Previous Years Exam Papers of TG-2 Other Technician Analysis Chart

S.L.	Exam NAME	EXAM DATE/TIME	No. of Questions
	Uttar Pradesh Rajya Vidyut	Utpadan Nigam Limited (UP	PRVUNL)
1.	UPRVUNL	22.12.2022	150
2.	UPRVUNL	05.04.2021	150
3.	UPRVUNL	09.11.2016	150
4.	UPRVUNL	22.09.2015	150
5.	UPRVUNL	09.05.2015	150
	UPSSSC Asstt. Boring	Technician & Tubewell Oper	ator
6.	UPSSSC Boring Technician	03.07.2022	30
7.	UPSSSC Tubewell Operator	12.01.2019	60
8.	UPSSSC Tubewell Operator	02.09.2018	60
9.	UPSSSC Boring Technician	09.08.2015	30
10	UPSSSC Tracer	2015	30
	Delhi Metro Rail	Corporation (Maintainer)	
11	DMRC Maintainer (Fitter)		75
12	DMRC Maintainer (Fitter)	19 04 2018 (I-Shift)	75
13	DMRC Maintainer (Fitter)	19.04.2018 (II-Shift)	75
14	DMRC Maintainer (Fitter)	20.04.2018	75
15	DMRC Maintainer (Fitter)	15.02.2017 (I-Shift)	75
16	DMRC Maintainer (Fitter)	15.02.2017 (II-Shift)	75
17	DMRC Maintainer (Fitter)	20.07.2014	75
18	DMRC Maintainer (Fitter)	24 12 2006	75
	Noida, Lucknow, Jaipur & (NMRC/L)	z Bangalore Metro Rail Corp MRC/IMRC/BMRC)	oration
19	IMRC Maintainer (Fitter)		55
20	NMRC Maintainer (Fitter)	15.09.2019	47
20.	NMRC Maintainer (Fitter)	2017	80
21.	I MRC Maintainer (Fitter)	16.03.2016	80
22.	BMRC Maintainer (Fitter)	2016	50
23.	ISBO	(Technician-B)	50
24	ISRO Technician B (Fitter)	21 10 2021	80
25	ISRO Technician-B (Turner)	14.07.2021	80
25.	ISRO Technician-B (Fitter)	03 11 2022	80
20.	ISRO Technician-B (RAC)	03.11.2022	80
27.	ISRO Technician-B (Machinist)	03.11.2022	80
29	ISRO VSSC Technician-B (Fitter)	14 07 2021	80
30	ISRO VSSC Technician-B (Turner)	14 07 2021	80
31	ISRO Technician-B (Fitter)	23.02.2020	80
32	ISRO Technician-B (Fitter)	10 02 2019 (I-Shift)	80
33	ISRO Technician-B (Fitter)	10.02.2019 (II-Shift)	80
34	ISRO Technician-B (Fitter)	10.02.2019 (11 51110)	60
35.	ISRO Technician-B (Fitter)	02.06.2019	80
36.	ISRO Technician-B (Fitter)	04.03.2018	80
37.	ISRO Technician-B (Fitter)	21.04.2018	80
38.	ISRO Technician-B (Fitter)	10.12.2017	60
39.	ISRO Technician-B (Fitter)	25.09.2016	80
40.	ISRO Technician-B (Fitter)	28.08.2016	80
41.	ISRO Technician-B (Fitter)	20.11.2016	60

42.	ISRO Technician-B (Fitter)	10.12.2016	80
43.	ISRO Technician-B (Fitter)	21.02.2015	80
44.	ISRO Technician-B (Fitter)	22.12.2012	80
45.	ISRO Technician-B (Turner)	23.02.2020	60
46.	ISRO Technician-B (Turner)	02.06.2019	60
47.	ISRO Technician-B (Turner)	22.04.2018	80
48.	ISRO Technician-B (Turner)	10.12.2017	60
49.	ISRO Technician-B (Turner)	25.09.2016	80
50.	ISRO Technician-B (Turner)	27.11.2016	60
51.	ISRO Technician-B (Turner)	22.11.2016	60
52.	ISRO Technician-B (Turner)	21.02.2015	80
53.	ISRO Technician-B (Plumber)	02.06.2019	80
54.	ISRO Technician-B (Plumber)	10.12.2017	80
55.	ISRO Technician-B (Plumber)	27.11.12016	60
56.	ISRO Technician-B (Welder)	21.04.2018	80
57.	ISRO Technician-B (Welder)	10.12.2017	80
58.	ISRO Technician-B (Welder)	25.09.2016	80
59.	ISRO Technician-B (Carpenter)	27.11.2016	60
60.	ISRO Technician-B (Diesel Mechanic)	27.11.2016	60
61.	ISRO Technician-B (Grinder)	27.11.2016	60
62.	ISRO Technician-B (Motor Mechanic)	27.11.2016	60
		T POADD AI D/Toohnic	vian
		1 BOARD ALF/ Technik	
63.	Assistant Loco pilot (ALP) Fitter	23.01.2019 (III-Shift)	75
64.	Assistant Loco pilot (ALP) Mechanic Motor Vehicle	23.01.2019 (III-Shift)	75
65.	Assistant Loco pilot (ALP) Fitter	21.01.2019 (I-Shift)	75
66.	Assistant Loco pilot (ALP) Mechanic Diesel	08.02.2019 (II-Shift)	75
67.	Assistant Loco pilot (ALP) RAC	23.01.2019 (I-Shift)	75
68.	Assistant Loco pilot (ALP)	23.01.2019 (III-Shift)	75
69.	Assistant Loco pilot (ALP) Heat Engine	08.02.2019 (II-Shift)	75
70.	Assistant Loco pilot (ALP) Fitter	23.01.2019 (II-Shift)	75
71.	Assistant Loco pilot (ALP) Mechanic Diesel	23.01.2019 (III-Shift)	75
72.	Assistant Loco pilot (ALP) Mechanic Diesel	23.01.2019 (I-Shift)	75
73.	Assistant Loco pilot (ALP) Heat Engine	23.01.2019 (III-Shift)	75
74.	Assistant Loco pilot (ALP)	23.01.2019 (I-Shift)	75
75.	Assistant Loco pilot (ALP) Heat Engine	08.02.2019 (I-Shift)	75
76.	R.R.B. Ajmer Asst. Loco Pilot	10.10.2004	100
77.	R.R.B. Ajmer Asst. Loco Pilot	23.05.2004	100
78.	R.R.B. Allahabad Asst. Loco Pilot	03.08.2008	100
79.	R.R.B. Allahabad Asst. Loco Pilot	09.12.2007	100
80.	R.R.B. Bangalore Asst. Loco Pilot	25.01.2004	100
81.	R.R.B. Bangalore Asst. Loco Pilot	08.07.2007	100
82.	R.R.B. Bangalore Asst. Loco Pilot	15.07.2012	100
83.	R.R.B. Bhopal Asst. Loco Pilot	06.06.2010	100
84.	R.R.B. Bhubneswar Asst. Loco Pilot	14.06.2009	100
85.	R.R.B. Bhubneswar Asst. Loco Pilot	15.07.2012	100
86.	R.R.B. Bilaspur Asst. Loco Pilot	15.07.2012	100
87.	R.R.B. Chandigarh Asst. Loco Pilot	14.09.2008	100
88.	R.K.B. Chandigarh Asst. Loco Pilot	15.07.2012	100
89.	R.K.B. Chandigarh Asst. Loco Pilot	25.05.2003	100
90.	R.K.B. Chennai Asst. Loco Pilot	06.06.2010	100
91.	R.K.B. Chennai/Bangalore Asst. Loco Pilot	27.10.2002	100
92.	R.K.B. Gorakhpur Asst. Loco Pilot	08.10.2006	100
93.	R.R.B. Gorakhpur Asst. Loco Pilot	11.10.2009	100

94.	R.R.B. Gorakhpur Asst. Loco Pilot	12.10.2003	100
95.	R.R.B. Gorakhpur Asst. Loco Pilot	14.04.2002	100
96.	R.R.B. Gorakhpur Asst. Loco Pilot	21.10.2001	100
97.	R.R.B. Guwahati Asst. Loco Pilot	22.01.2006	100
98.	R.R.B. Jammu-Kashmir Asst. Loco Pilot	06.06.2010	100
99.	R.R.B. Kolkata Asst. Loco Pilot	02.11.2008	100
100.	R.R.B. Kolkata Asst. Loco Pilot	06.02.2005	100
101.	R.R.B. Kolkata Asst. Loco Pilot	16.07.2006	100
102.	R.R.B. Kolkata Asst. Loco Pilot	2014	100
103.	R.R.B. Kolkata Asst. Loco Pilot	29.09.2002	100
104.	R.R.B. Malda Asst. Loco Pilot	16.07.2006	100
105.	R.R.B. Mumbai Asst. Loco Pilot	03.06.2001	100
106.	R.R.B. Mumbai Asst. Loco Pilot	05.06.2005	100
107.	R.R.B. Mumbai Asst. Loco Pilot	14.06.2009	100
108.	R.R.B. Mumbai Asst. Loco Pilot	15.07.2012	100
109.	R.R.B. Mumbai Asst. Loco Pilot	16.07.2006	100
110.	R.R.B. Mumbai/Bhopal Asst. Loco Pilot	05.01.2003	100
111.	R.R.B. Muzaffarpur Asst. Loco Pilot	15.02.2009	100
112.	R.R.B. Patna Asst. Loco Pilot	04.02.2007	100
113.	R.R.B. Patna Asst. Loco Pilot	11.11.2001	100
114.	R.R.B. Patna Asst. Loco Pilot	2014	100
115.	R.R.B. Ranchi Asst. Loco Pilot	04.09.2005	100
116.	R.R.B. Ranchi Asst. Loco Pilot	08.07.2007	100
117.	R.R.B. Ranchi Asst. Loco Pilot	19.01.2003	100
118.	R.R.B. Ranchi Asst. Loco Pilot	2014	100
119.	R.R.B. Ranchi Asst. Loco Pilot	21.09.2003	100
120.	R.R.B. Secunderabad Asst. Loco Pilot	06.06.2010	100
121.	R.R.B. Secunderabad Asst. Loco Pilot	11.11.2001	100
122.	R.R.B. Secunderabad Asst. Loco Pilot	29.06.2008	100
123.	R.R.B. Siliguri Asst. Loco Pilot	2014	100
124.	R.R.B. Trivandrum Asst. Loco Pilot	20.06.2004	100
125.	R.R.B. Ahamadabad Asst. Loco Pilot	2014	100
126.	R.R.B. Ahamadabad Asst. Loco Pilot	17.10.2004	100
127.	R.R.B. Ajmer Asst. Loco Pilot	05.06.2005	100
	INDIAN ORDNANG	CE FACTORY (IOF)	
128.	Indian Ordnance Factory	10.09.2017	80
129.	Indian Ordnance Factory Apprentice Fitter	2017	90
130.	Indian Ordnance Factory	2016	80
131.	Indian Ordnance Factory	08.05.2016	80
132.	Indian Ordnance Factory	2015	80
133.	Indian Ordnance Factory	2014	80
134.	Indian Ordnance Factory	2013	80
135.	Indian Ordnance Factory	2012	80
	DR	DO	
136	DRDO Fitter	2022	80
137	DRDO Turner	2022	80
138	DRDO Machinist	2022	80
139	DRDO Mechanic Motor Vehicle	2022	80
140	DRDO Mechanic Diesel	2022	80
141	DRDO Fitter	2016	100
142	DRDO Turner	2016	100
143	DRDO Machinist	2016	100
144	DRDO Mechanic Motor Vehicle	2016	100
145	DRDO Mechanic Diesel	2016	100
			- 3 0

	Himachal Pradesh				
146.	HPSSC Fitter	20.10.2019	120		
147.	HPSSC Jr. Technician (fitter) 30.08.2018	30.08.2018	120		
	Cochin Shipyard				
148.	Cochin Shipyard (Fitter)	13.06.2022	20		
149.	Cochin Shipyard (Sheet Metal)	13.06.2022	20		
150.	Cochin Shipyard (Fitter)	14.12.2021	20		
	Hary	ana			
151.	HSSC Pipe (Fitter)	03.08.2021	100		
152.	HSSC Fitter	09.08.2021	100		
	Northern Coalfiel	ds Limited (NCL)			
153.	NCL Tech. (Machinist)	27.12.2020	70		
154.	NCL Tech. (Fitter)	27.12.2020	70		
155.	NCL Tech. (Machinist)	10.07.2020	70		
	Other State & PS	U's Examinations			
156.	DSSSB Draughtsman (Mech.)	03.11.2022	50		
157.	HPCL Maintenance & Tech. (Mech.)	07.08.2022	50		
158	BDL Technician	2022	100		
159.	NLC Technician	24-09.2022	80		
160.	HAL Apprentice	10.11.2022	100		
161.	NPCIL Stipendiary Trainee (Fitter) Rawatbhata	16.10.2022	50		
162.	MP ITI Training Officer	20.12.2022	75		
163.	BEML	2022	100		
164.	NALCO Jr. Operative Trainee	2021	100		
165.	NALCO Operator Boiler	2021	100		
166.	BRO Vehicle Mechanic	2021	100		
167.	BARC Stipendiary Trainee Maintainer	2021	100		
168.	NFC Stipendiary Trainee Maintainer	2021	80		
169.	IGCAR Stipendiary Trainee Maintainer	2021	80		
170.	IOCL	2020	100		
171.	BHEL	2020	100		
172.	RRCAT Stipendiary Trainee Maintainer	2019	100		
173.	SAIL (Fitter)	17.11.2019	80		
174.	BECIL (NE07) Maintainer (Fitter)	2019	45		
175.	CRPF Constable Tradesman	2016	40		
176.	SAIL Bokaro Steel Plant	2016	60		
177.	NTPC Fitter	2016	80		
178.	BPCL Operator (Field)	2016	80		
179.	BEL Technician Fitter	20.11.2016	100		
180.	BEL Technician Fitter	19.11.2016	100		
181.	MP ITI Training Officer	08.11.2016	75		
182.	HAL Fitter	2015	50		
183.	VIZAG Steel Fitter	2015	50		
184.	MES Fitter (Tradesman)	2015	50		
185.	NTPC Fitter	2014	60		
186.	BHEL Hyderabad Fitter	2014	100		
187.	SAIL Durgapur Steel Plant	2014	60		
188.	COAL India Fitter	2013	80		
189.	Mazagon Dock Shipbuilders Ltd. Fitter	2013	80		
		Total	15822		





01.

Introduction : The Trade and Safety Means

1. Importance of first treatments	CPR can keep oxygen rich blood flowing to the brain and other organs until emergency medical treatment can restore a typical heart rhythm.
1. In a 5S concept the term 'Seiso (Shine)' stands for	The three basic parts of CPR are easily remembered as "CAB" : C for compressions, A for airway and B for breathing.
(a) Segregate needed nem nom unneeded and clear the later.(b) Keep needed item in correct place.	4. If a patient does not respond to mouth resuscitation treat a first aider should
(c) Keep the work piece neat and clean.	(a) seek medical help
(d) Maintain the established procedures.	(b) check for broken limbs
UPRVUNL 1G-2 Fitter $22.12.2022$	(c) keep the body warm with blankets
Ans. (c) : The concept of 55–55 is a methodical way to organize workplace and working practices as well as	(d) check pupils of eyes and pulse
being an overall philosophy and way of working. It is	BEML 2022
split into 5 phases each named after a different Japanese	RRB ALP Ajmer 10.10.2004
term beginning with the letter "S" (Seiri, seiton, seiso,	Ans. (a) : If a patient does not respond to mouth
seiketsu, shitsuke).	help.
Seiri – Sort classify	5. 5S stands for
Seiton – Straighten, simplify, set in order, configure	(a) Sort, Systematic, Segregation,
Seiso – Sweep, shine scrub, clean and check	Standardization and Sustain
Seiketsu – Standardize, stabilize, conformity	(b) Sort, Set, Shine, Standardization, Sustain
Shitsuke – Sustain, self discipline, custom and	(c) Sort, Sequence, Segregation, Standardization,
practice.	(d) Sort Set Systematic Standardization System
2. A victim of electric shock is unconscious and	
	KKB ALP AIMET 10.10.2004
not breathing. In case the victim's mouth is	Ans. (b) : 5S stand for–
not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable?	Ans. (b) : 5S stand for– Japanese English
not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method	Ans. (b) : 5S stand for-JapaneseEnglishSeiriSort
not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method	Ans. (b) : 5S stand for- Japanese English Seiri Sort Seiton Set
 not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method 	Ans. (b) : 5S stand for- Japanese English Seiri Sort Seiso Shine Seilor Structure
 not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these 	RKB ALP Ajmer 10.10.2004Ans. (b) : 5S stand for-JapaneseEnglishSeiriSortSeitonSetSeisoShineSeiketsuStandaridizeShitukoSustain
not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these UPSSSC Boring Technician 03-07-2022	RKB ALP Ajmer 10.10.2004Ans. (b) : 5S stand for-JapaneseEnglishSeiriSortSeitonSetSeisoShineSeiketsuStandaridizeShitsukeSustain6Benefits of the 5S systems are
not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these UPSSSC Boring Technician 03-07-2022 Ans. (c) : • A victim of electric shock is unconscious and not breathing in case the victim's mouth is closed	RKB ALP Ajmer 10.10.2004Ans. (b) : 5S stand for-JapaneseEnglishSeiriSortSeitonSetSeisoShineSeiketsuStandaridizeShitsukeSustain6. Benefits of the 5S systems are(a) increase the cleanliness
not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these UPSSSC Boring Technician 03-07-2022 Ans. (c) : • A victim of electric shock is unconscious and not breathing in case the victim's mouth is closed tightly, then schaffer's method or Holger-Nielsen	RKB ALP Ajmer 10.10.2004Ans. (b) : 5S stand for-JapaneseEnglishSeiriSortSeitonSetSeisoShineSeiketsuStandaridizeShitsukeSustain6.Benefits of the 5S systems are(a) increase the cleanliness(b) increase the productivity
 not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these UPSSSC Boring Technician 03-07-2022 Ans. (c) : • A victim of electric shock is unconscious and not breathing in case the victim's mouth is closed tightly, then schaffer's method or Holger-Nielsen method of artificial resuscitation respiration is more 	RKB ALP Ajmer 10.10.2004Ans. (b) : 5S stand for-JapaneseEnglishSeiriSortSeitonSetSeisoShineSeiketsuStandaridizeShitsukeSustain6.Benefits of the 5S systems are(a) increase the cleanliness(b) increase the productivity(c) increase the production rate
not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these UPSSSC Boring Technician 03-07-2022 Ans. (c) : • A victim of electric shock is unconscious and not breathing in case the victim's mouth is closed tightly, then schaffer's method or Holger-Nielsen method of artificial resuscitation respiration is more suitable.	Ans. (b) : 5S stand for- Japanese English Seiri Sort Seiton Set Seiso Shine Seiketsu Standaridize Shitsuke Sustain 6. Benefits of the 5S systems are (a) increase the cleanliness (b) increase the productivity (c) increase the production rate (d) maintain the production rate
 not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these UPSSSC Boring Technician 03-07-2022 Ans. (c) : • A victim of electric shock is unconscious and not breathing in case the victim's mouth is closed tightly, then schaffer's method or Holger-Nielsen method of artificial resuscitation respiration is more suitable. 3. What is CPR in safety?	Ans. (b) : 5S stand for- Japanese English Seiri Sort Seiton Set Seiso Shine Seiketsu Standaridize Shitsuke Sustain 6. Benefits of the 5S systems are (a) increase the cleanliness (b) increase the productivity (c) increase the production rate (d) maintain the production rate RRB ALP Ajmer 23.05.2004 Apple 23.05.2004
 not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these	Ans. (b) : 5S stand for- Japanese English Seiri Sort Seiton Set Seiso Shine Seiketsu Standaridize Shitsuke Sustain 6. Benefits of the 5S systems are (a) increase the cleanliness (b) increase the productivity (c) increase the production rate RRB ALP Ajmer 23.05.2004 Ans. (b) : Benefits of the 5S system are increase the
 not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these UPSSSC Boring Technician 03-07-2022 Ans. (c) : • A victim of electric shock is unconscious and not breathing in case the victim's mouth is closed tightly, then schaffer's method or Holger-Nielsen method of artificial resuscitation respiration is more suitable. 3. What is CPR in safety? (a) Cardio pulmonary resuscitation (b) Cardiac prevention remedies (c) Cordiac pulsating rate 	Ans. (b) : 5S stand for– Japanese English Seiri Sort Seiton Set Seiso Shine Seiketsu Standaridize Shitsuke Sustain 6. Benefits of the 5S systems are (a) increase the cleanliness (b) increase the productivity (c) increase the production rate RRB ALP Ajmer 23.05.2004 Ans. (b) : Benefits of the 5S system are increase the productivity.
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 not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these UPSSSC Boring Technician 03-07-2022 Ans. (c) : • A victim of electric shock is unconscious and not breathing in case the victim's mouth is closed tightly, then schaffer's method or Holger-Nielsen method of artificial resuscitation respiration is more suitable. 3. What is CPR in safety? (a) Cardio pulmonary resuscitation (b) Cardiac prevention remedies (c) Cardiac pulsating rate (d) None of these Cochin Shipyard Fitter (Sheet metal) 13-06-2022 IOCL 2020 	Ans. (b) : 5S stand for- Japanese English Seiri Sort Seiton Set Seiso Shine Seiketsu Standaridize Shitsuke Sustain 6. Benefits of the 5S systems are (a) increase the cleanliness (b) increase the productivity (c) increase the production rate RRB ALP Ajmer 23.05.2004 Ans. (b) : Benefits of the 5S system are increase the productivity. Sort Sort Set in order Sustain Keep only
 not breathing. In case the victim's mouth is closed tightly, which method of artificial resuscitation/respiration is more suitable? (a) Mouth-to-mouth method (b) Nelson's method (c) Schaffer's method or, Holger-Nielsen method (d) None of these UPSSSC Boring Technician 03-07-2022 Ans. (c) : • A victim of electric shock is unconscious and not breathing in case the victim's mouth is closed tightly, then schaffer's method or Holger-Nielsen method of artificial resuscitation respiration is more suitable. 3. What is CPR in safety? (a) Cardio pulmonary resuscitation (b) Cardiac prevention remedies (c) Cardiac pulsating rate (d) None of these Cochin Shipyard Fitter (Sheet metal) 13-06-2022 IOCL 2020 Ans. (a) : Cardio pulmonary resuscitation (CPR) is a 	Ans. (b) : 5S stand for- Japanese English Seiri Sort Seiton Set Seiso Shine Seiketsu Standaridize Shitsuke Sustain 6. Benefits of the 5S systems are (a) increase the cleanliness (b) increase the productivity (c) increase the production rate RRB ALP Ajmer 23.05.2004 Ans. (b) : Benefits of the 5S system are increase the productivity. Sort Sort Set in order Sort Standardize Sort Standardize Sort Standardize Sort Set in order Sort Set in order Sort Set in order Standardize Sustain Keep only Arrange items Necessary to promote work area for a consistently and review organized items in the efficient so it is neat organized Standards Standards
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7. The first aid boxes should be properly	Ans. (b) : If your clothes catch fire on the work spot,
equipped and kept in	you will roll over the ground.
(a) important places (b) machining area	• If a worker has suffered from electric shock, he
(c) easy access place (d) right position	should be kept warm and covered.
RRB ALP Allahabad 03.08.2008	13. If a person faints due to suffocation, the first
Ans. (c) : The first aid boxes should be properly	ald to be given is
equipped and kept in easy access place.	(a) Give min a warm drink (b) Sprinkle cold water on his face
8. If a worker has suffered from electric shock, he	(c) Place him on a well ventilated location
(a) Given an alcoholic drink	(d) Give him artificial respiration
(a) Given a cold drink	NTPC Fitter 2016
(c) Made to walk	RRB ALP Bangalore 15.07.2012
(d) Kept warm and covered	Ans. (c) : If a person faints due to suffocation, the first
RRB ALP Allahabad 03.08.2008	aid to be given the place him on a well ventilated
Ans. (d) : If a worker has suffered from electric shock.	location.
he should be kept worm and covered.	14. Which of the following should not be kept in a
9. In case of electric fire, which one of the	first-aid kit?
following should not be used:	(a) Stellie diessings (b) Plastels (a) Eve dressing (d) Headache tablets
(a) Put water on it	(c) Eye dressing (d) Treadache tablets RRB ALP Bangalore 15 07 2012
(b) Use sand or clay	Ans $(d) \cdot A$ workshop should have the following
(c) Use C. T. C. extinguisher	facilities and medicine for first aid treatment.
(d) Use dry chemical power	• Tincture iodine • Tincture benzoin • Dettol • Burnol
RRB ALP Allahabad 09.12.2007	• Pain killers • Bandage • Cotton • Safety pin • Raw
Ans. (a) : in case of electric fire never throw water on	plaster • Wooden splinters • Netted cloth • Gloss for
an electrical file because water conducts electricity and you could be electrocuted	giving medicines • Gloss for cleaning eyes • Dropper
 If you don't have a fire extinguisher, you can use 	• Stretcher etc.
baking soda to extinguish an electrical fire.	• Headache tablets not be kept in a first-aid kit.
10. What is the first action if a colleague (victim)	15. In case of an accident, the victim should
received a heavy electric shock?	immediately be
(a) Pull the victim from the live conductor	(a) asked to take rest (b) anguired about the accident
(b) Pour water to avoid burning of victim	(c) attended to immediately
(c) Fetch the first aid box	(d) left to himself without treatment
(d) Switch of the current immediately	RRB ALP Bangalore 15.07.2012
RRB ALP Bangalore 25.01.2004	Ans. (c) : In case of an accident, the victim should
Ans. (d) : Switch off the current immediately is the first	immediately be attended to and given first aid before a
action if a colleague (victim) received a neavy electric	trained medical worker arrives.
11 In ADC of first oid A stands for Airway D	16. Oil fire is extinguished by:
stands for breathing and C stands for	(a) Putting water on it
(a) Cardio problem	(b) Foam extinguisher
(b) Circulation	(c) Sod acid extinguisher (d) None of the above
(c) Cardio arrest	(d) None of the above BBB AI P Bhonel 06 06 2010
(d) Cleaning and dressing	Ans (b) : Oil fire is extinguished by form extinguisher
RRB ALP Bangalore 08.07.2007	Alls. (b) : Off file is extinguished by fourie extinguisher.
Ans. (b) : In ABC of first aid, 'A' stand for airway, 'B'	(a) getting promotions
stands for breathing and 'C' stand for circulation.	(b) finding better jobs
A – Airway, B – Breathing, C – Circulation.	(c) developing a good personality
12. If your clothes catch fire on the work spot,	(d) all of the above
what will you do first?	RRB ALP Bhubneswar 14.06.2009
(a) Run away from the spot	Ans. (d) : Soft skill helps in-
(b) Koll over the ground	(i) Getting promotions (ii) Finding better jobs (iii)
(c) Ful a linck blanket all over the body (d) Direct a fire extinguisher towards the electron	Developing a good personality (iv) The modern
(a) Direct a fire extinguisher towards the clothes	workplace in interpersonal (v) Customer and clients
RRR ALP Bangalore 15 07 2012	productivity.
The first Dungalore 10.07.2012	

have certain qualities which include –(a) confidence(b) determination(c) patience(d) all of the aboveRRB ALP Bhubneswar 14.06.2009	In the combustion of any substance, the following three factors are presents in appropriate amounts– 1. Fuel 2. Heat 3. Oxygen Cause of caught fire–
Ans. (d) : A person possessing good personal skills should have certain qualities which include– (1) Confidence (2) determine (3) patience (4) Ambition (5) creativity (6) flexibiliity.	 Loosing of electrical wiring condition. Smelting increase workshop. Short circuit in workshop. Searing of explosive and inflammable substance here
19. Fire due to electricity should be controlled by putting (a) sand (b) clay (c) CO2 (d) water	 and there. 5. Overloading of electrical wiring. 24. Which chemical is used in the soda acid fire extinguisher
 RRB ALP Bhubneswar 14.06.2009 Ans. (c) : Fire due to electricity should be controlled by putting CO₂ (carbon di-oxide). If a worker has suffered from electric shock, he should be kept worm and covered. 	 (a) Carbon dioxide (b) Sulphur dioxide (SO₂) (c) Aluminium sulphate (d) Sodium bicarbonate
20. If a patient is not responding to the mouth-to mouth respiration, then the primary attendant	IGCAR Stipendiary Trainee Maintainer 2021 UPRVUNL Fitter, 09-05-2015
 should- (a) immediately search for medical assistance (b) check the fractured bones (c) check the body warm with a quilt (d) check nerves and eyes 	Ans. (d) : Soda Acid fire extinguisher–Carbonous fire caused by wood, cloth and other solid combustive materials, soda acid fire extinguisher is used for extinguishing. It should not extinguish an electrical fires because its released chemicals are good conductors of
Ans. (a) : If a patient is not responding to the mouth-to- mouth respiration, then the primary attendant should immediately search for medical assistance.	 25. National Fire Protection Association (NFPA) codes and standards are adopted and used throughout the world to minimise the
 21. The best way to avoid an accident is – (a) wearing safety equipments (b) following safety rules pertaining to job machine and work area (c) following own way of working 	possibility of fire and other risks. Which code of NFPA deals with Standards for Fire Officer professional qualifications? (a) 1389 (b) 1710 (c) 1002 (d) 1021 Tubewall Operator 12 01 2019
(d) working like a skilled labor RRB ALP Bhubneswar 15 07 2012	Ans. (d) For fire officer professional qualification the
Ans. (b) : The best way to avoid and accident is follow safety rules pertaining to job machine and work area	1021 code is used for the NFPA standard.26. In the event of an accident, immediately to the
 22. Materials used in primary treatment is / are – (a) tincture iodine (b) burnol (c) dettol (d) all of the above RRB ALP Bhubneswar 15.07.2012 	 victim- (a) Should be told for rest (b) Should inquire about accident (c) Should provide help (Assistance) (d) Should he left without treatment
 Ans. (d) : Materials used in primary treatment are- 1. Tincture iodine 2. Tincture benzoin 3. Dettol 4. Burnol 5. Pain killers 6. Bandage 7. Cotton 8. Safety pin 9. Raw plaster 10. Wooden splinters 11. Netted cloth 12. Gloss for giving medicines 13. Gloss for cleaning eyes 14. Dropper 15. Stretcher etc. 	UPSSSC Tubewell Operator, 02-09-2018 Ans. (c) : First aid–Medical first aid given to the patient before the arrival of the doctor. In the event of an accident, immediately to the victim should provide assistance. Materials for first aid–
 23. Which of the following options is INCORRECT with respect to the key elements of a fire safety management system? (a) Regularisation of staff leave plan (b) Regular evacuation drills 	 Tincher iodine Mercury cream Tincher benzoin Dettol Pain killer
 (c) Maintenance and servicing of fire equipment (d) Staff training BDL Technician 2022 Tubewell Operator 12 01 2010 	 Cotton Betadin Netted cloth Safety pin

27.	The	first Aid in case of snake	e bite is	Ans	: (d) For boo	dv safetv–
(a) Pour water on wound			• Gloves			
(b) Put antiseptic on wound			• 4 n	ron		
(c) The cloth around wound and cut the wound to			• Apron			
	bleed the blood		• Co	veralls etc.		
	(d)	Rub the wound		33.	Always wh	ile grinding-
	(u)	ISRO Technician P	Jumber 27_11_2016		(a) Stand	in front of wheel
A	(a) a	The first treatment for an	les hits is first of all		(b) Stand	on the side of the wheel
Ans.	(c) :	The first treatment for sha	ke ble is first of all		(c) Wear g	goggles
cloth	snou	Id be fied on the wound an	a the wound should		(d) Both (a) and (c) above
be cu	it to le	et the blood comeout.			NFC	Stipendiary Trainee Maintainer 2021
28.	Whi	ich fire extinguisher is u	sed to control class			(HAL Fitter, 2015)
	'B' 1	fire–		Ans	: (b) Always	s stand on the side of the wheel while
	(a)	Waterr (b) C	Carbon tetracloride	oring	ting with a	grinder at the workpiece because the
	(c)	Wood chips (d) C	CO_2	snar	ks come out	the wheel can harm you and for this
		RRB ALP Fitter 2	3-01-2019, Shift-III	vou	should also w	vear eve glasses
Ans	s : (d)			you		
F	'ire	Type of fire	Fire			
cl	lass		extinguisher used	2.	Indust	rial accident and safety
Cla	iss-A	Carbonace fire	Water, sand, soda	34.	Fire due to	metals are classified as
		(wood, paper, coal)	acia		(a) Class N	(b) Class D
			Ē		(c) Class F	(d) Class K
Cla	ıss-B	Liquid tuel (diesel,	Foam type			UPRVUNL TG-2 Fitter 22.12.2022
		petrol, kerosene)	extinguisher, Co_2	An	s. (b) : Fires :	are classified according to the various
~	~		extinguisher	type	e of combust	ible fuel that has been ignited if the
Cla	iss-C	Gases fuel (LPG,	CO_2 , Hylone	wro	ng type of fi	re extinguisher is used it could cause
		methane, CNG, etc.)	chemical	the	fire to spread	or injure the operator
Cla	iss-D	Electric current,	CTC (Carbon	Cla		
		metallic fire	tetra chloride)		ss of fire	
29.	•••••	Used for safety of head	d–	Α		Wood, paper, fabric, plastic
	(a)	hard hats (b)	helmets	В		Flammable liquids (for example
	(c)	caps (d)	both (a) and (b)			gasoline)
			(IOF Fitter, 2016)	С		Burning gases (for example natural
Ans : (d) Head protection-		C		as)		
• Saf	etv he	elmets		D		
• Hai	rd hat	S		D		Combustible metal such as
• Hai	ir net					magnesium, potassium and
• Ru	mn ca	n				zirconium
Posn	iroto	P ry protection_		Е		Fires involving potentially
• Co	n atu	irotor				energized electrical equipment
• Ua	s tesp			K		Unsaturated cooling oils in well
• Pos	suive	gauge pressure respirator		**		insulated cooking appliances
• Au	tomat	ic respirator devices.				located in commercial kitchens
30.	Wo	re for safety of legs-	~ /	25	Which of	the following is not a Dorrange
	(a)	Slipper (b)	Canvas shoes	55.	Protoctive	the fullowing is not a rersonal Equipment?
	(c)	Lather shoes (d)	All of above		rotective	Equipment:
		(RRB Gorakhpi	ur ALP, 21.10.2001)		(a) Spanne	(b) Ear plugs
Ans	: (c) §	Safety equipments for leg	S-		(c) Face sh	(d) Safety shoes
• Lat	her sł	noes				UPRVUNL TG-2 Fitter 22.12.2022
• Saf	èty sh	noes		Ans	(a) : Person	al protective equipment is designed to
31.	Use	d for safety of eves_		prote	ect from haza	ards and minimise the risk of injury or
	(a)	Goggles (h)	Glasses	facil	ity.	
	(a)	Face Shields (d)	All of above	• Pe	rsonal protec	tive equipment (PPE) usually consists
		(u)	(IOF Fitter 2015)	of th	e following_	and equipment (11 L) usually consists
Ang	• (A)	Eva protostion aquinma	nte_While working		Despiratore	rotaction requirement
in the	$\cdot (u)$	has been to protect the avec	and while working		Cespiratory pl	rotection requirement
face	- worl	t should be used to much	soggies, glasses and	$\begin{bmatrix} 2 \\ 2 \end{bmatrix}$	ersonal alert	salety system (PASS)
lace	smen	a should be used to prote	eet the eyes remain	[]3.]	Helmets, coa	ats, trousers, protective gloves and
safe.				1	protective hoo	ods.
32.	Use	d for safety of body-		4. 1	Eye protection	n
	(a) Coveralls (b) Gloves			5. 1	Hearing prote	ection
	(c)	Apron (d)	All the above	• Sn	anner is not a	nersonal protective equipment
		(CRPF Constabl	e Tradesman, 2016)	- sp	uniter is not a	personal protoctive equipment.



Ans	s. (c) : Unsafe working habits always end up in loss	49. Whie	ch is true regarding CO ₂ extinguisher?
orp	bersonal injury.	(a) (arbon dioxide is filled in it at 2 bar pressure
44.	in a factory		It produces CO_2 by chemical reaction
	(a) Water (b) Soil		he surrounding
	(a) water (b) Soli (c) CTC extinguisher (d) All of these	(d) 1	It can not be used for fire caused due to
	BFCIL NF07 Maintainer (Fitter) 2019	(u) 1	electrical equipments
	RRCAT Stipendiary Trainee Maintainer 2019		NI C Technician 24-09 2022
Δne	(c) : CTC is used for the fire caused by electricity		IMRC Maintainer (Fitter) 05–02-2021
in a	factory.	Ans (d) ·	CO extinguisher work by displacing the air
• T	The CTC fire extinguisher full form is Carbon	from surrou	unding As carbon dioxide is also very cold
Tet	rachloride Fire Extinguisher.	as it comes	s out of the extinguisher so it cools the fuel
• I	t is used to be very effective extinguisher for	as well.	
con	nbating the small fire.	50 To e	extinguish fire due to flammable liquids
45.	To control fire from oil, petrol etc., which	whic	h type of extinguishing agent is used?
	extinguisher is used?	(a) 1	Foam
	(a) Water (b) CO_2	(b) '	Water
	(c) Foam (d) CTC	(c) (Carbon Tetra Chloride
	HPSSC Fitter 20-10-2019	(d) 1	None of the above
	NIPC Fitter-2014		ISRO Technician B (RAC) 03-11-2022
Ans	s. (c): Foam extinguisher is used to control fire from	Ans. (a) :	Foam fire extinguishers are suitable to fight
oll,	perior etc. Foam exinguishers takes away the heat ments that is one of the conditions for the fire to take	burning so	lids such as wood as liquid fires such as
plac	ce.	burning pe	trol. The foam has the ability to creep over
46.	Fire can be reduced by removing	the burning	gliquid or to soak into burning.
	(a) Oxygen (b) Heat	51. The	fuel involved Class 'D' fire is
	(c) Fuel (d) Any of above	(a) l	Flammable Liquid (b) Wood/Paper
	ISRO Technician B (Fitter) 21-10-2018	(c) l	Metals (d) Liquefied Gas
Ans	s. (d) :		ISRO Technician B (Fitter) 03-11-2022
Ans •	s. (d) : The three essential things required to reduced fir are	Ans. (c) :	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals
Ans •	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen.	Ans. (c) : Classes	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires
Ans •	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the	Ans. (c) : Classes of fire	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires
Ans •	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition	Ans. (c) : Classes of fire Class 'A'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood,
Ans •	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature.	Ans. (c) : Classes of fire Class 'A'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics.
Ans • •	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors	Ans. (c) : Classes of fire Class 'A' Class 'B'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline,
Ans • •	 s. (d): The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish 	Ans. (c) : Classes of fire Class 'A' Class 'B'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based
Ans • • 47.	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire?	Ans. (c) : Classes of fire Class 'A' Class 'B'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols.
Ans • • 47.	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam	Ans. (c) : Classes of fire Class 'A' Class 'B'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butters
Ans • • 47.	 s. (d): The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above 	Ans. (c) : Classes of fire Class 'A' Class 'B'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane.
Ans • • 47.	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above BRO Vehicle Mechanic 2021	Ans. (c) : Classes of fire Class 'A' Class 'B' Class 'C'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane. Energized electrical equipment such as computers accurate meters.
Ans • • 47.	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above BRO Vehicle Mechanic 2021 ISRO Technician B (Fitter) 21-10-2018	Ans. (c) : Classes of fire Class 'A' Class 'B' Class 'C'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane. Energized electrical equipment such as computers, servers, motors, transformers and appliance
Ans • • 47.	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above BRO Vehicle Mechanic 2021 ISRO Technician B (Fitter) 21-10-2018 s. (d) : Water, chemical & foam all are used to	Ans. (c) : Classes of fire Class 'A' Class 'B' Class 'B'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane. Energized electrical equipment such as computers, servers, motors, transformers and appliance Combustible metals such as magnesium
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Ans • 47. Ans exti • N	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above BRO Vehicle Mechanic 2021 ISRO Technician B (Fitter) 21-10-2018 s. (d) : Water, chemical & foam all are used to nguish fire. o single extinguisher can be used to tackle every fire	Ans. (c) : Classes of fire Class 'A' Class 'B' Class 'B' Class 'C'	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane. Energized electrical equipment such as computers, servers, motors, transformers and appliance Combustible metals such as magnesium, titanium, zirconium, sodium, lithium and potassium
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Ans • • 47. 47. 47. 48.	 s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above BRO Vehicle Mechanic 2021 ISRO Technician B (Fitter) 21-10-2018 s. (d) : Water, chemical & foam all are used to nguish fire. o single extinguisher can be used to tackle every fire because each type of fire extinguisher has different egories of fire on which it is effective. 	Ans. (c) : Classes of fire Class 'A' Class 'B' Class 'B' Class 'C' Class 'C' S2. White weld (a)	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane. Energized electrical equipment such as computers, servers, motors, transformers and appliance Combustible metals such as magnesium, titanium, zirconium, sodium, lithium and potassium ch type of fire extinguisher is used in ing shop?
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Ans • 47. 47. 47. 48.	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above BRO Vehicle Mechanic 2021 ISRO Technician B (Fitter) 21-10-2018 s. (d) : Water, chemical & foam all are used to nguish fire. o single extinguisher can be used to tackle every fire because each type of fire extinguisher has different egories of fire on which it is effective. present in the industry should be kept in security cordon for the safety of the personnel (a) Temperature indicators (b) Stock of welding rods	Ans. (c) : Classes of fire Class 'A' Class 'B' Class 'B' Class 'C' Class 'D' 52. White weld (a) 1 (b) 1 (c) 0 (d) 1	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane. Energized electrical equipment such as computers, servers, motors, transformers and appliance Combustible metals such as magnesium, titanium, zirconium, sodium, lithium and potassium ch type of fire extinguisher is used in ing shop? Foam type extinguisher Dry powder extinguisher
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Ans • 47. 47. 47. 48.	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above BRO Vehicle Mechanic 2021 ISRO Technician B (Fitter) 21-10-2018 s. (d) : Water, chemical & foam all are used to nguish fire. o single extinguisher can be used to tackle every fire because each type of fire extinguisher has different egories of fire on which it is effective. present in the industry should be kept in security cordon for the safety of the personnel (a) Temperature indicators (b) Stock of welding rods (c) Tailstock of lathe (d) Flywheel of prime movers JMRC Maintainer (Fitter) 05-02-2021	Ans. (c) : Classes of fire Class 'A' Class 'B' Class 'B' Class 'C' Class 'C' Class 'D' 52. White (a) 1 (b) 1 (c) 0 (d) 1 Ans. (c) : welding shot	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane. Energized electrical equipment such as computers, servers, motors, transformers and appliance Combustible metals such as magnesium, titanium, zirconium, sodium, lithium and potassium ch type of fire extinguisher is used in ing shop? Foam type extinguisher Dry powder extinguisher CO2 extinguisher Halon extinguisher RRB ALP Bhubneswar 15.07.2012 CO2 type of fire extinguisher is used in op.
Ans • 47. 47. 47. 48.	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above BRO Vehicle Mechanic 2021 ISRO Technician B (Fitter) 21-10-2018 s. (d) : Water, chemical & foam all are used to nguish fire. o single extinguisher can be used to tackle every fire because each type of fire extinguisher has different egories of fire on which it is effective. present in the industry should be kept in security cordon for the safety of the personnel (a) Temperature indicators (b) Stock of welding rods (c) Tailstock of lathe (d) Flywheel of prime movers JMRC Maintainer (Fitter) 05–02-2021	Ans. (c) :Classesof fireClass 'A'Class 'B'Class 'B'Class 'C'Class 'D'52. White weld (a) 1 (b) 1 (c) 0 (d) 1Ans. (c) :welding shot• Foam.	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane. Energized electrical equipment such as computers, servers, motors, transformers and appliance Combustible metals such as magnesium, titanium, zirconium, sodium, lithium and potassium ch type of fire extinguisher is used in ing shop? Foam type extinguisher Dry powder extinguisher CO2 extinguisher Halon extinguisher RRB ALP Bhubneswar 15.07.2012 CO2 type of fire extinguisher is used in op. water and dry chemical are used in class 'A'
Ans • • 47. 47. 47. 47. 48. Ans indu	s. (d) : The three essential things required to reduced fir are fuel, heat and oxygen. The air supplies oxygen and heat to raise the temperature of the fuel beyond the ignition temperature. Fire can be reduced by removing any one of these factors. Which of the following is used to extinguish fire? (a) Water (b) Foam (c) Chemical (d) All of above BRO Vehicle Mechanic 2021 ISRO Technician B (Fitter) 21-10-2018 s. (d) : Water, chemical & foam all are used to nguish fire. o single extinguisher can be used to tackle every fire because each type of fire extinguisher has different egories of fire on which it is effective. present in the industry should be kept in security cordon for the safety of the personnel (a) Temperature indicators (b) Stock of welding rods (c) Tailstock of lathe (d) Flywheel of prime movers JMRC Maintainer (Fitter) 05–02-2021 s. (d) : Prime movers of flywheel present in the ustry should be kept in security cordon for the safety	Ans. (c) :Classesof fireClass 'A'Class 'B'Class 'B'Class 'C'Class 'D'52. White weld (a) 1 (b) 1 (c) 0 (d) 1Ans. (c) :welding she • Foam, fire.	ISRO Technician B (Fitter) 03-11-2022 The fuel involved class 'D' fire is metals Types of fires Ordinary combustibles such as wood, paper, cloth, rubber, and some plastics. Flammable liquids such as gasoline, petroleum, greases, tars, oils, oil based paints, solvents, alcohols. Flammable gases such as propane and butane. Energized electrical equipment such as computers, servers, motors, transformers and appliance Combustible metals such as magnesium, titanium, zirconium, sodium, lithium and potassium ch type of fire extinguisher is used in ing shop? Foam type extinguisher Dry powder extinguisher CO2 extinguisher Halon extinguisher RRB ALP Bhubneswar 15.07.2012 CO2 type of fire extinguisher is used in op. water and dry chemical are used in class 'A'

53.	An accident is	An	s (c) · While grinding safety goggles must use
	(a) Unplanned event		While grinding a tool gloves apron and glass
	(b) Non-controlled event	 	should not be worm
	(c) Undesirable event		In case of arc welding dark glass screen should
	(d) All of the above	 	nrotect eves
	RRB ALP Bilaspur 15.07.2012	60	A hammer with loosely fitted handle will
Ans	s. (d) : An accident is–	00.	(a) Fly away and cause accident
•	Unplanned event		(a) Thy away and cause accident
•	Non-controlled event		(a) Have easy swing
•	Undesirable event.		(d) Convey more leverage
54.	Which one of the following is not the cost due		DDR AL P Channel 06 06 2010
	to an accident?	A	KKB ALI Chennar 00.00.2010
	(a) Cost due to damage to machine, tools, material and property	and	acuse of accident.
	(b) Cost of lost time of the injured person	61.	What should never be placed on a burn
	(c) Cost of compensation and medical aid		(a) Aloe (b) Water
	(d) Cost due to increase in production		(c) Coco butter (d) Dry sterile
	NALCO Jr. Operative Trainee 2021		RRB ALP Chennai 27.10.2002
	RRB ALP Chandigarh 14.09.2008	An	s. (c) : Coco butter should never be placed on a burn.
Ans	s. (d) : Cost due to increase production is not the	62.	The fire triangle in fire hazards is identified as
cos	t due to an accident.		(a) fuel, oxygen, and heat
55.	The safe way of working is		(b) fuel, oxygen, and vapour
	(a) An effective and right way of working		(c) fuel, burning and solid
	(b) An ancient way of working		(d) fuel, oil and waste
	(c) A way of handling the work in a hurry		RRB ALP Gorakhpur 08.10.2006
	(d) A way of normal working	An	s. (a) : The fire triangle in fire hazards in defined as
	UPSSSC Tubewell Operator, 02-09-2018	fue	el oxygen and heat.
Ans	s. (a) : The safe of working is an effective and right		\wedge
way	y of working.		
56.	An oily floor should be cleaned by		
	(a) Cotton waste		
	(b) Putting water		
	(c) Fulling saw dust (d) Spraving earbon diavide or sand		Evel
	(d) Spraying carbon dioxide of said DDR ALP Chandigarh 15 07 2012		ruei V
An	$\mathbf{K}\mathbf{K}\mathbf{D}\mathbf{A}\mathbf{L}\mathbf{I}$ Channing and $\mathbf{I}\mathbf{I}\mathbf{I}\mathbf{I}\mathbf{I}\mathbf{I}\mathbf{I}\mathbf{I}\mathbf{I}\mathbf{I}$	63.	Which of the following fire extinguishing agent
saw	dust		is suitable for a live electrical fire?
57	Fire is a combination of		(a) Water (b) $C = 1$
01.	(a) Fuel light and oxygen		(b) Carbon dioxide (c) C_{ab} T $(a + b)$
	(b) Fuel, heat and oxygen		(c) Carbon Tetrachloride
	(c) Fuel, heat and carbon dioxide		(d) 10am
	(d) Fuel, light and nitrogen		KKB ALP Goraknpur 11.10.2009
	ISRO Technician-B Turner 21.05.2015		is. (c): Carbon tetrachloride fire extinguishing agent
Ans	s. (b) : Fire is a combination of fuel, heat and	IS S	Suitable for five electrical file.
oxy	gen.	• •	arbon dioxide (CO_2) – suitable for class-B lifes
58.	In case of arc welding, one should protect his	•	Foam extinguishers are suitable for – flammable
	eyes by using	IIq	
	(a) Dark glass screen (b) Sun goggles	64.	In case of electric fire, which one of the following should not be used
	(c) Mask (d) Clear glasses		(a) But water on it
	RRB ALP Chandigarh 15.07.2012		(a) Fut water off it (b) Use sand or clay
Ans	s. (a) : In case of arc welding, one should protect his		(b) Use Salid of Clay (c) Use $C \to C$ extinguisher
eye	s by using 'Dark glass screen'.		(d) Use dry chemical nowder
•	while grinding safety goggles must use.		(u) Use any chemical powder DDR AI D Construment 12 10 2002
59.	While grinding one must use		KKD ALF GOFÄKIPUF 12.10.2003
	(a) Dark glass screen (b) Mask	An	is. (a) : in case of electric fire do not put water on it.
	(c) Safety goggles (d) Sun goggles	•	If a worker has suffered from electric shock, he
	RRB ALP Chandigarh 25.05.2003		snouid de kept worm and covered.

65. W	ho is responsible for providing you with rsonal Protective Equipment?	Ans. (a) : Die nut is used to rectify damaged or rested threads or
(a)	Your employer (b) Your supervisor	Die nut (Solid nut) – The die nut is used for chasing or
(c	Your co-worker (d) Yourself	reconditioning the damaged threads.
	RRB ALP Gorakhpur 14.04.2002	• Die nuts are not to be used for cutting new threads.
Ans. (a) you with	: Your employer is responsible for providing personal protective equipment (PPE).	• The die nuts are available for different standards and sizes of threads.
66. Ma	achine guards should be fitted to protect the	71. Which should be done immediately if a
ор	erator and other nearby from –	cylinder leaks due to defective valves or safety
(a)	In running nip points	plug?
(b)	Priving chips & sparks	(a) Thy to repair it yoursen
(C) (d)	All of these	(c) Inform the supplier
(u	RRB ALP Corekhnur 21 10 2001	(d) Move it to a safe area
Ans (d)	• Machine guards should be fitted to protect	NALCO Operator Boiler 2021
the oper	ator and other nearby from in running nip	RRB ALP Kolkata 02.11.2008
points, fl	ying chips and sparks and rotating parts.	Ans. (d) : Move it to a safe area should be done
67. Pe	rsonal Protective Equipment is required	immediately if a cylinder leaks due to defective values
wh	en –	or safety plug.
(a)	Employers suffer an injury	72. If a person gets electric shock, what should be
(b)	The employees suffer an injury	the immediate action?
(c	An employee asks for it	(a) Disconnect the electric current (b) Given him to drink sugar water
(d) Engineering, work practice, and	(c) Use gloves
	sufficient protection against hazards	(d) Rush to the hospital
	RRB ALP Guwahati 22.01 2006	RRB ALP Kolkata 06.02.2005
Ans. (d)	: Personal protective equipment is required	Ans. (a) : If a person gets electric shock disconnect the
when en	gineering work practice, and administrative	electric current immediate action.
controls	do not provide sufficient protection against	• If a worker has suffered from electric shock, he/she
hazards.		should be kept worm and covered.
68. In	case of any problem during machine	73. If there is LPG leakage at home or workshop,
ru	nning, what should be done first-	(a) Do not quitab on the lights and force
(a) (b)	Bun electric papel	(a) Do not switch off the lights and fans
(0) (c)	Call senior	(c) Open the doors
(d)	Press red button in front	(d) All of these
(u)	RRB ALP Guwahati 22.01.2006	RRB ALP Kolkata 16.07.2006
Ans. (d)	: In case of any problem during machine	Ans. (d) : If there is LPG leakage at home or workshop,
running,	what should be done first press red button in	what should we do-
front.		• Do not switch on the lights and fans
69. Th	e following extinguisher is suitable for cotton	• Do not switch off the lights and fans.
or	other textile fire :	• Open the doors and widows to ensure ventilation.
(a)) Water (D) Soda actu	74. The safety device used to protect eyes while
(0)	RRB ALP Jammu-Kashmir 06 06 2010	grinding is (a) Hand corean (b) Halmat
Ans (a)	• Water CO. fire extinguisher is suitable for	(a) finding screen (b) fieldet
cotton or	other textile fire.	RRB ALP Kolkata 2014
• Foan	n, water and dry chemicals are used in class A	Ans. (c) : The safety device used to protect eves while
type	of fire extinguishers.	grinding is chipping goggles (safety goggles).
 Foan liquid 	n is best suited to extinguish oil or flammable I fire.	• The safety device used to protect eyes while are welding is dark glass screen.
• The	three factors cause fire are oxygen, fuel and	75. There are three pre-requisites for any fire or
heat.		explosion to take place. Which one of the
70. W	hich one of the following is used to rectify	following is not included in the three pre-
da (a)	Dia nut (b) Circular anlit dia	(a) Fuel (b) Oyugen
(a)	Two-piece die (d) Die plate	(c) Nitrogen (d) Ignition
	RRB ALP Jammu-Kashmir 06 06 2010	RPR AI P Kolkete 20 00 2002
	ivivit i si sammu-ivasimmi vv.vv.2010	KKD ALLI KVIKAta 27.07.2002

Ans. (c) : There are three pre requisites for any fire or	Ans. (d) : To put off class B fire the type of fire
explosion to take place and that is (1) Oxygen (2) fuel	extinguisher used is foam type.
(3) Heat (Ignition).	82. The three factors that cause fire are oxygen, fuel and
• Nutogen is not included in the three pre-requisites.	(a) Heat (b) CO_2
70. In first ald, applying pressure to stop a bleeding becomes	(c) H_2O (d) Hazardous
(a) safe (b) unsafe	RRB ALP Mumbai 16.07.2006
(c) dangerous (d) no dangerous	Ans. (a) : The three factors that cause fire are oxygen
HAL Apprentice 10.11.2022	fuel and heat.
RRB ALP Malda 16.07.2006	\wedge
Ans. (a) : In first aid, applying pressure to stop bleeding	
becomes safe.	Fire
• A workshop should have the following	
facilities and medicine for first aid treatment–	(194)3472
1. Tincture iodine 2. Tincture benzoin 3. Dettol	Fuel
4. Burnol 5. Pain killers 6. Bandage 7. Cotton 8. Safety	83. Which one of the following fire extinguishers is
cloth 12 Glass for giving medicines 13 Glass for	suitable for the live electrical fire?
cleaning eves 14. Dropper 15. Stretcher etc.	(a) Halon
77. What is safety so as to cultivate?	(b) Water
(a) Concept (b) Habit	(c) Foam (d) Liquefied chemical
(c) Culture (d) Discipline	(d) Equence chemical RRB ALP Mumbai 16 07 2006
RRB ALP Mumbai 03.06.2001	Ans. (a) : Halon fire extinguishers is suitable for the
Ans. (d) : Discipline is safety so as to cultivate.	live electrical fire.
78. First aid procedure often consists of simple and	• Foam, water and dry chemical are used in class A
basic life saving techniques, that an individual	type of fire extinguisher.
performs with proper training and	• In case of electric fire, water should not be used.
(a) Knowledge (b) experience	84. A person being electrocuted should be removed
(c) skill education (d) None of the above BBB ALP Mumbai 05 06 2005	$\begin{array}{c} \text{Irom the live supply by means of} \\ (a) A \text{ length of metal nine} \end{array}$
Ans (c) · First aid procedure often consists of simple	(a) A length of dry timber
and basic life saving techniques that an individual	(c) A length of wet timber
performs with proper training and skill education.	(d) A scaffold pole
79. Which is the cause of electric fire?	RRB ALP Mumbai 05.01.2003
(a) Loose connection	Ans. (b) : A person being electrocuted should be
(b) Overloading the wires	removed from the live supply by means of a length of
(c) Electric short circuit	dry timber.
(d) All of these	85. Burning wood is classed as which type of fire?
RRB ALP Mumbai 14.06.2009	(a) Class A (b) Class B (c) Class C (d) Class D
Ans. (d) : The cause of electric fire is-	RRB ALP Mumbai 05.01.2003
(1) Loose connection (2) Over loading the wires (3)	Ans. (a) : Analyze and identify the type of fire refer
Worn out sockets that aren't properly grounded	table-1
80 Before cleaning the machine the machine	Class-A Wood, paper, cloth, solid material
should be	Class-B Oil based fire (grease, gasoline, oil)
(a) Run (b) Stopped	liquefiable gases.
(c) Switched in (d) Moved	Class D Metals and electrical equipment
RRB ALP Mumbai 15.07.2012	86 On finding a fire in a building a mechinist's
Ans. (b) : Before cleaning the machine, the machine	first action should be
should be stopped.	(a) Raise an alarm (b) Fight the fire
81. To put off class B fire, the type of Fire	(c) Leave the building (d) Carry on working
extinguisher used is	BPCL Operator (Field) 2016
(a) Dry powder (b) Jet of water	RRB ALP Mumbai 05.01.2003
(c) Carbon dioxide (d) Foam type	Ans. (a) : On finding a fire in a building a machinist's
RRB ALP Mumbai 15.07.2012	tirst action should be raise an alarm.

87. To put off class C fire, the type of extinguishe used is	r 91. While grinding a tool should always be worn.
(a) dry powder (b) carbon dioxide	(a) gloves (b) apron
(c) jet to water (d) foam type	(c) glass (d) all of the above
RRB ALP Muzanarpur 15.02.200	KRB ALP Muzanarpur 15.02.2009
Ans. (a):	shield to protect against flying particles. Gloves aprons
Fuel Extinguishing	metatarsal safety boots, hearing protection and
Class A fire Most effective i.e. cooling with	respiratory protection may be required depending on the
cloth etc solid sprayed on the base of the fire and	work. Ensure the floor around the work area is clean.
materials then gradually upwards.	92. Match the following accidents with their
Class 'B' fire Water should never be used on	solutions.
flammable burning liquids. Foam, dry	Accidents Solution
liquidable solidpowder or CO_2 may be used on this type of fire.	1. Burnt by acid(A) Giving artificial respiration
Class 'C' fire gas Dry power extinguishers are used and liquefied gas on this type of fire.	2. Burnt by metal (B) Clean using running water
Special powders have now be	3. Breathing stops (C) Dry bandage
developed which are capable of	(a) I (C), 2(A), 3(B) (b) I (C), 2(B), 3(A)
controlling and/or extinguishing	(c) $I(B), 2(A), 3(C)$ (d) $I(A), 2(C), 3(B)$
Class UDI fine Control district dry normalize and	RRB ALP Patna 04.02.2007
metal & electric vaporizing liquid (CTC)	Ans. (b) :
equipment extinguishers can be used to deal	Accident Solution
with fires in electrical equipment	Burnt by acid – Dry bandage
foam or liquid (i.e. water)	Burnt by metal – Clean using running water
extinguisher must be used on	Breathing stops – Giving artificial respiration
circumstances	95. What should be placed on a burn ?
88 Sefety can be effectively expressed by	(a) Albevera
(a) showing unsafe actions of an individual	(c) Dry sterile dressing
(b) showing the correct actions of an individual	(d) All of the above
(c) showing the actions of skilled worker	RRB ALP Patna 11.11.2001
(d) showing unsafe action by posters and safe	Ans. (d) : Aloevera, water and dry sterile dressing
methods practice	should be placed on a burn.
BEML 202	2 94. Fire, caused due to petrol, diesel and oils
RRB ALP Muzaffarpur 15.02.200	belongs to the category–
Ans. (b) : Safety can be effectively expressed by	(a) class A (b) class B (c) class B (d) class B
snowing the correct action of an individual.	$\begin{bmatrix} (c) class C \\ (d) class D \\ IOCL 2020 \end{bmatrix}$
by. which of the following things should be presen in the first aid box ?	RRR ALP Patna 2014
(a) Gauze bandage (b) Adhesive tape	Ans. (b) : Fire caused due to petrol diesel and oils
(c) Pair of scissors (d) All of the above	belong to the category class B.
RRB ALP Muzaffarpur 15.02.200	• Fire caused due to wood, paper, cloth etc. belongs
Ans. (d) : A first aid box consists of all the things	to the category class A.
necessary for providing aid against a minor would on	• Fire caused due to gas and liquefied gas belongs to
injury during an accident.	the category class 'C'.
• It consists of things like-	• Fire caused due to electric equipment or metal
scissors (4) Cotton (5) Antiseptic cream etc.	95. Class D fires, involve fire caused due to
90. While working on a machine should not be work	1 Inammable metals such as –
(a) loose clothes (b) shoes	(a) magnesium (b) sourum (c) potassium (d) all of the above
(c) apron (d) gloves	RRR ALP Patna 2014
RRB ALP Muzaffarbur 15.02.200	Ans. (d) : Class D fires involves fire caused due to
Ans. (a) : While working on a machine loose clothes	flammable metal such as magnesium. sodium. titanium
should not be worn.	and potassium.

96. Which of the following is / are required for humping a substance 2	7. The workshop floor should be neat and clean.
(a) Oxygen	available in a workshop.
(a) Oxygen (b) Flammable material	9. We shouldn't stand under a moving crane.
(c) A source of heat (c)	10. There should be no oil, grease etc. on the workshop
(d) All of the above	floor.
NTPC Fitter 2016	99. Which of the following is true about safety of
RRB ALP Patna 2014	machines?
Ans. (d) : Oxygen flammable material and a source of	while operation
heat are required for burning a substance.	(b) Leave the machine switched on
Ň	(c) Don't wear goggles while grinding
	(d) The speed of the machine is adjusted
5 Fire	according to the size of the job.
	RRB ALP Ranchi 04.09.2005
	Ans. (d) : Safety of Machines – These machines are a source of maintenance of a machine it is responsibility
Fuel	of worker. The following points should be noted for
• The factors that must be present in combination for	safety of machines-
a fire to continue to burn are as follows fuel, heat	1. There should be a proper distance between any two
and oxygen.	machines.
97. Which of the following is / are the cause of an	machine
accident ?	3. We shouldn't charge the gears of a working
(a) Ignorance (b) Curiosity	machine.
(c) Indiscipline (d) All of the above	4. We should switch off the machine when the
RRB ALP Ranchi 04.09.2005	electricity goes off. 5 We shouldn't keen tools in a steelenile while
Ans. (d) : Cause of accident–	working on a machine.
(1) Ignorance (2) Curiosity (3) Over-confidence (4)	6. Every machine should be cleaned before and after
Lack of interest (3) Indiscipline (6) Over time (7) Use of wrong tool (8) Fault in electrical wiring (0) Machine	use.
without safety guards (10) Bad planning (11) Incorrect	7. We should use goggles while grinding.
procedure of working.	8. We should never stand in front of the wheel while
98. Which of the following is a general safety rule ?	100 The basic category of safety sign is _
(a) Smoking should be avoided	(a) regulatory sign (b) informative sign
(b) Heavy load should be lifted cautiously	(c) warning sign (d) all of the above
(c) One should wear apron while working	RRB ALP Ranchi 08.07.2007
(d) All of the above	Ans. (d) : Safety signs– Many signs are used for safety
RRB ALP Ranchi 04.09.2005	in a workshop. They are follows–
Ans. (d) : Safety means protect oneself and other	1. Prohibitive signs 2. Mandatory signs 3. Warning
colleagues from any accidents. Different safety	101 extinguisher should be used in order
practices and standards are used in a workshop to	to extinguish fire due to oil.
followed in every workshop	(a) Foam fire (b) Ammonia fire
Type of safety – Safety is of the following types–	(c) CO_2 fire (d) All of the above
(1) Self safety (2) General safety (3) Safety of machine.	RRB ALP Ranchi 08.07.2007
General safety–	Ans. (a) : Foam fire extinguisher should be used in
1. Smoking should be avoided	102 Clothes that are used while working in a
2. Heavy loads should be lifted cautiously	workshop are –
3. One should wear apron white working	(a) loose clothes
4. Flammable substances should be kept at safe places	(b) tie, muffler and slippers
in a workshop.	(c) wrist watch and ring
5. There should be no naked electric wires in a	(d) apron, shoes and goggles
Workshop	KKB ALP Kanchi 19.01.2003
o. A workshop should have a proper arrangement of lighting	Ans. (d) : Apron, shoes and goggles are used while
ngming.	working in a workshop.



Ans. (d) : Basi	ic safety rules, when using hand and	116. Fire class in w	hich the fuel is gas or liquefied	
power tools-		gas is		
1. Keep all to	ools in good condition with regular	(a) Class A	(b) Class B	
maintenance		(c) Class C	(d) Class D	
2. Examine eac not use dama	ch tool for damage before use and do aged tools.	ISRO	Technician-B Turner 25.09.2016	
3. Operate too	ols according to the manufacture's	Ans. (c) :		
instruction.	5	Fire class	Type of fire	
112. How long	a rescue breath need to be?	Class-A	Solid fuel/carbonaceous fire	
(a) Delive	ered over 2 seconds	Class-B	Liquid fuels	
(b) Delive	ered over 1 seconds	Class-C	Gases fuels	
(c) Long	enough to make the chest rise	Class-C	Electrical fine/matallia fine	
(d) A sma	all puff of air	Class-D		
	RRB ALP Trivandrum 20.06.2004	117. What is the cold	our of Argon cylinder:	
Ans. (c) : A res	scue breath need to be long enough to	(a) Dark green	(d) Maroon	
make the chest ri	ise.	(c) Grey solder	RBALPRAC 23 01 2019 Shift-I	
113. What is t	he CTC found in a fire extinguishers	Ans. (a) :		
mean-		Gases cylinder	Colour code	
(a) Carbo	n Tetra chloride	Acetylene	Maroon/Red	
(b) Chron	nium Try chloride	Argon aulindor	Dark graan galdar	
(c) Chlori	ide Tetra calcium			
(d) Calcu	im Telurium chlorine	CO ₂ cylinder	Gray-solder	
	DMRC Maintainer Fitter, 20-04-2018 NMDC 15 00 2010	Cl ₂ cylinder	Yellow solder	
$\mathbf{A}\mathbf{n}\mathbf{c}$ (a) $\mathbf{c}\mathbf{T}\mathbf{C}$	found in fire extinguishers means it is	Helium-cylinder	Brown solder	
carbon tetra ch	loride Also called halon type fire	Hydrogen cylinder	Red solder	
extinguisher thi	s type of fire extinguisher is specially	Nitrous oxide cylinde	r Blue solder	
suitable for elec	trically fire. Generally CTC is used as	118. What colours	are used on signs used for fire	
fire extinguisher	for all type of fire classes (Class-A,	fighting equipm	ient–	
Class-B, Class-C	C and Class-D).	(a) White picto	gram on a black background	
114.	is used for the fire caused by	(b) Red pictogr	am on a white background	
electricity in a factory.		(c) Green picto (d) Vellow pict	agram on a white background	
(a) Water	(b) Soil	RRR ALP Me	ogram on a winte background schanic Diesel 23-01-2019 Shift-I	
(c) CIC e	extinguisher (d) All of these	Ans (b) \cdot White col	our diagram on red background	
Ang (a) • CTC	(Carbon Totra ablarida) is used for the	(pictogram) are used for	or fire extinguisher equipment.	
five caused by el	ectricity in a factory	Fire fighting equipme	ents-	
• CTC type fire	extinguisher it is also caused halon	1. Water type fine extinguisher		
type fire extingu	isher.	2. Soda acid fire extinguisher		
• In this carbon	tetra chloride (CCl ₄) or Bromo chloro	3. Foam type fire extinguisher		
di-fluoromethene	e (BFC) filled with air pressure.	4. Dry type powder fire extinguisher		
• The vapor gen	nerated by this device is poisonous so	5. CO_2 fire extinguisher		
that it is kept onl	y open place.	6. Carbon tetra chiorid	CD seed is a last is a last in the first f	
115. Class D fi	re extinguishers are commonly found	119. Full form of M	CB used in electrical wiring for	
in a cher	nical laboratory. They are for fires	(a) Miniature (Juse– Vircuit Breaker	
that invo	olve combustible metals, such as	(a) Miniature C (b) Mean Circu	it Breaker	
the geor	ni, inamum potassium and sourum. netric symbol for class D fire	(c) Minimum Current Breaker		
extinguish	neers is a/an	(d) Maximum (Current Booster	
(a) Yellov	w Star (b) Red Square	BARC Stipe	endiary Trainee Maintainer 2021	
(c) Green	Triangle (d) Blue Circle	DMRC Ma	intainer Fitter 21-2-2020, Shift-I	
	Tubewell Operator, 12-01-2019	Ans. (a) : Full form of	of MCB used in electrical wiring	
Ans. (a)		for protection purpose	is miniature circuit breaker.	
Fire class	Geometrical symbol	Miniature circuit	breaker (MCB)–MCB is an	
Class-A	Green Triangle	automatically operated	a electrical switch used to protect	
Class-B	Red Square	low voltage electrical	circuits from damage caused by	
Class-C	Diue Uircie Vallow Star	are typically rated up t	α a current unto 125 Amp	
Class-D	i chuw Stai	are typically fated up t	o a current apro 125 Amp.	

Fuse Vs MCB-Now days miniature circuit breakers	Ans. (d) : The fire of electrical equipments category is		
(MCBs) are much more commonly used in low voltage	class-D. Fire extinguisher is used for class-D is carbon		
electrical networks instead of fuse.	tetra chloride, it is also known as halon type fire		
120. Which gas is filled in a extinguisher cylinder–	extinguishers.		
(a) Air (b) Carbon di-oxide	125. Which of the following is not being included in		
(c) Hydrogen (d) Helium	the hand book?		
DMRC Maintainer Fitter 21-2-2020, Shift-I	(a) Fundamental information's		
Ans. (b) : Carbon dioxide gas is filled in a extinguisher	(b) Directional details		
cylinder.	(c) General defects		
Carbon dioxide is used in extinguishing a fire because it	(d) Factories act		
neither burns nor does it help in burning. It is also	RRCAT Stipendiary Trainee Maintainer 2019		
heavier than air, it insulators the burning substance by	UPRVUNL Technician Grade II Fitter 22-09-2015		
cutting the supply of oxygen.	Ans: (d) Factories act is not being includes in the hand		
121. Halon extinguishers are filled with:	DOOK. Hand back included following factors		
(a) water (b) liquefied noticeleum and	Fundamental information's		
(b) Inqueilled petroleum gas	 Fundamental informations Directional details 		
(c) Kerösene (d) aarban tatraahlarida	• Directional defants		
(d) carbon tetractionide DDR ALD 23 A1 2010 Shift I	• General defects		
Ang (d) + Halan time fire autinguishers are filled with	126. Match the following given lists :		
ans. (u): Halon type life extinguishers are linea with earbon tetra chloride or BromochlodiEluoro methane	LIST-I LIST-II (Tuno of fine) (Fuel)		
liquid It is specially used for electrically fire or metallic	(1 ype of Ine) (Fuel) A Class A fire 1 Cas & liquefied gas		
fire (class-D) but generally it is used for all type of	A. Class A life 1. Clas & iquened gas B. Class B fire 2. Wood		
fires	C Class C fire 3 Metals		
122 Doos not couse electric fire	D Class D fire 4 Flammable liquids		
(a) Loose connection	(a) $A=2$ $B=4$ $C=1$ $D=3$		
(b) Electric short-circuit	(a) $A-2$, $B-4$, $C-1$, $D-3$ (b) $A-1$, $B-2$, $C-3$, $D-4$		
(c) Open door	(c) $A-3$ $B-4$ $C-1$ $D-2$		
(d) Over loading	(d) $A-3$, $B-4$, $C-2$, $D-1$		
RRB ALP Fitter 23-01-2019. Shift-II	UPRVUNL Technician Grade II Fitter 22-09-2015		
Ans. (c): Open door does not cause of electric fires	Ans: (a)		
Causes of electrical fire–	(Type of fire) (Fuel)		
Loose connection	Class-A Wood		
• Electric short-circuit	Class-B Flammable liquid		
• Over loading	Class-C Gas and liquid gas		
• Wrong connection	Class-D Metals/Electric		
123. What type of fire extinguisher is used in case of	127. According to the factories act 1948, section 23.		
liquids fire-	Which machine is not a dangerous machine?		
(a) Class-A (b) Class-B	(a) Circular saw		
(c) Class-C (d) Class-D	(b) Milling machine used in metal trades		
RRB ALP Fitter 23-01-2019, Shift-II	(c) Power press other then hydraulic press		
UPSSSC Boring Technician 03-07-2022	(d) Grinding machine		
RRB Ranchi ALP Fitter 19-01-2003	UPRVUNL Technician Grade II Fitter 22-09-2015		
Ans. (b) :	Ans : (d) Factory Act 1948, section 23–This section		
Fire class Type of fire Fire extinguisher	states that the factory owners of managers can not allow		
Class-A Solid Water, sands, soda	him/her about the dangerous outer comes the relevant		
(carbonaceous) acid F.E.	ne cautions		
Class-B Liquid Foam type, CO ₂ F.E	The dangerous machine which are included in this		
Class-C Gases Dry powder F.E.	section-		
Class-D Electric fire/ CTC/CO ₂ E E	• Circular saw		
metallic fire	• Milling machine used in metal trades		
124 In which category is the fire of electrical	• Power press other than hydraulic press		
equipment included-	128 What is the range of electric current causes a		
(a) Class-E (b) Class C	heart condition which results in instant death?		
(c) Class-B (d) Class-D	(a) $10-20 \text{ mA}$ (b) $50-100 \text{ mA}$		
RRB ALP Fitter 23-01-2019, Shift-II	(c) $100-110 \text{ mA}$ (d) $20-50 \text{ mA}$		
MES Fitter tradesman 2015	NLC Technician 24-09.2022		
NTPC Fitter 2014	UPRVUNL Technician Grade II Fitter 22-09-2015		

Ans. : (a)		Ans : (d) Helps in accident control in factory/workshop		
Current	Effect of its	are-		
1 to 8 mA	It gives a feeling of shock, but it is not	• Automatic safety guard.		
9.15 m A	painful that is man can bear it.	• Interlock safety guard.		
8-15 mA	of the nervous nervous persists there	• The safety guard.		
	fore its tolerance do human personality	hazards and causes accidents?		
	dependent.	(a) Noise and vibrations		
15-20 mA	It gives a painful shock, muscle control	(b) Poor lighting and Poor ventilation		
	of the related nerve is not maintained	(c) Heat and Humidity		
	dies instantly.	(d) All of these (IOF Fitter 2015)		
129. Types o	f fire extinguishers for Class 'A' Fire:	Ans • (d) Eactor leading to industrial bazards and		
(a) Wa	iter filled extinguishers	causes of accidents are-		
(b) For (c) Spectrum	am or Dry powder or CO_2	• Noise and vibrations		
(d) Ha	lon, Carbon dioxide, dry powder and	Poor lighting		
vap	porizing liquid (CTC)	Poor ventilation		
IS	RO Technician-B Carpenter 27-11-2016	• Heat and humidity		
Ans (a) ·	RKB Ajmer ALP 22-05-2004	135. Indian Boiler Act, 1923 is applicable to		
Alls. (a) . Type	Fire extinguisher (FF)	(a) an objects (b) boilers more than 100 litres capacity		
Class-A	Water/sands/soda acid E E	(c) boilers more than 1000 litres capacity		
Class-B	$\frac{1}{1}$	(d) None of the above		
Class-C	Dry powder type Halon type	(MAZAGON DOCK Ltd. Fitter, 2013)		
Class-D	CTC(Carbon tetra chloride) F E	Ans: (b) Indian boiler act, 1923 is applicable to boilers		
130. Which	information sheet should be used as a	• Thickness of the boiler shell should not be less than 7		
safety s	tandard while doing electrical work–	mm.		
(a) Ext	tremely hot-do not come in contact	136. Which of the following safety measures is used		
(b) Ext	tremely dangerous	to promote the safety?		
(d) do not touch hot		(a) Excessive fine (b) Writing slogans		
Noida Metro Maintainer Fitter 2017		(c) Stopping the work (d) All of these BRO Vehicle Mechanic 2021		
Ans : (b) As work uses extr	a safety standard when doing electrical remely dangerous notice boards.	(MES Fitter Tradesman, 2015)		
131. The heat	at energy released is measure with the	Ans: (b) writing stogans is used to promote the safety		
help of		Safety symbols– 4 types–		
(a) Energ	rimeter (d) Anemometer	Prohibition symbols		
(c) Culor	ISRO Diesel Mechanic 27-11- 2016	Mandatory symbols		
Ans: (c) Ener	gy meter – Electrical energy	Warning symbols		
Therr	mometer – Temperature	Information symbols		
Anen	nometer – Heat energy	137. Which of the following is true if environmentally sound products are made		
132. Accordi	ing to the definition of "week" under	through efficient processes?		
the Fac	tory Act, 1948, it is a period of 7 days	(a) It is unprofitable, as long as recyclable		
beginning at midnight on		materials prices are soft		
(a) Sur (c) Sat	urday (D) Monday urday (d) Friday	(c) It is known as lean manufacturing (c) It can still be profitable		
(•) 544	(HAL Fitter, 2015)	(d) It is easier for repetitive processes than for		
Ans : (b) According to the definition of "week" under		product-focused processes		
the factory act	t, 1948, it is a period of 7 days beginning	NALCO Jr. Operative Trainee 2021		
at midnight on	1 WONDAY.	(<i>KRB</i> Chennai/Bangalore ALP, 27.10.2002)		
(a) Au	tomatic safety guard	Ans: (c) It environmentally sound products are made through the efficient processes it can still be profitable		
(b) Inte	erlock safety guard	138. In how many classes is the fire placed.		
(c) trip	safety guard	(a) Two (b) One		
(d) All	of these	(c) Four (d) Three		
	(RRB Patna ALP, 11.11.2001)	(IOF Fitter, 2016)		

Ans : (c) There are four classes of fires–	143. What do you use for respiratory protection–
1. Class A – Solid fuels	(a) Exhaust Fan (b) Ceiling Fan
2. Class B – Liquid fuels	(c) Filter respirators (d) None of the above
3. Class C – Gases fuels 4. Class D – Electric fires or motellic	<i>(IOF Fitter, 2013)</i>
4. Class D – Electric files of filetanic 130 What is used to extinguish a gas fire	Ans : (c) Respiratory protection-
(a) Dry powder fire extinguisher	Gas respirators
(b) C.T.C. fire extinguisher	Positive pressure respirators
(c) Water	• Automated respirators etc.
(d) All of above	Artificial respiration–There are four types of artificial
(IOF Fitter, 2014)	respiration.
Ans : (a) Dry powder type fire extinguisher–	1. Sylvester method
• In this type of machine powder is filled with air	2. Shafer method
• This powder is neither flammable nor an aid in	3. Mouth to mouth respiration
ignition	4. Artificial respiration devices
• It is used to extinguish class 'C' and class 'D' fires.	144. Not a cause of accident–
(A)	(a) In attention to dangerous
(Star	(b) Negligence
a too	(c) Respect for safety
	(d) Wrong use of equipment
POWDER	(RRB Chandigarh ALP, 25.05.2003)
	Ans : (c) Respect of safety is not cause of accident,
	while other options are cause of accident.
Ed In."	145. Which fire extinguisher is used to put out the
\smile	fire of oily substances-
Dry Powder Extinguishers	(a) Foam (b) Soda acid
	(c) C.T.C. (d) None of above
140. What should be done in case of fire in the workshop	NALCO Operator Boiler 2021
(a) Watch silently	(IOF Fitter, 2014)
 (a) Watch silently (b) Try to get out immediately 	(IOF Fitter, 2014) Ans : (a) Foam type fire extinguisher should be used to
 (a) Watch silently (b) Try to get out immediately (c) Switch off the electric main supply 	(IOF Fitter, 2014) Ans : (a) Foam type fire extinguisher should be used to put out the fire of oily substances (liquids fuels).
 (a) Watch silently (b) Try to get out immediately (c) Switch off the electric main supply (d) Information fire brigade immediately 	(IOF Fitter, 2014) Ans : (a) Foam type fire extinguisher should be used to put out the fire of oily substances (liquids fuels). 146. What chemicals are used in foam type fire
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02.

Measurement and Systems of Units

	HPSSC Fitter 20-10-2019
1. System of Units F.P.S., C.G.S.	Ans. (b) : 1 Yard = 3 feet
and M.K.S.	1 yard = 36 inches
	1 yard = 0.9144 mm
1 What is formula to colculate electric anarray	6. The unit of momentum is
1. What is formula to calculate electric energy (F)?	(a) kg m/s (b) N m/s
(E): (a) $F = nower \times time$	(c) $kg m/s^2$ (d) $N m/s^2$
(a) $E = power \times time$ (b) $E = voltage \times time$	$(c) \text{ kg.m/s} \qquad (d) \text{ N.m/s}$ $DSSSR Draughtsman (Mash.) 03.11.2022$
(b) $E = Voltage \land time$ (c) $E = Electric current × time$	DSSSD Draughtsman (Mech.) 05-11-2022
(d) $E = resistance \times time$	Ans. (a): The unit of momentum is kg-m/s.
UPSSSC Boring Technician 03.07-2022	Momentum = mass \times velocity
And (a) an Denne is the set of an anti-	or $= \mathbf{m} \times \mathbf{v}$
Ans. (a) : • Power is the rate of energy consumption	$=$ kg \times m/s
energy can directly be calculated as-	= kg-m/s
$P = \frac{E}{2}$	7. 45 degree is equal to how many radian:
t	(a) 0.785 (b) 1.57
$\mathbf{E} = \mathbf{P} \times \mathbf{t}$	(c) 6.28 (d) 1.05
Where $\vec{E} = Energy$ (in joule)	NFC Stinendiary Trainee Maintainer 2021
P = Power (in watt)	NCL Fitter 27-12-2020
t = Time (in second)	NCL Filler 27-12-2020
2 Which of the following is a unit of longth?	Ans. (a) : $180^{\circ} = \pi$ radian
2. Which of the following is a unit of fength: (a) Kilogram (b) Newton	$1^{\circ} = \frac{\pi}{1}$ radian
(a) Matra (d) Kalvin	$1 - \frac{1}{180}$ radian
(c) Meter (d) Kelvin MD ITI Training Officer 20 12 2022	π
RECH NE07 Maintainar (Fittar) 2010	$45^{\circ} = 45 \times \frac{\pi}{100}$
BECIL NEO/ Walltainer (Fitter) 2019	
Ans. (c): Metre is the unit of length.	= 0.785 radian
• Kilogram is the unit of mass.	8. What is the SI unit of temperature?
• Newton is SI unit of force.	(a) Celsius (b) Kelvin
• Kelvin is the unit of temperature.	(c) Fahrenheit (d) All of these
3. Convert 12 mm into inch–	NCL Fitter 27-12-2020
(a) 0.590 inch (b) 0.333 inch	Ans. (b) : The SI unit of temperature is Kelvin.
(c) 0.472 inch (d) 0.313 inch	• One Kelvin is formally defined as 1/273.16 of the
BECIL NE07 Maintainer (Fitter) 2019	thermodynamic temperature of the triple point of
Ans. (c) : $:: 1$ inch = 25.4 mm or 2.54 cm	pure water.
and 1 mm = $1/25.4$ inch	• The formula of changing Kelvin to Degree Celsius of
	Degree Fahrenheit is –
So the value of 12 mm = $12 \times \frac{12}{25.4}$	C = F - 32 = K - 273 15
12 mm = 0.472 inch	$\frac{1}{5} = \frac{1}{9} = \frac{1}{100} = \frac{1}{100}$
12 min 0.172 men.	
4. One intervalue is (a) 0.01 mm (b) 0.00001 mm	9. Which of the following is the relation between
(a) 0.01 mm (b) 0.0001 mm	the units of energy N-m/s and Watt?
(c) 0.0001 mm HPSSC Fitter 20_10_2019	(a) $1\frac{N-m}{m} = 0.36$ Watt (b) $1\frac{N-m}{m} = 3.60$ Watt
Ang (d) : 1 migron = 10^{-6} m	S = 0.50 Watt (0) 1 = 5.00 Watt
Ans. (d): 1 micron = 10 mi = $10^{-6} \times 10^3$ mm	N-m N-m
$-10^{-10} \times 10^{-101}$ mm	(c) $1\frac{1}{1} = 1$ Watt (d) $1\frac{1}{1} = 9.81$ Watt
= 0.001 mm	
	ISRO VSSC (Fitter) 14-07-2021 (4:30-6:30 pm)
5. Une yard is equal to how many inches?	Ans (a): $1^{N-m} - 1W_{ott}$
(a) 3 (b) 36	$\frac{1}{S} = 1 \text{ watt}$
(c) 30 (d) 12	Taking R.H.S.



19. Which is the base unit of measurement of	$\frac{1}{1} = 0.02125$	
length in British system?	Ans. (d): $\frac{1}{32} = 0.05125$	
(a) Meter	= 0.794 millimeter (mm)	
(b) Millimeter	= 0.0794 centimeter (cm)	
(c) Inch	24. Convert 12 mm into in	ch : -
(d) The imperial standard yard	(a) 0.0590 inch	(b) 0.333 inch
NLC Technician 24-09.2022	(c) 0.472 inch	(d) 0.313 inch
UPRVUNL (Fitter) 05.04.2021, 9:00 AM-12:00 PM	BR	O Vehicle Mechanic 2021
Ans. (d) : The yard is an English unit of length.		NMRC, 15-09-2019
1 yard = 36 inch	Ans. (c) : 1 inch = 25.4 mm	
	$1 \text{ mm} = \frac{1}{1 \text{ inch}}$	
= 0.9144 meter	25.4	
1 inch = 25.4 millimeter	$12 \text{ mm} = 12 \times \frac{1}{2} \rightarrow 0.472$	inch
= 2.54 centimeter	25.4	
20. One yard is equal to how many inches	12 mm = 0.472 inch	
(a) 72 Inch (b) 12 Inch	25. Value of the 1 micron	is-
(c) 3 Inch (d) 36 Inch	(a) 1/100 mm	(b) 1/10 mm
UPRVUNL (Fitter) 05.04.2021, 9:00 AM-12:00 PM	(c) 1/1000 mm	(d) 1/10000 mm
Ans. (d) : One yard = 36 inch	UPR	VUNL Fitter, 09-05-2015
= 3 feet	Ans. (c) : 1 micron = 10^{-6} met	er
= 0.9144 meter	$= 10^{-6} \times 10^{3} \text{ mm}$	
One feet = 12 inch	$= 10^{\circ} \text{ mm}$	
1 mile = 1760 yard	$=\frac{1}{10^3}$ mm	
21. One micrometer (μ) is equal to–	10^3	
(a) 0.001 Millimeter (b) 0.01 Millimeter	$=\frac{1}{1000}$ mm	
(c) 0.1 Millimeter (d) 0.0001 Millimeter	1000	
DMRC Maintainer Fitter, 19-04-2018	26. Match the following u	nits of length/distance in
Ans. (a) : One micrometer (μ) is equal to 0.001 millimeter (mm)	values in List–II	fresponding equivalent
$\frac{1}{1} = \frac{10^{-6}}{10^{-6}} m$		List_ II
$-10^{-6} \times 10^{3} \text{ mm} - 10^{-3} \text{ mm}$	Units of length/	Fauivalent values
$= 10^{\circ} \times 10^{\circ} \text{ mm} = 10^{\circ} \text{ mm}$	distance	Equivalent values
is used to measurement of temperature	A) 1 nanometre	i) 10^{-6} metre
22is used to measurement of temperature	B) 1 micrometre	ii) 10^{-12} metre
(a) Thermometer (b) Barometer	C) 1 angstrom	iii) 10^{-9} metre
(c) Calorimeter (d) Pyrometer	D) 1 nicometre	iv) 10^{-10} metre
DMRC Maintainer Fitter 19-04-2018	(a) (A)-(ii) (B)-(iii) (b)	$(i) = (i) = (D)_{-}(iv)$
Ans (d):	(a) (A) -(ii), (B) -(iii), (b) (A) -(iii) (B) -(i) (A) -(iii) (B) -(i) (A) -(iii) (B) -(i) (B) -	C) - (iy) (D) - (ii)
Instrument Annlication	(c) (A)-(iii), (B)-(ii), (C) (A)-(iii), (B)-(iii), (C) (A)-(iii), (C)-(iii), (C)-(iii), (C)-(C)-(C)-(C)-(C)-(C)-(C)-(C)-(C)-(C)-	C)- (i) (D)-(iv)
Pyrometer Temperature inside a furnace	(d) (A)-(iii), (B)-(i), (d)	C)- (ii), (D)-(iv)
Thermometer Temperature	NALCO Jr	•. Operative Trainee 2021
Barometer Atmospheric pressure	Tubev	vell Operator, 12-01-2019
Calorimeter Heat flow	Ans. (b)	_
1 [Numerator]	Units of length/distance	Equivalent values
23. $\frac{1}{32}$ " = $\left \frac{1}{\text{Decimal aquivalant}}\right $	(A) 1 nanometer	10^{-9} meter
	(B) 1 micrometer	10^{-6} meter
(a) 0.25 " (b) 0.5 "	(C) 1 angstrom	10^{-10} meter
(c) $0.0625^{\circ\circ}$ (d) $0.03125^{\circ\circ}$	(D) 1 nicometer	10^{-12} meter

27. Match the physical quantities in List-I with Acceleration = Rate of change of velocity their corresponding units of measurement in $a = \frac{\overline{dv}}{\overline{v}}$ List-II. dt List – I List – II $\frac{d}{dt} \times \frac{ds}{dt} = \frac{d^2s}{dt^2}$ **Physical Quantities** Units (i) kgms⁻² (A) Mass 31. SI unit of length (ii) $\overline{m^3}$ (B) Density (a) Millimetre (b) Kilometre (c) Metre (d) Centimetre (C) Weight (iii) kg HAL Apprentice 10.11.2022 (D) Volume $(iv) kgm^{-3}$ ISRO Technician-B Fitter 02-06-2019 Ans. (c) : (a) (A)-(iv), (B)-(iii), (C)-(i), (D)-(ii) **Physical quantities** SI units (b) (A)-(i), (B)-(ii), (C)-(iii), (D)-(iv) 1. Length Meter (c) (A)-(iii), (B)-(iv),(C)-(i), (D)-(ii) 2. Mass Kilogram (d) (A)-(ii), (B)-(i), (C)-(iv), (D)-(iii) 3. Time Second **NALCO Operator Boiler 2021** 4. Ampere Electric current Tubewell Operator, 12-01-2019 5. Temperature Kelvin Ans. (c) 6. Intensity of light Candela **Physical quantities** Units 7. Quantity of substance Mole (A) Mass kg Unit of energy is : 32. (B) Density kgm⁻ (a) Watt (b) Newton kgms⁻² (C) Weight (c) Newton per meter (d) Joule ISRO Technician-B Fitter 21-02-2015 (D) Volume m^3 Ans. (d) : The unit of moment of force in SI unit is : 28. **Physical quantities** Units (a) Newton meter (b) Kgm Energy Joule (d) Newton centimeter (c) Kfgm Power Watt ISRO Technician-B Fitter 04-03-2018 Force Newton Ans. (a): Moment of force is defined as the product of Pressure Pascal force and perpendicular distance from the axis. Surface tension Newton per meter Moment of force = Force \times Distance 33. Unit of current is : • Units of force is Newton-meter. (b) Ohm (a) Volt 29. The density of a body is defined as (d) Joule (c) Ampere (a) Force per unit volume ISRO Technician-B Fitter 21-02-2015 (b) Mass per unit volume Ans. (c) : (c) Pressure per unit volume **Physical quantities** Units (d) Acceleration per unit volume Current Ampere ISRO Technician-B Fitter 04-03-2018 Resistance Ohm Ans. (b) : The density of a body is defined as mass per Voltage Volt unit volume. Energy Joule $Density(\rho) = \frac{Mass(m)}{Volume(v)}$ 34. Convert 60° Celsius to Fahrenheit : (a) 100°F (b) 140°F • Unit of density - kg/m³ (c) 160° F (d) 172°F • Density of water at 20°C is 998 kg/m³ or 1000 kg/m³ ISRO Technician-B Fitter 21-02-2015 Velocity is the rate of change of : 30. Ans. (b) : We know that, (b) Displacement (a) force $\frac{C-0}{5} = \frac{F-32}{9}$ (c) Viscosity (d) acceleration ISRO Technician-B Fitter 04-03-2018 $\frac{C}{5} = \frac{F - 32}{9}$ Ans. (b) : Velocity is the rate of change of or displacement. $\frac{60}{5} = \frac{F-32}{9}$ Velocity = Rate of change of displacement $V = \frac{ds}{ds}$ $F = 108 + 32 = 140^{\circ}$ dt

35. Poise is the unit of :	Ans. (a) : The physical quantities which do not depend
(a) Energy (b) Viscosity	on any other physical quantities for their measurements
(c) Pressure (d) none of these	are known as fundamental quantities.
BPCL Operator (Field) 2016	Fundamental quantity Unit
ISRO Technician-B Fitter 21-02-2015	Length meter
Ans. (b) : Units of viscosity–	Mass kilogram
- In SI system - N-sec	Flectric current Ampere
• III SI System – $\frac{1}{m^2}$	Temperature Kelvin
Dvne-sec	Intensity of light Candela
• In CGS system = $\frac{1}{cm^2}$ or poise	Quantity of substance Mole
N – sec	Pressure is not a fundamental unit
• One poise = $0.1 \frac{1}{m^2}$	41 The base unit of length as per SI is the
36 Quantity of matter contained in a body is	(a) Millimeter (b) Meter
so. Quantity of matter contained in a body is called.	(c) Kilometer (d) Centimeter
(a) Mass (b) Weight	BEML 2022
(c) Density (d) Volume	ISRO Technician-B Turner 21.02.2015
ISRO Technician-B Fitter 23-02-2020	Ans. (b) : The base unit of length as per SI is the
Ans. (a) : Quantity of matter contained in a body is	meter.
called mass. It is also a measure of the body's inertia.	1 kilometer = 1000 meter
• SI unit of mass is kilogram (kg) and in CGS is gram	1 meter = 100 centimeter
Weight –Weight of an body is the force acting on the	1 centimeter = 10 millimeter
body due to gravity.	42. The standard temperature at which
37. One micron is equal to Centimetre.	measurement shall be taken is—
(a) 1/1000 (b) 1/100	$ \begin{array}{c} (a) \ 30^{\circ} C \\ (b) \ 15^{\circ} C \\ (c) \ 20^{\circ} C \\ (c) \ c) $
(c) 1/10 (d) 1/10000	(C) 20 C (0) 25 C (0) 25 C (0) 12 2017
ISRO Technician-B Fitter 22-12-2012	ISKO Technician-B Turner 10.12.2017
Ans. (d) : 1 micron = 10^{-6} meter	Ans. (c) : The standard temperature at which measurement shall be taken is 20° C or 293.15 K
$= 10^{-6} \times 10^2$ centimeter	A2 SL = site f = sheite in
10-4 1	43. SI unit of velocity is $(1) - m/r^2$
$= 10^{\circ} = \frac{10000}{10000}$ centimeter	$\begin{array}{c} (a) m/s \\ (b) m/s \\ (c) H \\ (c) m/s \\ ($
38 is the unit of relative density.	(c) Kg/s (d) s/m
(a) gm/cc (b) m/s	RKB ALP Heat Engine 08-02-2019
(c) kg/cm^2 (d) None of these	Ans. (a) :
ISRO Technician-B Fitter 22-12-2012	Physical quantity Unit
Ans. (d) : Relative density is a ratio of same dimension	Velocity m/s
quantities. So it does not have a unit.	Acceleration m/s ²
Density of substance	Force kg-m/s ² or Newton
Relative density = $\frac{1}{\frac{1}{\frac{1}{\frac{1}{\frac{1}{\frac{1}{\frac{1}{\frac{1}$	Weight kg-m/s ² or Newton
Polotivo dongity of water is 1	Mass kg
• Relative density of water is 1.	Pressure kg/ms^2 or N/m^2
$\begin{array}{c} \textbf{39.} \textbf{One inch is equal to :} \\ \textbf{(a)} 24.5 \text{ mm} \\ \textbf{(b)} 25.4 \text{ mm} \\ \textbf{(b)} 25.4 \text{ mm} \\ \textbf{(c)} \textbf{(c)} \textbf{(c)} \\ \textbf{(c)} \textbf{(c)} \textbf{(c)} \\ \textbf{(c)} \textbf{(c)} \textbf{(c)} \\ \textbf{(c)} \textbf{(c)} \textbf{(c)} \\ \textbf{(c)} \\ \textbf{(c)} \textbf{(c)} \\ \textbf{(c)} $	44. Unit of resistance in electrical circuit is–
(a) 24.5 mm (b) 25.4 mm	(a) ampere (b) ohm
(c) 25.2 mm (d) 24.4 mm NPCH_ST/(Fitter) Dewethbete 16 10 2022	(c) ohm/ampere (d) ampere/ohm
TAT CILL ST/(Fitter) Rawatoliata 10.10.2022	
IOCL 2020	RRB ALP Heat Engine 08-02-2019
IOCL 2020 ISRO Technician-R Fitter 28-06-2016 Shift-I	RRB ALP Heat Engine 08-02-2019
IOCL 2020 ISRO Technician-B Fitter 28-06-2016, Shift-I Ans. (b) : 1 inch = 2.54 cm	RRB ALP Heat Engine 08-02-2019
IOCL 2020 ISRO Technician-B Fitter 28-06-2016, Shift-I Ans. (b) : 1 inch = 2.54 cm = 25.4 mm	RRB ALP Heat Engine 08-02-2019 Ans. (b) : Physical quantity Unit Electric current
IOCL 2020 ISRO Technician-B Fitter 28-06-2016, Shift-I Ans. (b) : 1 inch = 2.54 cm = 25.4 mm 1 feet = 12 inch	RRB ALP Heat Engine 08-02-2019 Ans. (b) : Physical quantity Unit Electric current Ampere Designation on the second secon
IOCL 2020 ISRO Technician-B Fitter 28-06-2016, Shift-I Ans. (b) : 1 inch = 2.54 cm = 25.4 mm 1 feet = 12 inch 40 Which one of the following is not a	RRB ALP Heat Engine 08-02-2019 Ans. (b) : Physical quantity Unit Electric current Ampere Resistance Ohm Valeace Valeace
IOCL 2020 ISRO Technician-B Fitter 28-06-2016, Shift-I Ans. (b) : 1 inch = 2.54 cm = 25.4 mm 1 feet = 12 inch 40. Which one of the following is not a fundamental unit?	RRB ALP Heat Engine 08-02-2019 Ans. (b) : Physical quantity Unit Electric current Ampere Resistance Ohm Voltage Volt
IOCL 2020 ISRO Technician-B Fitter 28-06-2016, Shift-I Ans. (b) : 1 inch = 2.54 cm = 25.4 mm 1 feet = 12 inch 40. Which one of the following is not a fundamental unit? (a) Pressure (b) Length	RRB ALP Heat Engine 08-02-2019 Ans. (b) : Physical quantity Unit Electric current Ampere Resistance Ohm Voltage Volt Capacitance Farad
IOCL 2020 ISRO Technician-B Fitter 28-06-2016, Shift-I Ans. (b) : 1 inch = 2.54 cm = 25.4 mm 1 feet = 12 inch 40. Which one of the following is not a fundamental unit? (a) Pressure (b) Length (c) Mass (d) Time	RRB ALP Heat Engine 08-02-2019Ans. (b) :Physical quantityUnitElectric currentAmpereResistanceOhmVoltageVoltCapacitanceFaradMagnetic fluxWeber

45.	Unit of indu	ctance is :	Ans. (d) : Stress is defined as load per unit area of	
	(a) Henry	(b) Ohms	cross-section.	
	(c) Pascal	(d) Henry/Pascal	Stress - Load	
		RRB ALP Heat Engine 08-02-2019	$\frac{1}{Cross-sectional area}$	
		NTPC Fitter 2016	Unit of stress = $\frac{\text{Newton}}{\text{Or Pascal}}$	
Ans.	(a):		m ² m ²	
Phys	sical quantity	Unit	• Stress is an internal resistance against external	
Indu	ctance	Henry	changes like force bending, torsion etc.	
Elas	tria abarga	Stemen	• It can be both tensile or compressive in nature.	
Elec	inc charge		50. Which of the following is a direct measuring	
Liim	inous flux	Lux Lumen	tool	
16	Unit of cone	oitanao is :	(a) Iry Square (b) Steel Kule (c) Streight Edge (d) Ding Course	
40.	(a) Henry	(b) Ohms	(c) Straight Euge (u) King Gauge	
	(c) Pascal	(d) Farad	Ang to (b) Direct measuring tool It is determined the	
	(c) I useul	RRB ALP Heat Engine 08-02-2019	actual dimension and size of a workpiece.	
Ans.	(d):		For example–Steel rule, Vernier caliper, Micrometer,	
Phys	sical quantity	Unit	Indirect measuring tool Transfer the measurement	
Capa		Farad	from the workpiece to the direct measuring tool then	
Resi	stivity	Ohmmeter	the comparison is made.	
Conc	luctivity	Siemens per meter	For example-Try square, straight edge, all gauge,	
Elec	tric flux	Volt-meter	calipers etc.	
Elec	tric field	volt per meter or	51. The value of one micro-inch is	
47	0 .	per coulomb	(a) 0.000001" (b) 0.00001"	
47.	One micro	meter is equal to how much	(c) 0.0001" (d) 0.001"	
	(a) 10^3	(b) 10^2	BHEL 2020	
	(c) 10^{-2}	(d) 10^{-3}	ISRO Technician-B Fitter 04-3-2018	
	IS	RO Technician-B Fitter 23-02-2020	Ans: (a) 1 micro-inch = $0.000001''$	
Ans.	(a): 1 micron	$neter = 10^{-6} m$	1 square-incn = 6.45 cm 1 square fact = 0.002 m^2	
	1 nanomete	$er = 10^{-9} m$	1 square feet = 0.093 m^2	
	=	$10^{-6} \times 10^{-3}$		
2	=	10 ⁻³ micrometer	52. What is the SI unit of Temperature?	
10-3	micrometer =	1 nanometer	(a) Celsius (b) Fahrenheit	
.: l	micrometer =	10 [°] nanometer	(c) Kelvin (d) Joule	
48.	1 mm is equ	al to	ISRO Technician-B Fitter 10-02-2019	
	(a) 1000 mi	crons (b) 100 microns	Ans. (c) : SI unit of temperature is kelvin.	
	(c) 10 micro	ons (d) 10000 microns	Temperature conversion	
	NPCIL	ST/(Fitter) Rawatbhata 16.10.2022	C-0 F-32 K-273	
r	ISF	RO Technician-B Turner 02.06.2019	$\frac{100}{100} = \frac{180}{180} = \frac{100}{100}$	
Ans	: (a) $1m = 10$	⁻³ mm	K = C + 273	
$= 10^{-5} \times 10^{\circ}$ microns		15	$\frac{1}{52}$ The base unit of length as non S L units is	
$= 10^{\circ}$ microns			55. The base unit of length as per 5.1. units is	
1 mm = 1000 microns		ons	$ \begin{array}{c} (a) & \text{inclu} \\ (b) & \text{optimates} \\ (c) & \text{optimates} \\ (d) & \text{mates} \\ \end{array} $	
49. Stress is defined as		ined as	(c) centimetre (d) metre	
	(a) Load $\times a$	time	ISKU Technician-B Turner 22.04.2018	
	(c) Force \times	distance	Ans. (d) : The base unit of length as per SI unit is	
	(d) Load/are	ansiance a of cross section	Other units of length kilometer continuator millimeter	
(d) Load/area of cross section			inch foot word mile etc.	
	ICT	20 Technician_R Turner 27.11.2014	LINCH TEEL VARD THREETC	

54.	Current can be measu	red by	59.	The corresponding v	alue of -40°C in degree
	(a) Riyometer	(b) Ammeter		Fahrenheit equals :	(1) $40^{0}\Gamma$
	(c) Volmeter	(d) Wattmeter		(a) $0^{\circ}F$	(b) 40° F (d) 100° F
	IGCAR Stipendiary	Trainee Maintainer 2021		(0) = 401	SAIL Fitter 17-11-2019
	DMRC Maintaine	r Fitter 21-2-2020, Shift-I	Ans.	(c) : We know that,	
Ans.	(b) : Current is measured	d by ammeter.		C-0 $F-32$	
Elect	trical instrument	Measurement		5 9	
Amn	neter	Current	Give	n, $C = -40^{\circ}$	
Ohm	meter	Resistance		$\frac{-40-0}{5} = \frac{F-32}{5}$	
Watt	meter	Power in circuit		5 9 $F = -40^{\circ}$	
Volti	meter	Potential difference	60	$\frac{1}{25.4}$ mm is equal to \cdot	
Mult	imeter	Current, Resistance and	00.	(a) 1 cm	(b) 2.5 inches
		voltage		(c) 1.0 inch	(d) None of these
55.	ISO is an acronym for	:		() 0.54 1.1	SAIL Fitter 17-11-2019
	(a) International standa	ards organisation	Ans.	(c): $2.54 \text{ cm} = 1 \text{ inch}$	
	(b) International organ	isation for standardisation	61	Work is usually red	auired to be held in a
	(c) Indian standards or	ganisation	011	vertical positions fo	or laying out. For this
	(d) Indian organisation	for standardization		purpose this is clampe	ed to
	ISRO Techni	cian-B Welder 10.12.2017		(a) Surface plate	(b) An angle plate
Ans.	(b) : ISO is an ad	cronym for International		(c) A. V -block	(d) A machine ded BDL Technician 2022
Orga	nization for standardiz	zation. The ISO makes		UPRVUNL Technician	1 Grade II Fitter 22-09-2015
stand	lards and guidlines for a	variety of businesses and	Ans	: (b) An angle plate is a	90° section of cast steel. It
purp	oses publishes technical i	eports.	is us	ed to hold work that ca	nnot be held in any other
• It v	vas founded on 23 Februa	ary 1947.	way.	ale plate is also used for	vertical reference plane
56.	Thermocouples are	used for measurement	• Sur	face plate is used for a h	orizontal reference plane
	of		• V-l	block is used to hold rour	nd rods or pipes.
	(a) resistance	(b) voltage	62.	For taking both taper a	and angular measurements
	(c) pressure	(d) temperature		which of the following	g tools can be used?
	RRB ALP Mechanic Mot	or Vehicle 23-1-2019, Shift-III		(a) Sine bar	(b) Bevel protractor
Ans	: (d)			(c) Auto collimator	(d) Combination set
Instr	ruments N	Ieasurement	Ans	• (a) For taking 1	both taper and angular
Ther	mocouples I	emperature	meas	urement sine bar can be	used.
Volt	meter V	Voltage	• Sin	e bar is used in conjunct	tion with slip gauge blocks
Baro	meter P	ressure	for p	recise angular measurem	ent.
57.	The SI unit of pressur	e is-	• Be	vel protractor and auto	collimator is also used to
	(a) Newton	(b) Joule	angu	lar measurement.	
	(c) Dyne	(d) Pascal	• Co	mbination set has main the	hree parts-
	RR	B ALP 23-1-2019, Shift-II	1. Ce	otractor head	
Ans.	(d) : SI unit of pressure	= Pascal or N/m ²	$\frac{2.11}{3}$ So	uare head	
MKS	S unit of pressure = kgf/m	1 ² 2	<u>63.</u>	1 square meter is	equal to which of the
CGS	unit of pressure = Dyne/	cm		following	equal to which of the
• Au	ery high temperature (1)	ike temperature inside a		(a) 11.764 square feet	t (b) 10.00 square feet
furna	ace) is measured by pyror	neter		(c) 10.50 square feet	(d) 10.764 square feet
58.	1 micron = mn	1		$\frac{UPRVUNL}{(1)}$	<i>TG II FITTER 09-11-2016</i>
	(a) 0.1	(b) 0.01	Ans	$: (a) 1 m^2 = 10^{\circ} cm^2$	
	(c) 0.001	(d) 0.0001		$=\frac{10^4}{10^4}$ feet ² (::	1 feet = 30.48 cm)
		SAIL Fitter 17-11-2019		30.48	
Ans.	(c) : 1 micron = 10^{-6} m		.	$= 10.764 \text{ feet}^2$	
	$= 10^{-6} \times 10^{3}$ millimet	er	1 squ	hare meter = 10.764 squa	re teet
	$= 10^{\circ} \text{ mm}$		64.	Which one of the follo	owing is not correct?
	= 0.001 mm				

(a) Ohm Volt	• IHP (Indicated horse power) is the actually generated
(a) $Onm = \frac{1}{Ampere}$	power by the engine.
Coulomb	• BHP is always less than IHP.
(b) Ampere = $\frac{country}{country}$	IHP = BHP + FHP
Coulomb	where, FHP = Friction horse power
(c) $Volt = \frac{Coulomb}{Loulo}$	70. Decibel (db) is a unit used to measure:
Joule	(a) Light (b) Sound (c) Frequency (d) None of the above
(d) Coulomb = $\frac{3000}{11}$	ISRO Grinder 27-11-2016
Volt NEC Stinandiany Trainag Maintainag 2021	Ans : (b) Decibel (db) is a unit used to measure sound
D M P C Maintainer Technician 2006	• A whisper is about 30 db and a normal conversation is
Ans : (a) All given option is correct	about 60 db.
Ans: (c) An given option is correct.	• In industrial areas, the permissible limit is 75 db for
Except Volt = $\frac{\text{Coulomb}}{\text{Volt}}$	daytime and 70 db at night.
Joule	• Noise about 70 db over a prolonged period of time
65. One micron is equal to which of the following-	may start to damage our hearing.
(a) 0.0111111 (b) 0.00111111 (c) $0.0001mm$ (d) $0.10mm$	• Loud noise above 120 db can cause immediate harm
DMRC Maintainer Fitter 20-07-2014	to our ears.
Ans : (b) 1 micron = 10^{-6} m	71. What is the material of surface plate?
$-10^{-6} \times 10^{3}$ mm	(a) Mild steel (b) Tool steel
$= 10^{-3} \text{ mm}$	(c) High carbon steel (d) Granite
= 10 mm	DMRC Maintainer Fitter 2017
= 0.001 mm	the main horizontal reference plane for precision
66. Which of the given is not a vector?	inspection
(a) Force (b) Momentum (c) Mass (d) Velocity	• Surface plate is made by granite or cast iron
ISRO Diesel Mechanic 27-11- 2016	• Surface plate is also used as baseline for all
Ans : (c) Scalar quantities are defined by magnitude	measurements to a workpiece.
only. Ex–Mass, time, energy, density, volume, speed,	72. One micron =cm
distance etc.	(a) 0.001 (b) 0.0001
• Vector quantities are defined by both magnitude as	(c) 0.01 (d) 0.00001
well as direction.	ISRO Technician-B Fitter 20-11-2016
Ex-Velocity, Acceleration, Force, Momentum,	Ans : (b) 1 micron = 10^{-6} m
Displacement etc.	$= 10^{\circ} \times 10^{\circ} \text{ cm}$
67. Units for Emission standards	= 10 cm = 0.0001 cm
(a) g/km (b) km/g (a) g/km (d) $km g$	73 The taner of internal part can be measured
$(C) g-KIII \qquad (U) KIII-g$ $ISRO Diasal Machanic 27-11-2016$	with the help of .
Ans \cdot (a) Units for emission standard is α/km	(a) Sine bar
68 is the rate at which work is done in a	(b) Combination set
specific time	(c) Slip gauge and balls of standard dimension
(a) Torque (b) Power	(d) Dial gauge
(c) Efficiency (d) Force	DMRC Maintainer Fitter 20-07-2014
ISRO Diesel Mechanic 27-11- 2016	Ans: (c) The taper of internal part can be measured
Ans : (b) Power is the rate at which work is done in a	dimension
specific time.	 Slin gauge is also known as gauge block or Johnson
$Power = \frac{Work}{V}$	gauge
Time	• Sine bars should not be used for angle greater than
Unit of power= Joule or Watt	60°.
Sec Sec	74. Dynamometer is a device which is used to
• One horse power = 746 watt.	measure following?
69. BHP of an engine is measured by:	(a) Chip thickness ratio
(a) Torque wrench (b) Dynamometer	(b) Force during metal cutting
(c) Tachometer (d) Odometer	(c) Decay of cutting tool
ISKU Iecnnician -Motor Mechanic 2016	(d) Deflection of cutting tool
Ans: (b) BHP (Brake horse power) of an engine is	BARU Stipendiary Trainee Maintainer 2021
DID is the neuron available to do worful work	DMKC Maintainer Fitter 20-07-2014
• DITE IS THE DOWEL AVAILABLE TO DO USEFUL WOLK.	

Ans : (b) Dynamometer is used to measure force during	Ans : (b)
metal cutting or frictional resistance.	Physical properties Unit
Types of dynamometer-	Current Ampere
1. Absorption dynamometer –Prony brake	Voltage Volt
dynamometer, Rope brake dynamometer, Hydraulic	Resistance Ohm
dynamometer.	Power Watt
2. Transmission dynamometer–Epicyclic train	81. Who Invented Universal Standard Time?
dynamometer, Torsion dynamometer, Belt	(a) Enrico Fermi
transmission dynamometer.	(b) Adolf Gaston Eugen Fick
75. 2500mm is equal to following–	(c) Sandiola Fleming (d) Benoit Fourneyron
(a) 250cm (b) 25dm	(u) Benon Fourneyron (IOF Fitter 2015)
(c) 2.5m (d) All of the above	(101 Tuter, 2013)
DMRC Maintainer Fitter 20-07-2014	sandford fleming
Ans : (d) 1 m = 1000 mm	Universal time is a time standard based on Earth's
1 dm = 100 mm	rotation. While originally it was means solar time at 0°
1 cm = 10 mm	longitude.
2500 mm = 250 cm = 2.5 m = 25 dm	• Sandford fleming was Canada's foremost railway
76. How many decimeter is in one meter	construction engineer and scientist.
(a) 100 (b) 10	82. Kilowatt hour is a unit of :
(c) 1 (d) 1000	(a) Mass (b) Time
(RRB Mumbai ALP, 0.3.06.2001)	(c) Electric energy (d) Electric power
DRDO Turner.2016	DRDO Machinist.2016 (CRDE Countable Two degrees 201()
Ans : (b) $1 \text{ m} = 10 \text{ dm}$	(CRPF Constable Tradesman, 2016)
1 dm = 10 cm	Kilowatt hour is a composite unit of energy equal to
1 cm = 10 mm	one kilowatt sustained for one hour
77 How many centimeter in one inch	• SI unit of power is watt
(a) 25.4 (b) 0.254	• 1 kilowatt-hour is equal to 3.6×10^6 joule.
(c) 2.54 (d) 0.0254	• Kilowatt-hour is a commercial unit of power
(IOF Fitter, 2016)	83 1 kg/cm ² pressure is equivalent to
Ans : (c) 1 inch = 2.54 cm	(a) 0.1 bar (b) 1.0 bar
= 25.4 mm	(c) 10.0 bar (d) 100.0 bar
= 0.0254 m	(IOF Fitter, 2014)
78. The value of one kilowatt hour is	Ans : (b) 1 kg/cm^2 pressure is equivalent to 1 bar.
(a) $3.6 \times 10^6 J$ (b) $3.6 \times 10^3 J$	• Atmospheric pressure is represented by atm.
(c) 10^{3} J (d) 10^{5} J	• Bar is the unit of pressure that is almost similar to the
(RRB Gorakhpur ALP, 21.10.2001)	atmospheric unit.
Ans: (a) One kilowatt hour-	1 atm = 101.325 kPa
I	1 bar = 100 kPa
$=1000 \xrightarrow{3} \times 60 \times 60 \text{ sec}$	1 bar = 0.986923 atm
$-26 \times 10^5 \text{ J}$	84. How many watt in one horse power
-30×10^{-5} J -2.6×10^{6} J	(a) 1000 (b) 750
$= 5.0 \times 10^{\circ} \text{ J}$	(c) 746 (d) 748
79. The measurement of length is determined in	(RRB Chennai/Bangalore ALP, 27.10.2002)
(a) am (b) m	Ans: (c) Horse power is the unit of power which is
$ \begin{array}{c} (a) & (b) & (b) & (c) \\ (a) & (c) & (c) & (c) \\ (a) & (c) & (c) \\ (c) & (c) $	generally used to measuring power of pump or motor.
(C) mm (G) Km DBCAT Stinon diary Trainag Maintainag 2010	• One norse power is equal to 746 watt. It is equivalent
KNUAT Superiorary Trainee Maintainer 2019	95 Unit of force is :
DRDU IUINER.2010 (MFS Fitter Tradesman 2015)	(a) Farad (b) Farmi
Ans. (b) The manufacture of length is determined in	(a) Falau (b) Fellin (c) Newton (d) Rutherford
metric system from meter	MP ITI Training Officer 20 12 2022
Other unit of length kilometer continueter millimeter	(RRB Aimer ALP. 23.05.2004)
inch feet vard etc	Ans : (c) Unit of force is newton
90 What is a unit of America?	• Fermi is a small practical unit of distance. It is used
ov. what is a unit of Ampere:	for measuring nuclear size
(a) Voltage (b) Cullelli (c) Resistance (d) Dower	• Farad is the unit of capacitance
$(U) \text{resistance} \qquad (U) \text{resistance} \qquad (U) \text{resistance} \qquad (U) \text{resistance} (U) \text{resistance} $	• Rutherford is the unit of radioactivity
(<i>nal ruler</i> , 2015)	

86. One carbon credit is equivalent to-	Ans : (c)
(a) 10 kg CO_2 (b) 100 kg CO_2	Medium Speed of light
(c) 1000 kg CO_2 (d) $10,000 \text{ kg CO}_2$	Vacuum 3×10^8 m/s (highest)
(<i>IOF Fitter</i> , 2015)	Water $2.25 \times 10^{\circ} \text{ m/s}$
Ans : (c) Carbon credit is a permit that allows the	Glass $2 \times 10^{\circ} \text{ m/s}$
company that holds it to emit a certain amount of	Rock salt 1.96×10^8 m/sTurmouting oil 2.04×10^8 m/s
carbon dioxide or other greenhouse gases.	$\frac{1 \text{ urpentine oil}}{2.04 \times 10 \text{ m/s}}$
• One carbon credit is equivalent to one ton of CO ₂ or	92. One parsec, unit for measuring distances related
1000 kg CO ₂ .	to stars, equals to : (a) 4.25 light magnetic (b) 2.25 light magnetic
• Carbon credit is the difference between the carbon	(a) 4.25 light year (b) 5.25 light year (c) 4.50 light year (d) 2.05 light year
emissions allowed and actually emitted carbon.	(C) 4'50 light year (C) 5'05 light year (MFS Fitter Tradesman 2015)
87 Which unit of the measurement is multiplied by	Ans · (b) Parsec is the unit for expressing distance to
0.39 to get inch	stars and galaxies used by astronomers
(a) Millimeter (b) Centimeter	• It represents the distance at which the radius of
(c) Meter (d) Decimeter	earth's orbit subtends an angle of one second of arc.
NLC Technician 24-09.2022	• 1 parsec = 3.26 light year
(RRB Gorakhpur ALP, 14.04.2002)	$= 3.086 \times 10^{16} \text{meter}$
Ans : (b) 1 inch = 2.54 centimeter	• 1 light year = 9.46×10^{15} meter
	93. Light year is unit of :
$1 \text{ centimeter} = \frac{1}{2.54} \text{ inch}$	(a) Distance (b) Time
2.54	(c) Age (d) Intensity of light
	(Sail Bokaro Steel Plant, 2016)
88. Unit of work is :	DRDO Machinist.2016
(a) Joule (b) Newton	(RRB Chennai ALP, 06.06.2010)
(c) Watt (d) Dyne	Ans: (a) Light year is the unit of distance. Light year
VIZAAG Steel Fitter, 2015	is a large unit of length used to express astronomical
Ans: (a) Work = Force \times Displacement	distance. 1 light waar = 0.46×10^{15} mater
= kg-m/s ⁻ × m	$1 \text{ light year} = 9.40 \times 10^{-10} \text{ little}$
= N - M	• Falsec is the largest unit of astronomical distance
= Joule Newton = Unit of force in SL system	1 lum distance means t
Newton = Unit of force in SI system	94. I km distance means : (a) 100 m (b) 1000 cm
Watt- Unit of nower in SL system	(a) 100 m $(b) 1000 cm$
80 Annuarizatalu kan much is a harmal of sil a	DRDO Turner.2016. (IOF Fitter. 2013)
(a) 121 litra (b) 150 litra	
(a) 151 fifte (b) 155 fifte (c) 179 litre (d) 201 litre	Ans: (c) $1 \text{ km} = 1000 \text{ m}$
$(C) 175 \text{ Here} \qquad (U) 201 \text{ Here} \\ (RRR 4 Hahabad 4 I P 00 12 2007)$	$= 1000 \times 100 \text{ cm}$ = 1000 × 100 × 10 mm
$(\mathbf{A} \mathbf{B} \mathbf{A} \mathbf{n} \mathbf{a} \mathbf{a} \mathbf{b}) (\mathbf{h}) (\mathbf{h)) (\mathbf{h}) (\mathbf{h)} (\mathbf{h)} $	
Ans: (b) One barrer of $0n = 138.987$ http://	95. One picogram equals to- (a) 10^{-6} gram (b) 10^{-9} gram
≈ 139 nuc One barrel of oil = 42 gallon (in US)	(a) 10^{-12} gram (b) 10^{-15} gram (c) 10^{-15} gram
One barrel of oil = 35 gallon (in UK)	BRO Vehicle Mechanic 2021
00 Which of the following is not connectly metabod?	(RRB Patna ALP, 11.11.2001)
90. which of the following is not correctly matched:	Ans: (c) One picogram = 10^{-12} gram
(a) Knot – unit of measurement of speed of a sinp (b) Nautical mile – Unit of distance used in	1 microgram = 10^{-6} gram
(b) Natical line – Onit of distance used in	1 nanogram = 10^{-9} gram
(c) Angstrom - Unit of wavelength of light	1 femtogram = 10^{-15} gram
(d) Light year - Unit of measurement of time	96. The size of nano-particle lies between which of
(d) Eight year of the of the distribution of the (NTPC Fitter, 2014)	the following?
Ans: (d) Correctly matched	(a) From 100 n.m. to 1000 n.m.
Light year – Unit of measurement of distance	(b) From 0.1 n.m. to 1 n.m.
Angstrom – Unit of wavelength of light	(c) From 1 n.m. to 100 n.m.
Nautical mile – Unit of distance used in navigation	(a) From 0.01 n.m. to 0.1 n.m.
Knot – unit of measurement of speed of a ship	(Sau Dokaro Steel Plant, 2016)
01 Snood of light is -	Ans: (c) The size of nano particle lies between 1 n.m.
91. Speed of light is: $(2 - 2)^{1/2} = (2 - 2)^{1/2}$	- 100 n.m. (1 nanometer - 100 nanometer). Nano
(a) 9×10^{2} m/s (b) 3×10^{11} m/s	particles are now being used in the manufacture of
(c) $3 \times 10^{\circ}$ m/s (d) $2 \times 10^{\circ}$ m/s	scratch proof eye glasses transparent sunscreens, self-
(<i>KRB Ranchi ALP</i> , 19.01.2003)	cleaning windows and ceramic coatings for solar cells.
97. How would the height of a six feet tall person be expressed in nanometers (approximately) ?	 (a) Dyne second/cm² (b) Dyne/cm² (c) Erg/cm² (d) Poise/cm²
---	--
(a) $183 \times 10^{\circ}$ nanometer (b) 224×10^{6} nanometer	DRDO Machinist.2016
(b) 234×10^{-1} nanometer (c) 183×10^{7} nanometer	(RRB Gorakhpur ALP, 12.10.2003)
(d) 234×10^7 nanometer (<i>RRB Mumbai ALP, 05.06.2005</i>)	Ans : (a) SI unit of coefficient of viscosity $=\frac{N-\sec}{m^2}$
Ans : (c) Height of person = 6 feet	CGS unit of coefficient of viscosity
\therefore 3.28 feet = 1 meter	- Dyne-sec or Poise
\therefore 6 feet = $\frac{1}{3.28} \times 6 = 1.829$ meter $\Rightarrow 1.83$ meter	$\frac{-1}{cm^2} = \frac{1}{cm^2} = $
$\therefore 10^{-9}$ meter = 1 nanometer	• One poise = $0.1 \frac{m^2}{m^2}$ – 1 gm/cm-sec
1 meter = $1/10^{-9}$ nanometer	• 1 Poiseuille = 10 poise = 1 decapoise
$\therefore 1.83 \text{ meter} = \frac{1}{2} \times 1.83 = 1.83 \times 10^9$	103. Einstein is a unit in light chemistry and its value is
	(a) 6.02×10^{23} quanta
6 feet = 183×10^{7} nanometer	(b) 10eV energy
98. One nanometer is equal to :	(c) 3.70×10^{10} excited molecules
(a) 10^{-9} meter (b) 10^{-6} meter	(d) 10° second NALCO Ir Operative Trainee 2021
(c) 10^{-10} meter (d) 10^{-3} meter	DRDO Turner.2016
(IOF Fitter, 2016)	(RRB Kolkata ALP, 06.02.2005)
(RRB Chennai ALP, 06.06.2010)	Ans : (a) Einstein is defined as one mole of photons.
(RRB Chandigarh ALP, 25.05.2003)	Einstein is defined as the energy is one mole of photon. One male of energy = 6.02×10^{23} guanta
Ans: (a) 1 nanometer = 10^{-9} meter	104 Which of the following is not the unit of
1 micrometer = 10^{-6} meter	magnetic field?
1 Angstrom = 10^{-10} meter	(a) Tesla (b) Gauss
1 millimeter = 10 ⁻⁹ meter	(c) Newton/Ampere-m (d) Weber (PPP Cumphati ALP 22.01.2006)
99. One metric ton weight equals to-	Ans : (d) Tesla gauss and Newton/Ampere-m is the
(a) 1000 gram (b) 1000 kg	unit of magnetic field while weber is the unit of
(c) 2.2 pound (d) 1 gallon	magnetic flux.
(BHEL Hyderabad Fitter, 2014)	1 gauss = 10 ' tesla 1 tesla = 1 weber/ m^2
Ans : (b) 1 metric ton = 1000 kg	105. Which of the following can be used in
1 pound = 0.454 kg	temperature measurement above 1500°
1 gallon = 3.79 little $1 hereal = 150 little$	centigrade?
	(a) Clinical thermometer (b) Thermo-electric thermometer
100. I micron is equal to : (a) $1/10$ mm (b) $1/100$ mm	(c) Platinum resistance thermometer
(a) $1/10$ mm (b) $1/100$ mm (c) $1/1000$ mm	(d) Pyrometer
(c) 1/1000 mm (d) 1/10000 mm (Sail Rokaro Staal Plant 2016)	(IOF Fitter, 2013)
$(Suit Down'o Steet Tuni, 2010)$ Ans : (c) 1 micron = 10^{-6} meter	Temperature Range of
	measurement instrument temperature
$=10^{-6} \times 10^{3} \text{ mm} = \frac{1}{1000} \text{ mm}$	1. Clinical thermometer 35°C - 43°C
101 Unit of redicactivity is a	2. Platinum resistance –200°C - 1200°C
(a) Condolo (b) Formi	3. Thermoelectric 200°C - 1200°C
(a) Curie (d) Angstrom	thermometer
(IOF Fitter 2014)	4. Pyrometer Above 1500°C
Ans: (c) Curie is a SL unit of radioactivity	(a) Measuring the thickness of earth
SI unit of radioactivity is becaueral	(b) Measuring the thickness of diamond
• A curie is a large unit of radioactivity	(c) Measuring the thickness of ozone layer
\sim A curie is a range unit of faultoactivity.	(d) Measuring of noise
• A bacquerel is one decourper score d	DRDO Turner. 2016
- A DECOUPLELIS ODE DECAVIDELSECOND	VITAAC GLAD FILLAR 2015
A becquerer is one decay per second.	VIZAAG Steel Fitter, 2015

Ans: (c) Dobson unit is used to measuring the thickness of again layer in a column of air from the	111. Which of the following pairing is incorrect
ground to the top of the atmosphere	(a) Hygrometer-water vapour content of the
• The average amount of ozone is around 300 dobson	(b) Lactometer Specific gravity of liquids
which means 3 mm thick ozone.	(c) Anemometer–Speed of the wind
• Average ozone hole is around 100 dobson that means	(d) Seismograph–Earthquakes
1 mm.	(a) Seismögruph Eurenquares (NTPC Fitter. 2014)
107. Which thermometer is suitable for measuring	Ans : (b)
2000°C?	Hygrometer–Water vapour content of the atmosphere
(b) Mercury thermometer	Lactometer–Density of milk
(c) Full radiation pyrometer	Anemometer–Speed of the wind
(d) Vapour pressure thermometer	Seismograph-Earthquakes
NALCO Operator Boiler 2021	• Lactometer works on the principle of Archimede's
(IOF Fitter, 2015)	principle.
Ans : (c) Radiation pyrometer has an optical system	112.An anemometer measures which of the
including a lens, a mirror and an adjustable eyepiece.	following?
• Radiation pyrometer is suitable to measure the temperature 2000°C	(a) Speed of light
• Gas thermometer measures the temperature of a gas	(b) Speed of wind
by volume or pressure difference	(c) Speed of water stream
• Vapour pressure thermometer measures the	(d) Speed of satellites
temperature by variable saturated vapour pressure of	(RRB Patna ALP, 04.02.2007)
the volatile liquid.	Ans : (b) An anemometer measures speed of wind. It is
108. Which instrument is used for photographing	a common weather station instrument.
the Sun?	• Anemometer measures speed of wind in knot.
(a) Galvanometer	113. What is the sensory receptor related to the
(b) Potentiometer	detection of blood pressure?
(c) Spectrophotometer	(a) Chemo receptor (b) Mechano receptor
(d) Spectronenograph (BHFL H yderabad Fitter 2014)	(c) Photo receptor (d) Magneto receptor
Ans : (d) Spectrobeliograph is used for photographic	(BHEL Hyderabad Fitter, 2014)
the sun. It is used to obtain an image of the sun in light	Ans : (b) Mechno receptor is an important receptor
of a particular wavelength.	related to somatosensory system.
• Galvanometer is used to measure electric current.	• It is related the detection of blood pressure.
• Potentiometer is used to measure emf of a cell or	• Chemo receptor transmits nervous signals to
potential difference between two points.	respiratory centre in the brain.
109. The instrument used for measuring air pressure	• Photo receptors are specialized neurons found in the
is called	retina.
(a) Anemometer (b) Barometer	• Magneto receptor allows an organism to detect the
(IOF Fitter, 2012)	earth's magnetic field.
Ans : (b) Barometer is used to measuring air pressure	114. Instrument for measuring low temperatures is
(atmospheric pressure).	called
• Anemometer is used to measure wind speed.	(a) Diagometer (b) Cryometer
• Hygrometer is used to measure humidity or amount of	(c) Chromatoptometer (d) Cymometer
water vapour in the air.	(IOF Fitter, 2016)
• Thermometer is a device used to measuring	Ans : (b) A cryometer is a thermometer used to
temperature.	measure very low temperature.
110. Which instrument is used for measuring	• A diagometer is a sort of electroscope in which the
numidity of atmosphere:	dry pile is employed to measure the amount of
(a) Datometer (b) Alternometer	electricity transmitted by different bodies.
(IOF Fitter. 2014)	• Cymometer is used to wave motion.
Ans : (d)	• Chromatoptometer is used to color perception.
Instruments Measurement	115. Instrument for measuring work performed is
Hygrometer Humidity	called
Barometer Atmospheric pressure	(a) Eudiometer (b) Anemometer
Anemometer Wind speed	(c) Hyetometer (d) Ergometer
Thermometer Temperature	(IOF Fitter, 2014)

	120 Instrument for measuring light intensity is
Ans: (d) Instrument for measuring work performed is	120. Instrument for measuring light intensity is called
called ergometer.	(a) Lucimeter (b) Cryometer
Anemometer \rightarrow Used to measure wind speed.	(c) Cvanometer (d) Barometer
Eucliometer \rightarrow Used to measure change in volume of	DRDO Machinist.2016
gas	(RRB Mumbai ALP, 15.07.2012)
Hyptometer \rightarrow Used to measure rainfall.	Ans : (a)
116. Which device is used to measure the depth of	Instrument Measurement
ocean?	Lucimeter Light intensity
(a) Lexometer (b) Nanometer	Cryometer Very low temperature
(c) Fathometer (d) Hydrometer	Cyanometer Color intensity of blue sky
(CRPF Constable Tradesman, 2016)	Barometer Atmospheric pressure
DRDO Turner.2016	121. Instrument used for measuring specific gravity
Ordnance Factory Fitter Itarsi 8.5.2016	is called
Ans : (c) Fathometer \rightarrow Used to measure the depth of	(a) Bathymeter (b) Cryometer
ocean.	(c) Aerometer (d) Cymometer
Nanometer \rightarrow Used to measure the smallest things (an	HAL Apprentice 10.11.2022
atom or molecules)	UPSSC Tracer (Technical) 2015
Hydrometer \rightarrow Used to measure specific gravity of	Ans : (c) Aerometer is used for measuring specific
liquid	• The aerometer is use today are mostly made of alass
117 Instrument for meaning blueness of the slaver	• The actometer is used to measure wave motion
ocean is called	122 The instrument used to measure plead Dressure is
(a) Bathymeter (b) Ceraunograph	(a) Sphygmomano_meter (b) Thermometer
(a) Damyneter (b) Ceraunograph	(a) Sphyghomano-meter (b) Thermometer (c) FCG (d) Stethoscope
(c) Cyanometer (d) Darometer (IOE Eittag 2016)	(c) Let (a) Stehoscope (RRR Ranchi AI P 2014)
(IOF Fuller, 2010)	(Intel Ranch Intel, 2017)
Ans: (c) A Cyanometer is an instrument for measuring	Instrument Application
Determination of the second se	Sphygmomano meter Blood pressure
• Bathymeter an instrument used to measure the depth	Themometer Temperature
of water in seas of lakes.	ECG Diagnosis of heart disease
118. Instrument for measuring time is called	Stethoscope Listening of sounds produced
(a) Diagometer (b) Anemometer	by heart or lungs
(c) Durometer (d) Chronometer	123. Instrument for measuring rainfall is called
(MAZAGON DOCK Ltd. Fitter, 2013)	(a) Lucimeter (b) Galactometer
Ans : (d) A chronometer is a instrument that is used to	(c) Hyetometer (d) Hygrometer
measure an accurate time of a fixed known location.	(KKB Kanchi ALP, 2014)
• It is a clock for controlling or determining the	Ans: (c)
longitude of a vessel at sea.	Hystometer Painfall
• Diagometer is used to measure the amount of	Lucimeter Light intensity
electricity transmitted by different bodies.	Hygrometer Humidity
• Durometer is used to measure the hardness of	124 Instrument for measuring wind velocity is called
materials.	(a) Coulombmeter (b) Anemometer
119. Which device is used to measure earthquakes?	(c) Cvanometer (d) Chronometer
(a) Endoscope (b) Thermometer	DRDO Fitter.2016
(c) Sonograph (d) Seismograph	(RRB Kolkata ALP, 2014)
DRDO Fitter.2016	Ans : (b) Instrument for measuring wind velocity is
DRDO Turner.2016	called anemometer.
DRDO Fitter.2016	• A coulomb meter is a tool for measuring the
BPCL Operator (Field) 2016	electrostatic charge of a material.
Sail Durgapur Steel Plant. 5.9.2014	• Coulomb meter can measure upto 1999 nanocoulomb.
(RRB Mumbai ALP, 15.07.2012)	• Most popular anemometer is robinson cup
Ans : (d)	anemometer.
Instrument Measurement	125. How can we measure specific gravity of milk?
Seismograph Earthquakes	(a) Using a viscometer
Thermometer Temperature	(b) Using a odometer
	(a) Laing a huge anatar
Endoscope View the inside of a person's	(c) Using a hydrometer (d) Using a hydrometer
Endoscope View the inside of a person's body	 (c) Using a hydrometer (d) Using a hydrometer
Endoscope View the inside of a person's body Sonograph Evaluate, diagnose and treat a	 (c) Using a hygrometer (d) Using a hydrometer DRDO Turner.2016 Ordnance Factory Fitter Itarsi & 5 2016

Ans : (d) Specific gravity of milk is measured by	Unit of intensity of electric field = <u>Newton</u>
hydrometer.	Coulomb
 nyurometer uses Archimedes principle. A hydrometer is made of a thin class or plastic type. 	• Intensity of electric field is a vector quantity.
• A hydrometer is made of a thin glass of plastic tube sealed at both ends	130. Which of the following thermometers is called
• Odometer is used for measuring the distance travelled	(a) Thermo-electric thermometer
by a vehicle.	(b) Radiation thermometer
• Viscometer is used for measuring the viscosity of	(c) Gas thermometer
liquid.	(d) Liquid thermometer
126. Match correctly	BEML 2022
(1) Fathometer A. Atmospheric	UPSSSC Tracer (Technical) 2015
(2) Barometer B Atmospheric	Ans: (b) Radiation thermometer also known as
humidity	temperature where contact with the hot body it not
(3) Hygrometer C. Height	possible.
(4) Altimeter D. Depth of sea	• Helium and hydrogen are most widely used in gas
Code:	thermometer.
(a) 1-B, 2-C, 3-A, 4-D (b) 1-D, 2-A, 3-B, 4-C	• Gas thermometer is more sensitive than liquid
(c) 1-D, 2-B, 3-C, 4-A (d) 1-C, 2-A, 3-B, 4-D	thermometer.
(RRB Chandigarh ALP, 15.07.2012)	• Mercury is commonly used in inquid thermometer.
Ans: (b) Correctly matched–	(a) Air pressure
Fatnometer - Depth of sea	(b) High temperature
Hygrometer - Atmospheric humidity	(c) Humidity
Altimeter - Height	(d) Intensity of earthquake
127. Instrument used to measure the intensity of	IOCL 2020
light is called	DKDO TURNER.2010 Sail Durgapur Steel Plant 5 9 2014
(a) Anemometer (b) Calorimeter	(RRB Kolkata ALP, 2014)
(c) Luxmeter (d) Altimeter (PPR Ahamadahad ALP 2014)	Ans: (b)
(RKD Anumuuuuuu ALI, 2014)	Air pressure Barometer
the intensity of light Equipped with digital and analog	High temperature Pyrometer
circuits a luxmeter allows the photographer to	Humidity Hygrometer
determine the proper exposure for photography.	Intensity of earthquake Seismograph
128. Which of the following is the instrument for	132. Which of the following instrument is used to detect the position of submerged objects in the
nomination of thermometer on water, vapour,	ocean?
temperature?	(a) Audiometer (b) Galvanometer
(a) I nermosiai (b) Pyrometer	(c) Sextant (d) Sonar
DRDO Turner.2016	DRDO Fitter.2016
(RRB Ahamadabad ALP, 2014)	Ans: (d) Sonar is used to detect the position of
Ans : (d) Hygrometer is used to measure humidity or	• Sextant is a doubly reflecting pavigation instrument
water-vapour content in air.	that measures the angular distant between two visible
• Hypsometer is an instrument for measuring height or	objects.
120 Unit of electric field is	• Audiometer is used to measure hearing threshold.
(a) Newton (b) Newton/Ampere	• Galvanometer is used to measure small electric
(c) Newton/Coulomb (d) Volt/Coulomb	current.
DRDO Turner.2016	133. Match the List-I with List-II and select the
UPSSSC Tracer (Technical) 2015	List-I List-II
Ans: (c)	(Instrument/device) (Ouantity to be
F	
Intensity of electric field $(F) =$	measure)
Intensity of electric field (E) = $-$	measure)A. Ammeter1. Pressure
Intensity of electric field (E) = $-$ q where,	measure)A. AmmeterB. Hygrometer2. Weight
Intensity of electric field (E) = $-$ q where, F = Electric force (unit - newton)	measure)A. AmmeterB. HygrometerC. BarometerC. BarometerC. BarometerC. Barometer

Code :	137. Relative Humidity is measured by–
A B C D A B C D	(a) Hydrometer (b) Hygrometer
(a) 2 3 4 1 (b) 3 4 1 2	(c) Lactometer (d) Potentiometer
(c) $4 \ 1 \ 2 \ 3 \ (d) \ 1 \ 2 \ 3 \ 4$	DRDO Fitter.2016
(KRB Kolkata ALP, 2014)	UPSSSC Tracer (Technical) 2015
Ams: (b) Correctly matched– Ammeter Current	Sail Durgapur Steel Plant. 5.9.2014
Hygrometer Specific gravity	Ans : (b)
Barometer Pressure	Hydrometer - Specific gravity of liquid
Spring balance Weight	Hygrometer - Relative humidity or water vapour
134. Which one of the following is not correctly	content in air
matched?	Lactometer - Purity of milk
(a) Decidel Unit of loudness of sound (b) Horse power Unit of power	Potentiometer - Voltage difference between two
(c) Nautical mile Unit of distance in	point of electric current
navigation	138. Which instrument is used to measure
(d) Celsius Unit of heat	(a) Hydrometer (b) Barometer
NTPC Fitter 2016	(a) Hydrometer (b) Barometer
DRDO Fitter.2016	Sail Durganur Steel Plant 5.9.2014
Sail Durgapur Steel Plant. 5.9.2014	Ans \cdot (b) Atmospheric pressure is measured by
Ans: (d)	harometer
Horse power Unit of power	• Manometer is used to measure pressure of fluid
Nautical mile Unit of distance in navigation	flowing in pipeline.
Celsius Unit of temperature	• Hydrometer is based on concept of buoyancy.
• 1 horsepower (hp) = 746 watt	139 Which liquid is used in a simple barometer?
• 1 Nautical mile = 1852 meter	(a) Water (b) Mercury
• Unit of heat is calorie.	(c) Alcohol (d) All of the above
135. Which of the following is not correctly	DRDO Fitter.2016
(a) Manometer - Pressure	Ans : (b) Mercury is used in simple barometer. The
(b) Carburetor - Internal combustion	high density of mercury makes it expand less.
engine	• In the space above the mercury column in a barometer
(c) Cardiograph - Speed of heart	tube, the gauge pressure of the vapour is negative.
(d) Seismograph - Surface curvature	140. Sudden drop in the level of mercury in a
Ans : (d) Correctly matched	barometer is an indicator
Manometer - Pressure	(a) Fair weather (b) Storm
Carburetor - Internal combustion engine	(c) Snowiali (d) Heavy rain
Cardiograph - Speed of heart	DKDO Turner.2016, DKDO Fitter.2016
Seismograph - Earthquake	Sall Durgapur Steel Plant. 5.9.2014
• Richter scale is used to rate the magnitude of an	Ans: (b) Condition of barometer regarding weather-
an earthquake	1. Sudden fall of mercury level - indicates storm of
• Seismograph is an instrument used to detect and	2 Gradual fall in mercury level - indicates possibility
record seismic waves.	of heavy rain
136. Which of the following is not correctly	3. Gradual rise in mercury level - indicates dry weather
matched?	or fair weather.
(a) Anemometer - Speed of air (b) Ammeter - Electric current	141. Liquid crystals are used in :
(c) Tachometer - Pressure difference	(a) Wrist watches (b) Display devices
(d) Pyrometer - High temperature	(c) Pocket calculators (d) All of the above
Sail Durgapur Steel Plant. 5.9.2014	BHEL 2020
Ans : (c)	DRDO Fitter.2016
Anemometer - Speed of air	Ans : (d) Liquid crystal is a state of matter whose
Ammeter - Electric current	properties are between liquids and solids crystals.
Pyrometer - High temperature	• Liquid crystals are used in all kinds of display devices
• Pressure difference is measured by differential	including computer, monitors and laptop screens, TVs,
manometer.	clocks, visors and navigation system.

142. Match List-I with List-II and select the correct	Code:
answer using the codes given below	A B C D A B C D
List-I List-II	(a) 1 2 3 4 (b) 4 1 2 3
A. Steinoscope 1. 10 measure the intensity of	(c) 4 1 3 2 (d) 3 1 2 4
B Sphygmoman- 2 To find out the purity of	IGCAR Stipendiary Trainee Maintainer 2021
ometer gold	DRDO Fitter.2016
C. Keratometer 3. To listen heart sound	Ans: (d)
D. Luxmeter 4. To measure blood pressure	Anemometer Air speed
Code :	Seismograph Earthquake
A B C D A B C D	Barograph Atmospheric pressure
(a) 1 2 3 4 (b) 4 3 2 1	Hygrometer Humidity
(c) 3 4 2 1 (d) 2 1 4 3	146. Auxanometer is used to-
DRDO Fitter.2016	(a) Measure the rate of photosynthesis
Ans : (c)	(b) Measure the rate of growth
Stethoscope To listen heart sound	(c) Measure the rate of lysis
Sphygmoman To measure blood pressure	(d) Measure the rate of loss of energy
ometer	DRDO Fitter.2016
Keratometer To find out the purity of gold	Ans : (b) Auxonometer is used to measure the growth
Luxmeter To measure the intensity of light	in length of a plant organ.
143. Which instrument is used to measure blood	• Auxonometer is also used to measure pressure
pressure?	inside the roots of the plants.
(a) Glucometer	• Auxonometer allow measurement of growth in
(b) Sine wave inverter	micrometer.
(c) Sphygmomanometer	147. Which of the following one pair is not correctly
(d) Hygrometer	matched?
DRDO Turner.2016	(a) Odometer : Instrument for measuring the
DRDO Fitter.2016	distance travelled by the wheels
Ans: (c) Sphygmomanometer is used to measure	of vehicles
Chrometer is used to measure how much shapes is	(b) Odometer Instrument for measuring the
• Glucometer is used to measure now much glucose is	frequency of electromagnetic
• Sine wave inverter converts direct current (DC) to	waves
alternating current (AC).	(c) Audiometer Sound-Intensity measuring
• Lactometer is a type of hydrometer which is used to	(d) Ammeter : Electrical nower measuring
measure the specific gravity of milk.	device
144. The principle on which the stethoscope used by	DRDO Fitter 2016
doctors work is :	Ans: (d) Ammeter is used to measure the current in a
(a) Interference	circuit
(b) Reflection	Wattmeter is used to measure electrical nower
(c) Refraction	149 The instrument used to measure the intensity
(d) Superposition of sound wave	of sound .
DRDO Fitter.2016	(a) Chronometer (b) Anemometer
Ans : (d) Principle of stethoscope is based on	(c) Audiophone (d) Audiometer
superposition of sound wave.	DRDO Fitter.2016
Stethoscope is used to listening to sounds produced	Ans : (d) Audiometer is used to measure the intensity
within the body mainly neart or lungs.	of sound.
145. Match List-I with List-II and select the correct	Chronometer is used to measure accurate time.
answer coues given below:	• Chronometer is used for pavigation purpose
LISI-I LISI-II A Anemometer 1 Farthquaka	• Odometer is used to measure distance travelled by a
B Seismograph 2 Atmospheric pressure	vehicle.
C Barograph 3 Air speed	• Audiophone is used for improving imperfect sense of
D Hygrometer 4 Humidity	hearing.

149.Mercury is c	ommonly used in t	he thermometers	Temperature	Kelvin	K
because of it	s characteristic :		Quantity of	mole	mol
(a) High dens	sity		substance		
(b) High flui	dity		Luminous	Candela	cd
(c) High coef	fficient of expansion		intensity	1 /	(1) D1
(d) High spec	cific heat		• There is two	supplementary qu	iantity–(1) Plane
	1	DRDO Fitter.2016	153. The sneed	of airnlanes and	shins is shown is
Ans (c) Me	reury is common	ly used in the	'naut'. The	speed of 100 nauts	will be :
thermometers be	cause it has hig	h coefficient of	(a) Equal t	o ¹ 100 mile per hour	S
expansion hence	it expands uniform	ly and noticeable	(b) Equal t	o 115 mile per hour	S
for a slight change	e of temperature		(c) Equal t	o 130 mile per hour	S
• Mercury is a n	on sticky viscous n	netal and hence it	(d) Equal t	o 160 mile per houi	S Maintainan 2021
makes a clear mer	hiscus helpful in rea	dings	NFC 5	upendiary frame	DRDO Fitter.2016
Mercury has low	w density and low sn	ecific heat	Ans : (b) 1 mile =	1.60 km	
	v density and low sp		1 km = 1/1.60 mile	e	
150. Match List-	I with List-II and	select the correct	$1.85 \text{ km} = \frac{1}{-1} \times 1$	85mile	
answer code	s given below :		1.60		
	LIST-II		1 km -1.85 km		
A. Lactometer	1. Electric C	urrent	h		
D. Annieter	2. Relative I	iumuny voltage	1 v1.95 mile	/ h	
C. Hygioinete D. Valtmatar	A Durity of	mille	$=\frac{1.60}{1.60} \times 1.85$ mile	/ 11	
D. volumeter	4. Pulity 01	IIIIIK	= 1.15 mile/h		
Code:	~ D A D	C D	100 knot = $1.15 \times$	100 = 115 mile/h	
(a) A B C	\mathbf{D} \mathbf{A} \mathbf{B}		154. Which is no	ot correctly matche	ed?
(a) 4 1 2	2 3 (0) 1 3 2 2 (d) 4 3 3 (d) 4 3	4 2 2 1	(a) Celsius	- Te	emperature
(0) 1 4 2	5 2 (u) 4 3	2 1 (IOF Fittor 2012)	(b) Kilowatt	nour - Er	lergy
		(101' 1'mer, 2012)	(d) Richter s	cale - Hi	umidity
Ans: (a)	Durity of m	11.	(u) Henter s	BDI	Technician 2022
Ammeter Purity of milk			L	RDO Turner.2016	
Hygrometer Relative humidity (RRB Sikandrabad ALP		<i>t ALP, 29.06.2008)</i>			
Voltmeter Electric voltage		Ans : (d) Rick	nter scale is use	d for measuring	
151 The relative	donaity of mills on	n he found he	earthquakes. Rich	ter scale measures	rate the magnitude
(a) Hydron	e density of milk ca	Rutyrometer	of an earthquake.	a haaa 10 la aarithaa	ia anala
(a) Hydron	eter (d)	Thermometer	• Kichter scale is	a base 10 logarithm	ic scale.
(c) Lacton	DRDO Mac	hanic Diesel 2016	• Mercalli scale	is based on obser	vation eartiquake
Ans · (c) The rely	ative density of mill	can be found by	Humidity is mea	sured by hygromet	er.
lactometer	active defisity of fifth	x can be found by	155 Pascal unit is	•	
Butyrometer is a	used to measure fat	content in milk or	(a) Humidity	• v (b) Press	ure
milk products in g	eneral		(c) Rain	(d) Temp	erature
Gerber method	is a very popula	r method for the		(RRB Banglore	ALP, 15.07.2012)
determination of n	nilk fat.		Ans: (b) Pressure	e is the force applie	d perpendicular to
• Hydrometer and	l lactometer work o	on the archimedes	the surface of an o	bject per unit area.	
principle.			Pressure $(P) =$	Force (F)	
152. This is not	SI fundamental un	it:		Area (A)	
(a) Amper	e (b) (Candela	Unit of pressure =	Newton/m ² or Pas	cal
(c) Newton	n (d) 1	Kelvin	• Gauge pressu	re is positive for	pressure above
	DRDO Mec	hanic Diesel 2016	atmospheric press	ure, zero at atmosp	ric pressure and
Ans:(c)		• Atmospheric press	essure is measured i	n har	
Fundamental	Fundamental	Symbol		lated to 'anaray' i	n the same way as
0	Fundamental	·	156. '.Inite' is re		I THE SAME WAV W
Quantity	Unit		156. 'Joule' is re 'Pascal' is i	related to :	ii the same way as
Quantity Length	Unit meter	m	156. 'Joule' is re ' Pascal' is r (a) Quantity	related to : (b) Press	ure
Quantity Length Mass	Unit Weter kilogram	m kg	'Soule' is re 'Pascal' is n (a) Quantity (c) Density	related to energy r (b) Press (d) Purity	ure
Quantity Length Mass Time	Unit Meter kilogram second	m kg s	(a) Quantity (c) Density	related to energy r (b) Press (d) Purity (Coal	ure 7 India Fitter, 2013)

Measurement and Systems of Units

Ans : (b) Joule is the unit of energy and pascal is the unit of pressure.	 Ans: (c) Intensity of sound is measured in decibel. Decibel is a relative unit of measurement. It is equal
Unit of density (ρ) = $\frac{\text{kilogram (kg)}}{m^3}$	to one tenth of a bel. The unit of intensity of sound is $untt/m^2$
• Density is the ratio of mass and volume	• File unit of intensity of sound is wait/in . • Pitch is a property of sound which is used to
157. What is the unit of Atmospheric pressure?	differentiate between grave sound and sharp sound
(a) Bar (b) knot	162 Desibel :
(c) Joule (d) Ohm	(a) Is a musical instrument
DRDO Turner.2016	(b) Is the wavelength of noise
(Coal India Fitter, 2013)	(c) Is a measure of sound level
Ans: (a) Unit of atmospheric pressure is bar. It is not SL unit or CGS unit, but is accented for use with SL	(d) Is a musical voice
unit of COS unit, but is accepted for use with SI	RRCAT Stipendiary Trainee Maintainer 2019
$1 \text{ bar} = 100 \text{ kPa} = 10^5 \text{ Pa}$	(MAZAGON DOCK Ltd. Fitter, 2013)
Atmospheric pressure also known as barometric	Ans : (c) Decibel is a measure of sound level. Decibel
pressure, is the pressure within the atmosphere of	is a logarithmic ratio of the quantities such as sound
• Atmospheric pressure is measured by barometer	pressure, power, voltage and intensity etc.
 Atmospheric pressure is measured by barometer. 159 Unit of electric resistence of a conductor is 	• Noise levels below 35-40 dB are usually necessary for
(a) Farad (b) Volt	• A departing jumbo jet may result in 120 dB being
(c) Ampere (d) Ohm	recorded along the runway
Ordnance Factory Fitter Itarsi 8.5.2016	163 Match List-I with List-II and select the correct
Ans: (d)	answer using the codes given below :
Physical quantity Unit Capacitance Earad	List-I List-II
Voltage Volt	A. Cusec 1. Pressure
Electric current Ampere	B. Byte 2. Intensity of earth-
Electric resistance Ohm	quake
159. Electron volt is the unit of–	C. Richter 3. Rate of flow
(a) Energy	D. Bar 4. Computer
(b) Charge of electron	Code :
(d) Power	A B C D A B C D
Ordnance Factory Fitter Itarsi 8.5.2016	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
Ans : (a)	BARC Stinendiary Trainee Maintainer 2021
Physical quantity Unit	(Coal India Fitter, 2013)
Energy Electron Volt Charge of electron Coulomb	Ans: (b)
Potential difference Volt	Cusec Rate of flow
Power Watt	Byte Computer
• Electron volt is the work required to move an	Richter Intensity of earthquake
electron through a potential difference of one volt.	Bar Pressure
1 electron volt (ev) = 1.60218×10^{-2} erg.	164. Match List-I with List-II and select the correct
$\frac{-1.00216\times10}{160}$ Joure	answer using the codes given below :
matched?	List-I List-II
(a) Work - Joule (b) Force - Newton	A. wavelength 1. Hertz
(c) Mass - Kilogram (d) Pressure - Dyne	B. Energy 2. Angstrom
(Coal India Fitter, 2013)	D. Frequency 4. Decibel
Ans: (d) Dyne is the unit of force in CGS unit. SI unit	Code:
of pressure is pascal.	
Force - Newton	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
• Newton is the SI unit of force.	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
161. The decibel unit is used to measure :	(MAZAGON DOCK Ltd. Fitter. 2013)
(a) Speed of light	Ans : (a)
(b) Intensity of heat	Wavelength Angstrom
(c) Intensity of sound (d) Redigesting fragmenter	Energy Joule
(u) Radioactive frequency $(IOF E:ttom, 2012)$	Intensity of sound Decibel
(10F Filter, 2013)	
(RRR Kolkata ALP. 02.11.2008)	Frequency Hertz

165. Match List-I with List-II and select the correct answer using the codes given below :List-IList-II(Unit)(Quantity)A. Watt1. HeatB. Knot2. NavigationC. Nautical mile3. Speed of shipD. Calorie4. PowerCode:ABCDABCD(a) 3142(b) 1234(c) 4321(d) 2413(<i>RRB Jammu-kashmir ALP, 06.06.2010</i>)	 169. What is measured in cusecs? (a) Purity of water (b) Depth of water (c) Flow rate of water (d) Quantity of water BRO Vehicle Mechanic 2021 (Coal India Fitter, 2013) Ans : (c) Cusec is the unit used to measure the amount of water release from reservoir (i.e. flow rate). Cusec is the short from for cubic feet per second. Flow rate refers to the volume of liquid that flows per unit time. 1 cusec = 28.317 litre per second
Ans: (c)	170. what is the SI unit of mechanical energy?
Watt Power	(a) Joule (b) Wett
Knot Speed of snip	(b) Wall (c) Newton-second
Calorie Heat	(d) Joule-second
166 Megawatt is a unit of measurement of electricity	(Coal India Fitter, 2013)
who	Ans : (a) Mechanical energy is the total amount of
(a) is produced	energy of an object. This energy is relative to an
(b) is consumed	object's position or motion.
(c) is saved	• Energy due to an objects motion is kinetic energy.
(d) is loss in transmission	• Stored energy due to an objects position is potential
(Coal India Fitter, 2013)	energy.
Ans : (a) Megawatt is used to measure the output of a	Mechanical energy = kinetic energy + potential
power plant.	• Unit of mechanical energy is joule
I megawatt $(MW) = 1000$ kilowatt (KW)	• Onit of mechanical energy is joure.
• Gigawatt (GW) measure the capacity of large power	1/1. Which of the following quantity is measured on Dichter scale?
• One magawatt is equivalent to the energy produced	(a) Movement of glaciers
by 10 automobile engines	(b) Population growth
167 Tachyan means ·	(c) Intensity of earthquakes
(a) Particles moving faster than the speed of light	(d) Temperature inside the earth
(b) Part of a molecule with a heavy nucleus	NLC Technician 24-09.2022
(c) Particles moving faster than the speed of sound	DRDO Motor Mechanic. 2016
in air	Ordnance Factory Fitter Itarsi 8.5.2016
(d) Amount of lattice vibrations	Ans : (c) The Richter is used for measurement of
Ordnance Factory Fitter Itarsi 8.5.2016	earthquake. Richter scale is used to rate the magnitude
Ans : (a) A tachyon is a hypothetical particle that	of an earthquake. The Richter scale is a base-10
always travels faster than light speed. The word	logarithmic scale that each other of magnitude is 10
tachyon comes from the Greek. Its meaning is swift,	• Pichter scale does not measure earthquake damage
quick, fast, rapid.	172 PARSEC unit is •
108. Which of the following is vector quantity:	(a) Distance (b) Time
(a) Displacement (d) Distance	(c) Glare of light (d) Magnetic force
DRDO Motor Mechanic 2016	(RRB Bilaspur ALP, 15.07.2012)
Ans · (c) The physical quantities for which both	Ans : (a) Parsec is the unit of astronomical distance.
magnitude and direction are defined distinctly are	• A parsec is a distance from the sun to an astronomical
known as vector quantities.	object which has a parallax angle of one arc second.
Example-Displacement, velocity, acceleration, weight,	1 parsec = 3.26 light year.
force, momentum etc.	1/3. The smallest unit of length is-
• It is represented by quantity symbol in bold or with	(a) Micron (b) Nanometer
the arrow sign above.	(C) FORMINGER (U) NORE OF THE ADOVE (RRR Mumbai AI.P. 16.07.2006)
• Time, speed, distance, density, volume, temperature,	Ans : (c) 1 micron = 10^{-6} meter
work are scalar quantities.	1 nanometer -10^{-9} meter
• Scalar quantity has magnitude only. It does not have	$1 \text{ nationation} = 10^{-10} \text{ mater}$
unection.	

15	
1 fermimeter = 10^{15} meter	Ans : (d) Volume is a scalar quantity. In scalar
1 zeptometer = 10^{-21} meter	quantity, only magnitude is required, while in vector
From the given option fermimeter is smallest unit of	quantity magnitude as well as direction are required
longth	Vester magnitude us wen us direction are required.
	• vector quantity is represented by an arrow.
174. Fermi is the unit which expresses–	• Displacement, velocity, force are vector quantity.
(a) Energy (b) Momentum	178. Which of the following one is not the unit of
(c) Impulse (d) Length	heat?
(RRB Mumbai ALP, 14.06.2009)	(a) Calaria (b) Vilacalaria
Ans \cdot (d) Fermi is the unit of length equals to 10^{-15} m	(a) Calorie (b) Kilocalorie
Alls. (d) Fermi is the different equals to 10 mi.	(c) Kilojoule (d) Watt
• It is also known as remiometer.	(Coal India Fitter, 2013)
• Unit of energy is joule in SI system.	Ans : (d) Watt is not unit of the heat. It is unit of
• Unit of momentum is kg-m/sec.	power While calorie kilocalorie and kilo joule is unit
• Unit of impulse is Newton-sec.	of heat or energy
175 Match List-I with List-II and select the correct	1 kilosolorio $= 4.19$ kilo joulo
answer using the codes given helow .	
answer using the codes given below .	179. Which of the following is a vector quantity?
List-1/सूचा-1 List-11	(a) Momentum (b) Pressure
A. High velocity 1. Mach	(c) Energy (d) Work
B. Wavelength 2. Angstrom	(RRB Gorakhnur ALP. 08.10.2006)
C. Pressure 3. Pascal	
D Energy 4 Joule	Ans: (a)
Code:	Scalar quantity Vector quantity
	1. Distance 1. Displacement
(a) $A-2 B-1 C-3 D-4$ (b) $A-1 B-2 C-4 D-3$	2. Speed 2. Velocity
(c) A-1 B-2 C-3 D-4 (d) A-2 B-1 C-4 D-3	3 Mass 3 Weight
(RRB Bhubneswar ALP, 15.07.2012)	4 Energy 4 Acceleration
Ans : (c)	5 Density 5 Momentum
High velocity Mach	G. Density S. Wonchum
Wavelength Angstrom	6. Power 6. Force
Pressure Pascal	7. Length, area 7. Gravity
Energy Ioule	8. Volume 8. Drag
• Mach number is the ratio of speed of an object to the	9. Time 9. Impulse
• Mach number is the ratio of speed of an object to the	10. Temperature 10. Lift
speed of sound in the medium through which the	11 Work
object is travening.	12 Pressure
• The wavelength of a wave describes how long the	
wave is.	180. Consider the following physical quantities:
176. Match List-I with List-II and select the correct	Energy, power, pressure, impulse,
answer using the codes given below :	temperature, gravitational potential. Which of
List-I List-II	the above is/are vector quantity/quantities?
(Physical quantity) (Unit)	(a) Only impulse
Δ Acceleration 1 Joule	(h) Only impulse and pressure
B Force 2 Newton second	(b) Unity impulse and pressure
C Work done 2 Newton	(c) Impulse, temperature and pressure
D. Immulso 4 mater/second^2	(d) Gravitational potential
D. Impulse 4. meter/second	NALCO Jr. Operative Trainee 2021
Code:	DRDO Turner.2016
A B C D A B C D	(MAZAGON DOCK I td. Fitter 2013)
(a) 1 2 3 4 (b) 2 1 4 3	
(c) 4 3 1 2 (d) 3 4 2 1	Ans: (a) Impulse is a vector quantity, while pressure,
(RRB Banglore ALP, 08.07.2007)	temperature, power energy and gravitational potential
Ans : (c)	are scalar quantity.
Physical quantity Unit	
Acceleration meter/second ²	2 Units of Angle Massurement
Force Newton	2. Units of Angle Measurement
West days Leafs	and Tools
work done Joule	
Impulse Newton-second	191 Dadian is aqual to
177. Which of the following quantity is not vector?	101. Kadian is equal to
(a) Displacement (b) Velocity	(a) 58.3° (b) 59.4°
(c) Force (d) Volume	(c) 57.3° (d) 60.3°
(RRB Siliguri ALP. 2014)	HPSSC Jr. Technician (Fitter) 30-08-2018

Ans. (c) : Radian is the SI units of measuring angle.	• Two plane surfaces of slotted type angle plate have
The length of an arc of a unit circle is numerically equal	slots milled.
to measurement in radian of the angle.	• The slots on the slotted type angle plate are machined
$\langle \lambda \rangle$	19(Metaviel used for engle plate is
r = radius	(a) High corbon steel
$r \circ l = Arc of length$	(a) High carbon steel (b) Medium carbon steel
	(c) Grav cast iron
$2 - \mathbf{P} + \mathbf{I} = - 2 (0)$	(d) Cast iron steel
2π Radian = 360°	DMRC Maintainer Fitter, 19-04-2018
1 Radian = $\frac{360^{\circ}}{2\pi} = \frac{180^{\circ}}{\pi}$	BPCL Operator (Field) 2016
2π π 1 Dedice = 57.205° x 57.2°	Ans. (c) : An angle plate is a 90° section of cast iron,
1 Radial $= 57.255 \approx 57.5$	with two accurately machined surface.
(a) 60 seconds (b) 60 minute	• Angle plate are used to hold workpieces square to the table during marking out operations
(a) 00 seconds (b) 00 minutes (c) 100 seconds (d) 100 minutes	• Angle plates have ribs on the unmachined part for
NALCO Operator Boiler 2021	• Angle plates have hos on the unmachined part for good rigidity and to prevent distortion
NCL Fitter 27-12-2020	• Plain solid angle plates are suitable for supporting
Ans (b) \cdot One degree equals to 60 minutes	workpieces during layout work.
183 Which of the following is related to the	187. Which of the following is an example of a
temperature?	comparator?
(a) It is a form of energy	(a) Vernier caliper (b) Micrometer
(b) It is measured by calorie meter	(c) Dial gauge (d) Steel rule
(c) It is a measure of heat	ISRO Technician-B Fitter 10-12-2017
(d) It has a unit calorie	Ans. (c) : Dial gauge is an example of comparator.
ISRO VSSC (Fitter) 14-07-2021 (4:30-6:30 pm)	Dial gauge is also known as a dial indicator, is a
Ans. (c) : Temperature is the measure of coldness or	• The working principle of the dial gauge is dependent
hotness show in terms of any measuring scale, it	on the movement of the spindle
indicates the trajectory in which heat energy	• Part of the dial gauge that shows the numbers from the
spontaneously propagates. Heat flow from a hotter body	measurement results is called scale.
(Higher temperature) to a colder body (lower	188. Sine bar is used to measure :
comperature).	(a) Angle of a tapered job
Conversion of temperature unit	(b) Angle between surfaces
$\frac{{}^{\circ}C-0}{-} = \frac{{}^{\circ}F-32}{-} = \frac{K-2/3.15}{-}$	(c) Run out of job
5 9 5	(d) None of the above
184. 60° corresponds to radians?	HAL Apprentice 10.11.2022
(a) 2π (b) $\pi/2$	ISKO Technician-D Filter 28-00-2010, Sint-I
(c) $\pi/3$ (d) π	ioh Sine har is the one of the most accurate angle
ISRO Technician B (Turner) 14-07-2021	measuring device.
Ans. (c) :	• Working principle of sine bar is based on the
$180^{\circ} = \pi$ radian	trigonometric function.
$60^\circ = \frac{\pi}{1000} \times 60 = \frac{\pi}{100000000000000000000000000000000000$	• Sine bar is specified by centre distance between two
$\frac{100}{180} = \frac{1}{3} \frac{1}{3}$ radian	rollers.
185. Which angle plate is adjustable in such a way	189is used for leveling of machineries
as to keep both the surfaces at an angle?	(a) Scale (b) Spirit level
(a) Box angle plate	ISRO Technician-B Fitter 28-06-2016. Shift-I
(b) Slotted type angle plate	Ans. (b) : Spirit level is used for leveling of
(c) Plain solid angle plate	machineries. Spirit level is an instrument to indicate
(d) Swivel type angle plate	whether a surface is horizontal or vertical relative to the
UPRVUNL (Fitter) 05.04.2021, 9:00 AM-12:00 PM	earth.
Ans. (d) : Swivel type angle plate is adjustable so that	• Different types of spirit level may be used by
the two surface can be kept an angle.	carpenters, brick layers, metal workers.
• Box angle plate has all the faces machined square to	• Spirit level is made of a tube and a holder, tube is
each other.	generally made of glass or plastic.

190. Which among the following instruments is used	194. Which grade of slip gauge is used for general
diameter?	workshop application?
(a) Limit gauges	(a) Grade 0° (b) Grade 00°
(b) Dial test indicator	(c) Grade II (d) Grade I
(c) Sine bar	IUCL 2020
(d) Vernier bevel protractor	KRB ALP Fitter 23-01-2019, Snift-111
ISKO Technician-B Fitter 21-04-2018, Shift-III	Ans: (c) Grade 'n' of slip gauge is used for general
concentricity of the outside diameter	Grades of slip gauge
Function of dial test indicator–	1. Grade '00' . Calibration grade
1. As a comparison in mass production.	1. Grade $00 \rightarrow$ Calibration grade
2. Check the centre alignment.	2. Grade $0 \rightarrow \text{Inspection grade}$
3. Determine errors in geometric shapes such as oval,	4. Grade 'ii' \rightarrow Workshop application
round and taper.	105 Einishing of measuring faces of slip gauge is
4. As a comparison of two neights of two distances between parrow boundaries	195. Finishing of measuring faces of shp gauge is
191 Which among the following instruments are	done by :
used to check the components only to insure	(a) Reaming (b) Honning
that the sizes are within the prescribed limits in	(c) Lapping (d) Drilling (d) Drilling
mass production work?	KRB ALP Fitter 23-01-2019, Snitt-111
(a) Try square (b) Dial test indicator	Ans: (c) Finishing of measuring faces of slip gauge is
(c) Gauges (d) Vernier caliper	done by lapping.
ISRO Technician-B Fitter 21-04-2018, Shift-III	• Cross-sectional size of slip gauge is 32 × 9 mm.
Ans. (c) : Gauges are used to check the components	• Ship gauge is also known as gauge block of Johnson
limits in mass production work	• Slip gauges are made of stabilized high grade steel
• Taylor's principle is related to gauge design	• Hardness of slip gauge should be 64 HRC
 'NO GO' and 'GO' gauges are designed to check the 	106 Dial tast indicator is used for measuring
minimum and maximum material limit.	(a) temperature
192. Which of the following is not a tool/instrument	(a) temperature (b) viscosity
used for marking?	(c) deviation of any object from an expected
(a) Angle plate (b) 'V' block	standard
(c) Surface plate (d) Dial indicator	(d) density
ISRO Technician-B Fitter 10-12-2016, Shift-II	BEML 2022
Ans. (d) : Dial indicator is not used for marking. Dial	RRB ALP Heat Engine 08-02-2019
indicator is high precision instrument, used for	Ans. (c) : Dial test indicator is used for measuring
component	deviation of any object from an expected.
• It works on the principle of rake and pinion	• High magnification ratio is important in this
• A dial test indicator magnifies small variations in	instrument.
sizes by means of a pointer on a graduated dial.	• A rotatable bevels are used in dial test indicator for
193. What is the angle of the angle plate	marking final zero setting.
(a) 30° (b) 45°	• Tolerance pointers are attached to dial face for rapid
(c) 65° (d) 90°	checking of parts.
ISRO Technician-B Fitter 10-12-2016, Shift-II	197. The size of the sine bar is specified by its
Ans. (d) : The angle of angle plate is 90°.	(a) Weight
• Angle plate is made of cast iron.	(b) Centre distance between the two rollers
• The edges and ends of the angle plate are machined	(c) Total Length
square.	(d) Size of the rollers
Types of angle plate–	ISRO Technician-B Turner 02.06.2019
1. Plain solid angle plate	Ans: (b) The size of sine bar is specified by its centre
2. Slotted type angle plate	distance between the two rollers.
3. Swivel type angle plate	• Sine bar is a precision measuring instrument for
4. Box type angle plate	checking and setting angles.
• Slotted type of angle plate can be tilted 90° along with	• The commonly available size of sine bar are–100 mm,
the work for marking or machining.	200 mm, 250 mm.

198. Which of the following is an example of a	203. Which angle can be checked using try square? (a) 90^0 (b) 60^0
comparator?	$\begin{array}{ccc} (a) & y_0 \\ (c) & 30^0 \\ (d) & 40^0 \\ \end{array}$
(a) Dial gauge (d) Steel rule	BHEL 2020
ISRO Technician-R Fitter 10-02-2019	RRB ALP Fitter 23-01-2019, Shift-II
Ans (c) · Dial gauge is an example of a comparator	Ans. (a) : 90° angle can be checked by using try square.
199 Which of the following is an instrument for	• Try square has a blade and a stock which are fixed
indirect angle measurement?	• Try square is a checking tool
(a) Bevel gauge (b) Bevel protractor	• It is used to check the flatness of the job and the right
(c) Combination set (d) Sine bar	angle between two surfaces.
ISRO Technician-B Fitter 10-02-2019	• It has two main parts–(1) Blade, (2) Stock.
Ans. (d) : Sine bar is an instrument for indirect angle	
measurement.	STRAIGHT EDGE
• The distance between the axes of the two cylinders of	
Sine bar is 5 inches or 10 inches.	BLADE
• Some noises are drifted in the body of sine bar to reduce the weight and facilitate handling	90°
200 The size of the sine bar is specified by its :	90°
(a) Diagonal cross-length of sine bar	
(b) Centre to centre distance between rollers	BURR SLOT
(c) One end at the other end of the sine bar	STOCK
(d) Out of distance between rollers	204 Size of sine bar is taken from_
RRB ALP Fitter 21-01-2019, Shift-I	(a) Width
Ans : (b) The size of sine bar is specified by its length.	(b) Distance between two roller centres
• The length of the sine bar is the centre to centre	(c) Weight
distance between rollers.	(d) All of the above
• Upper surface of sine bar forms the hypotenuse of a	(RRR Ranchi ALP 21 09 2003)
201 Which of the following instrument is not used	Ans : (b) Size of sine bar is taken from the distance
for measuring of angles?	between two roller centres.
(a) Clinometer (b) Optical flats	• Working principle of sine bar is based on
(c) Bevel protractor (d) Protractor head	trigonometrical ratio.
RRB ALP Fitter 21-01-2019, Shift-I	• Sine bar is a precision angle measuring instrument.
Ans : (b) Optical flat is a disc of high quality glass or	• Accuracy of setting a sine bar decreases appreciably with steep angle
• Ontical flats are often used into test gauge blocks for	205 Sine bar is not in which of the following sizes?
precision and wear.	(a) 500 mm (b) 200 mm
• Optical flat is also used as reference against the	(c) 100 mm (d) 300 mm
flatness of unknown surface for comparison.	NTPC Fitter 2016
• Clinometer, bevel protractor and protractor head is a	(BHEL Hyderabad Fitter, 2014)
angle measuring instrument.	Ans : (a) Sine bar is not available in 500 mm sizes.
instrument is used. Identify	206. The purpose of hole in the sine bar is–
(a) Micrometer (b) Dial indicator	(a) For looking good
(c) Screw gauge (d) Caliper	(b) To reducing weight
RRB ALP 23-1-2019, Shift-II	(d) All of the above
Ans. (b) : To measure the cylinder bore dial indicator is	(IOF Fitter. 2012)
• Micrometer is used for making precise linear	(RRB Allahabad ALP, 03.08.2008)
measurements of dimensions such as diameter.	Ans : (c) The purpose of hole in sine bar is to clamping
thickness and length.	the workpiece.
• Screw gauge is mainly used to measure the diameter	• It is not possible to measure the angle of a given
of a thin wire.	specimen directly employing a sine bar.
• Inside calipers are used to measure an objects inside	• Bevel protractor measures the angle of the given
unitension. • Outside caliners are used to measure on chiests	Lispecimen directly
• Outside campers are used to measure an objects	Sine bar measures the angle of the given specimen indirectly by usage of align gauge

207. Sine bar works on principle of- (a) Trigonometry (b) Geometry (c) Algebraic (d) None of the above MP ITI Training Officer 08.11.2016 (Shift-I) (RRB Ranchi ALP, 08.07.2007)	 The jobs are mounted using angle plates for both measuring and marking. Angle plate is mainly made of cast iron. 211. What is the accuracy of master gauge?
Ans : (a) Sine bar works on the principle of trigonometry.	(a) 0.00001" (b) 0.0001" (c) 0.001" (d) 0.01" (OF Fitter 2015)
the precise formation of an angle.	Ans : (b) A master gauge is a standard or reference gauge.
h Gauge Blocks	 It is used for checking the accuracy of inspection gauges. It is also used to calibrate or set micrometer, comparator, or other gauging system. Accuracy of master gauge is 0.0001".
	212. Measuring tool is made of which metal?
	(a) Spring (b) Stainless steel
	(c) Both (d) None of the above
Surface Plate Hardened and Ground Cylinder	BDL Technician 2022 (Coal India Fitter 2013)
$\sin\theta = \frac{h}{\ell}$	Ans : (c) Measuring tool is made of spring steel and stainless steel both.
where, h - height of sine bar	213. Bevel protractor is used in-
ℓ - length of sine bar	(a) Linear measurement
(a) Stainless steel	(b) Measuring of flat surfaces
(b) High carbon steel	(c) Measuring of height
(c) Stabilized chromium steel	(d) Angular measurement
(d) High speed steel (IOF Fitter 2012)	IGCAR Stipendiary Trainee Maintainer 2021
Ans: (c) Sine bar is made of stabilized chromium steel.	(IOF Futer, 2013)
209. Sine bar is used to-	for measuring the angle of job.
(a) Measure the diameter of hole	• The bevel protractors have a beam, a graduated dial
(b) Determine the angle of a taper job (c) Levelling of a job for drilling	and blade that has a connection with a swivel plate.
(d) Check the profile of a thread	• The range of bevel protractor is 0-180°.
DRDO Turner.2016	• It is also known as plain protractor or engineer's
(RRB Chandigarh ALP, 14.09.2008)	protractor.
Ans: (b) Uses of sine bar–	214. Clinometer is related to :
2. To set the workpiece at a given angle	(a) Spirit level
3. For checking the measurement of unknown angle in	(b) Bevel protractor
the workpiece.	(c) Tolerance measurement
4. To check for unknown angles on heavy components.	(d) Angle gauge (IOE Fitter 2012)
210. Which of the following is not the angle measuring device :	(IOF Fuller, 2012)
(a) Angle plate (b) Sine bar	measuring angles of slope elevation or depression of an
(c) Bevel protector (d) Angle gauge	object with respect to gravity's direction.
IOF Fitter 10-9-2017	• A clinometer is a useful equipment for measuring
Ans: (a) Angle plate is not the angle measuring device.	angles and calculating approximate heights.
 Angle plate is made by two plates machining at an angle of 90°. 	• It is used frequently is forestry, engineering and astronomy.

Previous Years Exam Papers of TG-2 Other Technician Analysis Chart

S.L.	Exam NAME	EXAM DATE/TIME	No. of Questions		
	Uttar Pradesh Rajva Vidyut Utpadan Nigam Limited (UPRVUNL)				
1.	UPRVUNL	22.12.2022	150		
2.	UPRVUNL	05.04.2021	150		
3.	UPRVUNL	09.11.2016	150		
4.	UPRVUNL	22.09.2015	150		
5.	UPRVUNL	09.05.2015	150		
	UPSSSC Asstt. Boring	Technician & Tubewell Oper	ator		
6.	UPSSSC Boring Technician	03.07.2022	30		
7.	UPSSSC Tubewell Operator	12.01.2019	60		
8.	UPSSSC Tubewell Operator	02.09.2018	60		
9.	UPSSSC Boring Technician	09.08.2015	30		
10	UPSSSC Tracer	2015	30		
	Delhi Metro Rai	Corporation (Maintainer)			
11	DMRC Maintainer (Fitter)		75		
12	DMRC Maintainer (Fitter)	19 04 2018 (I-Shift)	75		
13	DMRC Maintainer (Fitter)	19.04.2018 (II-Shift)	75		
14	DMRC Maintainer (Fitter)	20.04.2018	75		
15	DMRC Maintainer (Fitter)	15.02.2017 (I-Shift)	75		
16	DMRC Maintainer (Fitter)	15.02.2017 (II-Shift)	75		
17	DMRC Maintainer (Fitter)	20.07.2014	75		
18	DMRC Maintainer (Fitter)	24 12 2006	75		
	Noida, Lucknow, Jaipur &	& Bangalore Metro Rail Corp MRC/IMRC/BMRC)	oration		
10			55		
19.	NMPC Maintainer (Fitter)		33		
20.	NMRC Maintainer (Fitter)	2017	4/		
21.	I MBC Maintainer (Fitter)		80		
22.	DMRC Maintainer (Fitter)	2016	50		
23.		(Technician D)	50		
24	ISBO Technician D (Eitter)	02.11.2022	00		
24.	ISRO Technician-B (Filler)	03.11.2022	80		
25.	ISRO Technician-B (RAC)	03.11.2022	80		
20.	ISRO Technician-B (Machinist)	03.11.2022	80		
27.	ISRO Technician-B (Filler)	21.10.2021	80		
28.	ISRO Technician-B (Turner)	14.07.2021	80		
29.	ISRO VSSC Technician-B (Fluer)	14.07.2021	80		
30.	ISRO VSSC Technician-B (Turner)	14.07.2021	80		
31.	ISRO Technician-B (Fitter)	23.02.2020	80		
32.	ISRO Technician-B (Fitter)	10.02.2019 (I-Shilt)	80		
<i>33.</i>	ISRO Technician-B (Fitter)	10.02.2019 (II-Shilt)	80		
25	ISRO Technician B (Fitter)	02.06.2019	00		
35.	ISRO Technician B (Fitter)	04.03.2019	80		
30.	ISRO Technician B (Fitter)	21.04.2019	80		
37.	ISRO Technician B (Fitter)		60		
30.	ISRO Technician B (Fitter)	25.00.2016	80		
<i>4</i> 0	ISRO Technician-B (Fitter)	28.08.2016	80		
40. <u>4</u> 1	ISRO Technician-B (Fitter)	20.00.2010	60		
TI .		20.11.2010	00		

42.	ISRO Technician-B (Fitter)	10.12.2016	80
43.	ISRO Technician-B (Fitter)	21.02.2015	80
44.	ISRO Technician-B (Fitter)	22.12.2012	80
45.	ISRO Technician-B (Turner)	23.02.2020	60
46.	ISRO Technician-B (Turner)	02.06.2019	60
47.	ISRO Technician-B (Turner)	22.04.2018	80
48.	ISRO Technician-B (Turner)	10.12.2017	60
49.	ISRO Technician-B (Turner)	25.09.2016	80
50.	ISRO Technician-B (Turner)	27.11.2016	60
51.	ISRO Technician-B (Turner)	22.11.2016	60
52.	ISRO Technician-B (Turner)	21.02.2015	80
53.	ISRO Technician-B (Plumber)	02.06.2019	80
54.	ISRO Technician-B (Plumber)	10.12.2017	80
55.	ISRO Technician-B (Plumber)	27.11.12016	60
56.	ISRO Technician-B (Welder)	21.04.2018	80
57.	ISRO Technician-B (Welder)	10.12.2017	80
58.	ISRO Technician-B (Welder)	25.09.2016	80
59.	ISRO Technician-B (Carpenter)	27.11.2016	60
60.	ISRO Technician-B (Diesel Mechanic)	27.11.2016	60
61.	ISRO Technician-B (Grinder)	27.11.2016	60
62.	ISRO Technician-B (Motor Mechanic)	27.11.2016	60
		T POADD AI D/Toohnic	vian
		1 BOARD ALF/ Technik	
63.	Assistant Loco pilot (ALP) Fitter	23.01.2019 (III-Shift)	75
64.	Assistant Loco pilot (ALP) Mechanic Motor Vehicle	23.01.2019 (III-Shift)	75
65.	Assistant Loco pilot (ALP) Fitter	21.01.2019 (I-Shift)	75
66.	Assistant Loco pilot (ALP) Mechanic Diesel	08.02.2019 (II-Shift)	75
67.	Assistant Loco pilot (ALP) RAC	23.01.2019 (I-Shift)	75
68.	Assistant Loco pilot (ALP)	23.01.2019 (III-Shift)	75
69.	Assistant Loco pilot (ALP) Heat Engine	08.02.2019 (II-Shift)	75
70.	Assistant Loco pilot (ALP) Fitter	23.01.2019 (II-Shift)	75
71.	Assistant Loco pilot (ALP) Mechanic Diesel	23.01.2019 (III-Shift)	75
72.	Assistant Loco pilot (ALP) Mechanic Diesel	23.01.2019 (I-Shift)	75
73.	Assistant Loco pilot (ALP) Heat Engine	23.01.2019 (III-Shift)	75
74.	Assistant Loco pilot (ALP)	23.01.2019 (I-Shift)	75
75.	Assistant Loco pilot (ALP) Heat Engine	08.02.2019 (I-Shift)	75
76.	R.R.B. Ajmer Asst. Loco Pilot	10.10.2004	100
77.	R.R.B. Ajmer Asst. Loco Pilot	23.05.2004	100
78.	R.R.B. Allahabad Asst. Loco Pilot	03.08.2008	100
79.	R.R.B. Allahabad Asst. Loco Pilot	09.12.2007	100
80.	R.R.B. Bangalore Asst. Loco Pilot	25.01.2004	100
81.	R.R.B. Bangalore Asst. Loco Pilot	08.07.2007	100
82.	R.R.B. Bangalore Asst. Loco Pilot	15.07.2012	100
83.	R.R.B. Bhopal Asst. Loco Pilot	06.06.2010	100
84.	R.R.B. Bhubneswar Asst. Loco Pilot	14.06.2009	100
85.	R.R.B. Bhubneswar Asst. Loco Pilot	15.07.2012	100
86.	R.R.B. Bilaspur Asst. Loco Pilot	15.07.2012	100
87.	R.R.B. Chandigarh Asst. Loco Pilot	14.09.2008	100
88.	R.K.B. Chandigarh Asst. Loco Pilot	15.07.2012	100
89.	R.K.B. Chandigarh Asst. Loco Pilot	25.05.2003	100
90.	R.K.B. Chennai Asst. Loco Pilot	06.06.2010	100
91.	R.K.B. Chennai/Bangalore Asst. Loco Pilot	27.10.2002	100
92.	R.K.B. Gorakhpur Asst. Loco Pilot	08.10.2006	100
93.	R.R.B. Gorakhpur Asst. Loco Pilot	11.10.2009	100

94.	R.R.B. Gorakhpur Asst. Loco Pilot	12.10.2003	100
95.	R.R.B. Gorakhpur Asst. Loco Pilot	14.04.2002	100
96.	R.R.B. Gorakhpur Asst. Loco Pilot	21.10.2001	100
97.	R.R.B. Guwahati Asst. Loco Pilot	22.01.2006	100
98.	R.R.B. Jammu-Kashmir Asst. Loco Pilot	06.06.2010	100
99.	R.R.B. Kolkata Asst. Loco Pilot	02.11.2008	100
100.	R.R.B. Kolkata Asst. Loco Pilot	06.02.2005	100
101.	R.R.B. Kolkata Asst. Loco Pilot	16.07.2006	100
102.	R.R.B. Kolkata Asst. Loco Pilot	2014	100
103.	R.R.B. Kolkata Asst. Loco Pilot	29.09.2002	100
104.	R.R.B. Malda Asst. Loco Pilot	16.07.2006	100
105.	R.R.B. Mumbai Asst. Loco Pilot	03.06.2001	100
106.	R.R.B. Mumbai Asst. Loco Pilot	05.06.2005	100
107.	R.R.B. Mumbai Asst. Loco Pilot	14.06.2009	100
108.	R.R.B. Mumbai Asst. Loco Pilot	15.07.2012	100
109.	R.R.B. Mumbai Asst. Loco Pilot	16.07.2006	100
110.	R.R.B. Mumbai/Bhopal Asst. Loco Pilot	05.01.2003	100
111.	R.R.B. Muzaffarpur Asst. Loco Pilot	15.02.2009	100
112.	R.R.B. Patna Asst. Loco Pilot	04.02.2007	100
113.	R.R.B. Patna Asst. Loco Pilot	11.11.2001	100
114.	R.R.B. Patna Asst. Loco Pilot	2014	100
115.	R.R.B. Ranchi Asst. Loco Pilot	04.09.2005	100
116.	R.R.B. Ranchi Asst. Loco Pilot	08.07.2007	100
117.	R.R.B. Ranchi Asst. Loco Pilot	19.01.2003	100
118.	R.R.B. Ranchi Asst. Loco Pilot	2014	100
119.	R.R.B. Ranchi Asst. Loco Pilot	21.09.2003	100
120.	R.R.B. Secunderabad Asst. Loco Pilot	06.06.2010	100
121.	R.R.B. Secunderabad Asst. Loco Pilot	11.11.2001	100
122.	R.R.B. Secunderabad Asst. Loco Pilot	29.06.2008	100
123.	R.R.B. Siliguri Asst. Loco Pilot	2014	100
124.	R.R.B. Trivandrum Asst. Loco Pilot	20.06.2004	100
125.	R.R.B. Ahamadabad Asst. Loco Pilot	2014	100
126.	R.R.B. Ahamadabad Asst. Loco Pilot	17.10.2004	100
127.	R.R.B. Ajmer Asst. Loco Pilot	05.06.2005	100
	INDIAN ORDNANG	CE FACTORY (IOF)	
128.	Indian Ordnance Factory	10.09.2017	80
129.	Indian Ordnance Factory Apprentice Fitter	2017	90
130.	Indian Ordnance Factory	2016	80
131.	Indian Ordnance Factory	08.05.2016	80
132.	Indian Ordnance Factory	2015	80
133.	Indian Ordnance Factory	2014	80
134.	Indian Ordnance Factory	2013	80
135.	Indian Ordnance Factory	2012	80
	DR	DO	
136	DRDO Fitter	2022	80
137	DRDO Turner	2022	80
138	DRDO Machinist	2022	80
139	DRDO Mechanic Motor Vehicle	2022	80
140	DRDO Mechanic Diesel	2022	80
141	DRDO Fitter	2016	100
142	DRDO Turner	2016	100
143	DRDO Machinist	2016	100
144	DRDO Mechanic Motor Vehicle	2016	100
145	DRDO Mechanic Diesel	2016	100
			- 3 0

Himachal Pradesh			
146.	HPSSC Fitter	20.10.2019	120
147.	HPSSC Jr. Technician (fitter) 30.08.2018	30.08.2018	120
	Cochin S	Shipyard	
148.	Cochin Shipyard (Fitter)	13.06.2022	20
149.	Cochin Shipyard (Sheet Metal)	13.06.2022	20
150.	Cochin Shipyard (Fitter)	14.12.2021	20
	Hary	ana	
151.	HSSC Pipe (Fitter)	03.08.2021	100
152.	HSSC Fitter	09.08.2021	100
	Northern Coalfiel	ds Limited (NCL)	
153.	NCL Tech. (Machinist)	27.12.2020	70
154.	NCL Tech. (Fitter)	27.12.2020	70
155.	NCL Tech. (Machinist)	10.07.2020	70
	Other State & PS	U's Examinations	
156.	DSSSB Draughtsman (Mech.)	03.11.2022	50
157.	HPCL Maintenance & Tech. (Mech.)	07.08.2022	50
158	BDL Technician	2022	100
159.	NLC Technician	24-09.2022	80
160.	HAL Apprentice	10.11.2022	100
161.	NPCIL Stipendiary Trainee (Fitter) Rawatbhata	16.10.2022	50
162.	MP ITI Training Officer	20.12.2022	75
163.	BEML	2022	100
164.	NALCO Jr. Operative Trainee	2021	100
165.	NALCO Operator Boiler	2021	100
166.	BRO Vehicle Mechanic	2021	100
167.	BARC Stipendiary Trainee Maintainer	2021	100
168.	NFC Stipendiary Trainee Maintainer	2021	80
169.	IGCAR Stipendiary Trainee Maintainer	2021	80
170.	IOCL	2020	100
171.	BHEL	2020	100
172.	RRCAT Stipendiary Trainee Maintainer	2019	100
173.	SAIL (Fitter)	17.11.2019	80
174.	BECIL (NE07) Maintainer (Fitter)	2019	45
175.	CRPF Constable Tradesman	2016	40
176.	SAIL Bokaro Steel Plant	2016	60
177.	NTPC Fitter	2016	80
178.	BPCL Operator (Field)	2016	80
179.	BEL Technician Fitter	20.11.2016	100
180.	BEL Technician Fitter	19.11.2016	100
181.	MP ITI Training Officer	08.11.2016	75
182.	HAL Fitter	2015	50
183.	VIZAG Steel Fitter	2015	50
184.	MES Fitter (Tradesman)	2015	50
185.	NTPC Fitter	2014	60
186.	BHEL Hyderabad Fitter	2014	100
187.	SAIL Durgapur Steel Plant	2014	60
188.	COAL India Fitter	2013	80
189.	Mazagon Dock Shipbuilders Ltd. Fitter	2013	80
		Total	15822





01.

Welding

1. Welding Process	 Ans. (c) : Electrode size is measured diameter of core wire. An electrode is a metallic wire of standardize &
1. Which of the following arc welding parameters	length, generally coated with flux.
does not affect the heat input during welding?	• It is used to complete the welding circuit and provide
(a) Welding current (b) Voltage	filler material to the joint by an arc.
(c) Flux coating (d) Travel speed	6. The layer of flux on metal wire is called
UPRVUNL TG-2 Fitter 22.12.2022	(a) Welding torch (b) Welding set
Ans. (c) : Flux coating does not affect the heat input	(c) Electrode (d) None of these
auring weiging.	BEML 2022
• Welding current, welding voltage, welding speed affect the heat input during welding.	HPSSC Fitter 20-10-2019 Ans. (c) : Laver of flux on metal wire is called as
2. Which cast iron cannot be welded?	electrode.
(a) Grey cast iron (b) White cast iron	• Flux coating is used to protect metal from
(c) Malleable cast iron (d) Nodular cast iron $HEGC B$:	contamination by the oxygen and nitrogen and other
HSSC Pipe (Fitter) 03-08-2021	contaminants in the atmosphere.
Ans. (b) : White cast from which is very hard and contains iron carbide is normally considered to unwelded able	7. Which type of flame has the oxygen and acetylene ratio 1.2:1?
• In white cast irons carbon is present in the form of	(a) Carburizing flame (b) Reducing flame
"iron carbide".	(c) Neutral flame (d) Oxidizing flame
3. What is called from where electrode bare part	HPCL Maintenance and Technician 07-08-2022
is gripped?	Ans. (a) : Oxidizing flame type of excess oxygen (O_2)
(a) Handle (b) Stubble end	is used. Oxidizing flame used ratio oxygen and
(c) Spindle (d) Bare end	acetylene is 1.2.1.
HPSSC Fitter 20-10-2019	• Oxidizing name no smoke and noisy. • This flame is used for welding oxygen free conner
NTPC Fitter 2016	allov brass allov zinc base material
Ans. (b): That is known as stubble end where electrode	• Carburizing flame is ratio $C_2H_2 > O_2$, it is smooky and
bare part is gripped. Electrode is a metallic wire of standard size $\&$ length generally coated with flux	quite flame.
4 What is the colour of wolding booth well?	• Neutral flame is ratio 1:1. The flame is hissy and little
(a) Vellow (b) Red	smoke used for cast iron, mild steel etc.
(c) Green (d) Black	8. Which of the following statement is wrong
(c) 01111 (c) 11111 IOCL 2020	regarding the safety to be followed during gas
HPSSC Fitter 20-10-2019	welding
Ans. (d) : Colour of welding booth wall is of black	(a) Welder should wear goggles
colour.	(b) Welder should take some that the see culinder
• We need to point in a colour that is flat and non	(c) weider should take care that the gas cylinder
reflective.	(d) Welder should be wear asbestos gloves
• A latex paint for welding booth is more preferable	(d) weider should be wear assestos groves
because of lower chances of burning paint & fumes due	BHEL 2020
5 How the size of electrode is measured?	Ans. (b) : Precautions during gas welding_
5. now the size of electrode is measured?	• Welder should wear goggles. These goggles protect
(a) Longin (b) Width	the eye from infrared radiation.
(c) Diameter of core wire	• Protecting clothing such as flameproof apron. gloves.
(d) Circle	cap or helmet & both should wear before welding.
HPSSC Fitter 20-10-2019	• Gas cylinder should not be exposed to heat.

9.	In welding, the polarity of Alternating Current power source is always (a) Straight Polarity	Ans. (c) : The top edge is melted round and the cut face is not smooth in gas cutting due to the tip being held too high.
	(b) Reverse Polarity (c) Both Straight and Reverse Polarity	14. Which fuel gas is used for cutting deep under
	(d) No Polarity	water?
	ISRO Technician B (Fitter) 03-11-2022	(a) Acetylene (b) Hydrogen
Ans. (d) : In welding the polarity of alternating current	(c) LPG (d) Methalie DDR ALP Corekbour 14 04 2002
power	source is always No polarity.	Ans (b) + Hudrogen fuel gas is used for outting deep
Straig	ht polarity-	Alls. (b) : Hydrogen luer gas is used for cutting deep under water
• In st	raight polarity, the electrode is having a negative	• Temperature of hydrogen fuel gas 2400°C to 2700°C
positiv	ve terminal of the direct current power source.	• Used for brazing, silver, soldering and underwater gas
• In st	raight polarity $2/3$ of heat will be at the workpiece	cutting of steel.
and 1/	3 will be at the electrode.	15. The electrode size refers to
Rever	sible polarity–	(a) Diameter of its core wire
• In r	everse polarity, the electrode is connected to the	(b) Diameter (overall) of electrode
positiv	ve terminal whereas workpiece is connected to the	(c) Thickness of flux coating
Elec	trong move from workniege to electrode resulting	(d) Length of electrode
\bullet Electin 2/3	heat at electrode and 1/3 at workpiece	IGCAR Stipendiary Trainee Maintainer 2021
10.	Which of the following joining methods results	RRB ALP Gorakhpur 12.10.2003
100	in the fusion of the parent metal?	Ans. (a) : The electrode size refers to the diameter of its
	(a) Riveting (b) Welding	core wire and each electrode has a certain current range.
	(c) Brazing (d) Soldering	• The welding current increases with the electrode size
	RRB ALP Kolkata 02.11.2008	(diameter).
Ans.	(b) : The welding is a process of joining two	• The length of electrode may depend on diameter of the core wire ranging from 250 to 450 mm i.e. larger the
simila	nlication of pressure and with or without the use	core diameter larger the length
of fille	er metal.	16. One of the functions of electrode coating is
11.	If the blowpipe is moved to and fro frequently	(a) To increase welding current
	while cutting the kerf will	(b) To stabilize the arc
	(a) Be more (b) Of correct size	(c) To prevent rusting
	(c) Be less (d) Not be affected	(d) To control arc temperature
A	RRB ALP Jammu-Kashmir 06.06.2010	RRB ALP Gorakhpur 11.10.2009
Ans.	(a) : If the blowpipe is moved to and ito ntly while cutting the kerf will be more	Ans. (b) : Electrode coating should provide gas
• The	oxygen stream and combusted gas transport the	shielding for the arc, arc stability, good weld shape.
molter	n metal oxide away and the metal in its path burn,	Methods of flux coating on electrodes-
produ	cing a narrow cut known as a kerf.	1. Dipping method
12.	In gas cutting, if too little cutting oxygen is	2. Extruded method
	supplied	17. The electrodes are manufactured in two
	(a) The metal will be cooled down (b) The kerf will be parrow	standard lengths namely
	(c) The kerf will be wide	(a) 350 mm and 450 mm
	(d) The metal will fail to cut completely	(c) 400 mm and 500 mm
	RRB ALP Guwahati 22.01.2006	(d) 12" and 10"
Ans. ((d) : In gas cutting, if too little cutting oxygen is	RRB ALP Gorakhpur 08.10.2006
suppli	ed the metal will fail to cut completely.	Ans. (b) : The electrodes are manufactured in two
13.	The top edge is melted round and the cut face is	different lengths, 350 or 450 mm.
	not smooth in gas cutting. This is due to	• In arc welding, an electrode is used to conduct current
	(a) Extremely slow cutting speed(b) Insufficient acetylene pressure	through a workpiece to fuse two pieces together.
	(c) The tip being held too high	Types of electrode-
	(d) Too much cutting oxygen pressure	1. Consumable electrode
	RRB ALP Gorakhpur 21.10.2001	2. Non-consumable electrode

18. In DC betwee change (a) PC (b) PC (c) PC (d) PC	C welding here en electrode a e of polarity. Distive 2/3 and Distive 1/3 and Distive 3/4 and Distive 1/4 and	eat distribut and the base of The distribut negative 1/3 negative 2/3 negative 1/4 negative 3/4	ion is possible netal due to the ion of heat is	 21. During arc welding the correct angle of the electrode with the welding line is (a) 30° (b) 40° to 50° (c) 70° to 80° (d) 90° RRB ALP Chandigarh 15.07.2012 Ans. (c) : During arc welding the correct angle of the electrode with the welding line is 70° to 80°.
	R	RB ALP Che	nnai 27.10.2002	22. Identify the characteristic of flame shown in
Ans. (a) : C	comparison of	different elect	rode polarity-	figure.
1	DC, electrode positive 2/3rd at	DC, electrode negative	AC	(a) Oxygen is more than acetylene
Heat	electrode	electrode	both	(b) Acetylene is more than oxygen
generation	1/3rd at	2/3rd at		(c) Acetylene and oxygen are in equal proportion
generation	workpiece	workpiece		(d) Acetylene and oxygen are in less proportion
2	Thin	Thin	Intermediate	RRB ALP Chandigarh 14.09.2008
Thickness	sheets	sheets		Ans. (b) : Acetylene is more than oxygen in given \mathcal{C}
of work to				figure.
be welded				Carburize flame –For this flame, excess fuel gas (C_2H_2) is used it is used for welding medium carbon steel
3.	High	Low	Intermediate	nickel etc. $(C_2H_2 > O_2)$
Metal				• Temperature - 2900°C
deposition				• Intermediate flame (red)
rate				23. Which of the following ray is not produced
19. During	g gas weldi	ng, somethiı	ng the joining	during welding?
pieces	are perman	ently change	d in shape and	(a) Gamma rays (b) Visible light rays
size from original.			(c) Infrared rays (d) Ultra violet rays	
	DISTORTION	~ -		RRB ALP Bilaspur 15.07.2012
Construction and Construction			Ans. (a) : Gamma rays is not produced during welding. Welding arc and flames emit visible light rays, ultraviolet and infrared radiation. UV radiation in a welding arc will burn unprotected skin just like UV radiation in sunlight.	
TRANSVERSE CONTRACTION DISTORTION			AR	24. In the coatings of electrodes for welding mild
The re	eason for the	defect as she	wn in figure is	steel and low-alloy steels, is used to
due to				provide gaseous shield with reducing agent.
(a) Ui	nsuitable flam	e setting		(a) Metal carbonates
(b) Ec	lge preparation	n is not prope	rly done	(b) Titanium dioxide
(c) Ui	nsuitable nozz	le size is selec	eted	(c) Ferromanganese and ferrosilicon
(d) Lo	(d) Localized, heating and cooling			(u) Centriose DDR ALD Rhubneswer 15 07 2012
		BDL T	echnician 2022	Ans (d) : In the costings of electrodes for welding mild
	R	RB ALP Che	nnai 06.06.2010	Alls. (u): In the coatings of electrodes for weiging initial steel and low-allow steels, cellulose is used to provide
Ans. (d) : T	Ans. (d) : The reason for the defect as shown in figure		shown in figure	gaseous shield with reducing agent.
is due to localized, heating and cooling.			25. Temperature of hotness of workpiece in a forge	
20. Which	one of the	following pr	operties is the	is judged approximately by —
most e	essential for	the metals in	the process of	(a) Color (b) Weight
casting, welding, brazing and soldering?			dering?	(c) Structure (d) Smell
(a) Fu	ISIDILITY	(b) Mal	leability	RRB ALP Bhubneswar 14.06.2009
(c) Te	enacity	(d) Plas		Ans. (a) : Temperature of hotness of workpiece in a
	ККВ	ALP Chandig	garn 25.05.2003	forge is judged approximately by color.
Ans. (a) : Fu	Ans. (a) : Fusibility is the most essential for the metals			Hot forging of steel The forging temperatures are
in the process of casting, welding, brazing and			, brazing and	above the re-crystallization temperature and are
soluering.				typicany between 950 C-1250 C.

Welding

 (a) Gas (b) Resistance (c) Arc (c) Thermit RB ALP Bapa 06.6.2010 Ans. (c) : Electrode is consumed in the arc welding process. (c) = Arc welding is a method of permanently joining two or more metal parts. They can use either consumable alcetrode. The welding region is usually protected by some type of shielding gas, vapout (c) Arc welding (b) Gas welding (c) Spot welding (b) Gas welding (c) Spot welding (b) Gas welding (c) Spot welding (c) Spot welding (c) Spot welding (c) Thermit welding (c) Spot welding (c) Spot welding (c) Thermit welding (c) Spot welding (c) Thermit welding (c) Spot welding (c) Thermit welding (c) Spot welding (c) Spot welding (c) Thermit welding (c) Spot welding (c) Spot welding (c) Thermit welding (c) Spot welding (c) Spot welding (c) Spot welding (c) Spot welding (c) Thermit welding (c) Spot welding (c) Spot welding (c) Thermit welding (c) Spot welding (26.	Electrode is cons	sumed in the following welding	Ans. (b) : Short arc length is correct for fusion and penetration
 (c) Are (d) Thermit RR ALP Bhopal 06.06.201 regression of the are welding process. Are welding is a method of permanently joining two or more metal parts. They can use either consumable or non-consumable electrode. The welding regression used in the are welding (e) Spot welding (f) Thermit welding (e) Spot welding (f) Thermit welding trocess, such are used hard drawn copper. Ans. (c) : Pressure welding process, generally used in sheet metal fabrication is called		(a) Gas	(b) Resistance	• If the distance between the tip of the electrode and the
 RRB ALP Bhopal 06.06.2010 Ans. (c) : Electrode is consumed in the arc welding is a method of permanently joining two consumable electrode. The welding region is used ther consumable electrode. The welding region is usel ther consumable of shielding gas, vapour or shage. 7. Pressure welding process, generally used in sheet metal fabrication is called (a) Arc welding (b) Gas welding (c) Thermit welding and (c) is provided in a called soft welding (d) formative traited is a metal arc welding or non-consumable, in the case of gas metal arc welding process, generally used in process is used for (b) RrB ALP Bangalore 15.07.2017 Ans. (c) : Pressure welding process, generally used in the case of gas metal arc welding in process is used for (c) Stot welding flux is used for protect the surface from stopping oxidation. RRB ALP Bangalore 08.07.2007 Ans. (d) : Welding flux is used for protect the surface from stopping oxidation. RRB ALP Bangalore 02.7.2017 Ans. (d) : Welding flux is used for protect the surface from stopping oxidation. RRB ALP Bangalore 02.7.2014 Ans. (b) : Metal thickness from 1/16 to 1/2 mch. (16 for 12.7 mm) can be welded with no edge preparation in submerged arc welding from 1/4 to 1 inch (6.4 to 25.4 mm). High current density (c) Lorg (m) 1/6 to 1/2 mch. (16 for 12.7 mm) can be welded with no edge preparation. Welds are al concentrated, deep preparation. The function of 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode metrid frate and a concentrated, deep penetrating arc. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (b) Long (d) Medium RB ALP Alahabad 09.12.2007 Ans. (b) : Metal thickness from 1/16 to 1/2 mch. (b) for a and a concentrated, deep penetrating arc. Mich arc length is correct for fusion and penetration? (a)		(c) Arc	(d) Thermit	base metal is less than the diameter of the core wire it is
 Ans. (c) : Electrode is consumed in the arc welding process. Arc welding is a method of permanently joining two or more metal parts. They can use either consumable or sisually protected by some type of shielding gas, vapour or slag. (a) Hard drawn copper (b) Cadmium copper (c) Chromium copper (d) Tungsten copper non-consumable electrode. In evelding grocess, generally used in sheet metal fabrication is called (a) Arc welding (d) Thermit welding (c) Spot welding (d) Thermit welding is sheet metal fabrication is called (b) Castellar (c) Spot welding (d) Thermit welding process, generally used in sheet metal fabrication is called spot welding (this welding process is used primarily for welding this welding process is used primarily for welding this welding process is used for metal area. (a) Radiation (b) Oxidation (c) Rus tused for protect the surface from stopping oxidation. The function of hause thor protect the surface from stopping oxidation. The function of human is used for protect the surface from stopping oxidation. The function of human is used for protect the surface from stopping oxidation. (c) Else of granular flux (d) Stopping oxidation. The function of human is used for protect the surface from stopping oxidation. The function of human is used for protect the surface from stopping oxidation. (c) Else of granular flux (d) Stopping oxidation. (d) Stoer granular flux (d) Stopping oxidation. (e) Lose of granular flux (d) stopping oxidation. (f) High arc time (b) High current density results in a high heles torcode metal for welding in a high heles torcode metal for trate and a concentrated, deep penetrating arc. (a) Normal short (b) Short (c) Long (d) Medium (RRB ALP Bhopal 06.06.2010	called a short arc $(l > d)$.
 Process. Arc welding is a method of permanently joining two or more metal parts. They can use either consumable or non-consumable electrode. The welding region is usually protected by some type of shielding gas, vapour, or alg. (a) Hard drawn copper (b) Cadmium copper (c) Chromium copper (c) Chromium copper (c) Turageten copper (c) Turageten copper (c) Turageten copper (c) Turageten copper (c) Chromium copper (c) Turageten co	Ans.	(c) : Electrode is	s consumed in the arc welding	31. For welding aluminum alloys, the electrodes
 Arc welding is a method of permanently joining two or more metal parts. They can use either consumable of non-consumable clettrode. The welding recision is usually protected by some type of shielding gas, vapour, or slag. 77. Pressure welding process, generally used in sheet metal fabrication is called (a) Arc welding (b) Gas welding (c) Spot welding (b) Gas welding (c) Spot welding process, generally used in sheet metal fabrication is called (b) Engradiore 15.07.2017 Ans. (c) : Pressure welding process, generally used in sheet metal fabrication is called (b) ReB ALP Bangdore 15.07.2017 Ans. (c) : Pressure welding process, generally used in sheet metal fabrication is called (c) Enduction (d) Stopping oxidation (c) ReB ALP Bangdore 08.07.2007 Ans. (d) : Welding flux is used for protect the surface from stopping oxidation. The function of flux in gas welding-1. To dissolve oxides and to prevent impurities and ther inclusion that could affect the weld quality. (c) Stoud welding is a process of joining large sections whose special application at	proce	ess.		(a) Hard drawn conner (b) Cadmium conner
 and the metal parts. They can use either consumate of mon-consumable electrode. The welding region is usually protected by some type of shielding gas, vapour, or slag. 3. Pressure welding process, generally used in sheet metal fabrication is called spot welding (c) Spot welding (d) Thermit welding the two welding is sheet metal fabrication is called spot welding (as shown as resistance spot welding (b) Gas welding is a such as the state to generally used in the case of gas metal are welding or non-consumable, such as ing as tungsten to the weld area. 3. Welding flux is used for increasing is a state of the state is to getter by applying pressure and heat from an electric urrent to the weld area. 3. Welding flux is used for increasing agents to discolve and remove oxides and clean the metal for welding from dirt and other impurities. 3. Why upto 12 mm thick plates can be welded without edge preparation in submerged are welding is a process of joining large sections whose special application at (a) Locomotive rail and ship hulls (1.7 mm) can be welded with no edge preparation. Wide generation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). 3. Thermit welding is a process of joining large sections whose special application at (a) Locomotive rail and ship hulls (b) Engine blocks (c) Lathe beds (c) Short (c) Long (d) Medium RRB ALP Athababd 09.12.2007 	• Arc	welding is a met	hod of permanently joining two	(a) That drawn copper (b) Caumum copper (c) Chromium copper (d) Tungsten copper
 Indicionalitable circlulue. The welding region is usually protected by some type of shielding as, vapour, or slag. 27. Pressure welding process, generally used in sheet metal fabrication is called, (a) : For welding aluminum alloys, the electrodes is are used hard drawn copper. During welding process, an electrode is used to conduct electricity through workpiece to fuse two pieces together. Depending upon the process, the electrode is either consumable in the case of gas metal are welding or non-consumable, such as in gas tungsten are welding. This welding the tase of primarily for welding (us to used for). B. Welding flux is used for (a) Radiation (b) Oxidation (c) Reduction flux in gas welding- 1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and ther intermit. (a) High are time (b) High arctift density (c) Use of granular flux (d) Semi-automatic process? (a) High are time (b) High arctime density (c) Use of granular flux (d) Semi-automatic process? (a) High are time (b) High arctift density (c) Use of granular flux (d) Semi-automatic process? (a) High are time (b) High arctime density (c) Use of granular flux (d) Semi-automatic process? (a) High are time (b) High arctift density (c) Use of granular flux (d) Semi-automatic process? (b) High current density results in a high electrode metal and ship hulls (b) Engine blocks (c) Latch beds on material from 1/4 to 1 inch (6.4 to 25.4 mm). (b) Kigh Current density results in a high electrode metal are complexible and the assess of joining large sections whose special application at locomotive rail and ship hulls (b) Engine blocks (c) Latch beds on superstante. (b) Engine blocks (c) Latch beds (c) Short (c) Long (c) Medium RRB ALP Alhabad 09.	or mo	ore metal parts. In	ey can use either consumable of	NEC Stingendiary Trainge Maintainer 2021
 Ans. (a) : For welding aluminum alloys, the electrodes is used to conduct electricity through workpiece to fuse two pieces together is correct for fusion and the reaction is called spot welding (also favore welding frozess; generally used in sheet metal fabrication is called spot welding (also favore sis used primarily for welding two or more metal sheets together by applying pressure and heat from an electric current to the weld area. Welding flux is used for	11011-0	ly protected by sor	ne type of shielding gas vapour	RRR ALP Allahahad 03 08 2009
 27. Pressure welding process, generally used in sheet metal fabrication is called	or sla		ne type of sinclaing gas, vapour,	Ans (a) · For welding aluminum allows, the electrodes
 27. Tressure welding process, generally used in some metaplication is called (a) Arc welding (b) Gas welding (c) Spot welding (d) Thermit welding (d) Thermit welding is called spot welding (l). This welding process is used primarily for welding two or more metals hest together by applying pressure and heat from alectric current to the weld area. (b) RRB ALP Bangalore 08.07.2007 Ans. (d) : Welding flux is used for (a) Radiation (b) Oxidation (c) RRB ALP Bangalore 08.07.2007 Ans. (d) : Welding flux is used for (b) RRB ALP Bangalore 08.07.2007 Ans. (d) : Welding flux is used for protect the surface from stopping oxidation. The function of flux in gas welding (b) High current density (c) Use of granular flux (d) Semi-automatic process? (a) Kns (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with an edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	27	Pressure weldin	g process generally used in	are used hard drawn conner
 (a) Arc welding (b) Gas welding (c) Spot welding (d) Thermit welding mices together. (b) Peending upon the process, the electrode is either consumable in the case of gas metal arc welding or sonsable, such as ing as tangsten arc welding. (c) Pressure welding process, generally used in sheet metal fabrication is called spot welding (as known as resistance spot welding). This welding two or more metal sheets together by applying pressure and heat from an electric current to the weld area. 28. Welding flux is used for	<i>2</i> 7.	sheet metal fabri	cation is called	• During welding process an electrode is used to
 (c) Spot welding (d) Thermit welding is process (g) four welding (d) Thermit welding (also sheet metal fabrication is called spot welding (also sheets together by applying pressure and heat from effect current to the weld area. 28. Welding flux is used for		(a) Arc welding	(b) Gas welding	conduct electricity through workpiece to fuse two
 Beending upon the process, the electrode is either consumable, in the case of gas metal are welding or onn-consumable, such as in gas tungsten are welding. This welding there are welding or onn-consumable, such as in gas tungsten are welding. Which of these is a fusion welding process? Which of these is a fusion welding process? Welding flux is used for		(c) Spot welding	(d) Thermit welding	pieces together.
 Ans. (c) : Pressure welding process; generally used in sheet metal fabrication is called spot welding (also known as resistance spot welding). This welding process is used primarily for welding two or more metal sheets together by applying pressure and heat from an electric current to the weld area. 28. Welding flux is used for		(c) spot wording	RR ALP Bangalore 15 07 2012	• Depending upon the process, the electrode is either
 Fuls. (c) Fileson volume process, generating process is used velding process is used primarily for welding to work more metal sheets to gether by applying pressure and heat from an electric current to the weld area. 28. Welding flux is used for (a) Radiation (b) Oxidation (c) Reduction (d) Stopping oxidation. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding welding welding welding flux file metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding welding welding welding welding welding for dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding welding welding welding welding welding welding welding welding to more metal are submerged arc from tags welding from stopping oxidation. The function of flux in gas welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc metal are submerged arc from tags welding welding welding welding welding welding welding welding to more metal are submerged arc from tags stud arc welding (s) a process of joining large sections whose special application at locomotive rail and ship hulls and steel casings and forgings. (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allanbabd 09.12.2007 	Ans	(c) · Pressure we	ding process generally used in	consumable in the case of gas metal arc welding or
 a line as trugsten are welding. b line as trugsten are welding. c line as trugsten are welding. d line as trugsten are weldi	sheet	metal fabrication	is called spot welding (also	shielded metal arc welding or non-consumable, such as
 32. Which of these is a fusion welding process? (a) Forge welding (b) Arc welding (c) Reduction (c) Reduction (d) Stopping oxidation (e) Reduction (f) Stopping oxidation (f) Stopping oxidation (g) Studwelding flux is used for reaction of flux in gas welding- 1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding more system welding is a process of joining large sections whose special application at (a) Locomotive rail and ship hulls and steel casings and forgings. (b) Engine blocks (c) Laute beds (d) Medium RRB ALP Allahabad 09.12.2007 	know	n as resistance	spot welding) This welding	in gas tungsten arc welding.
 sheets together by applying pressure and heat from an electric current to the weld area. 28. Welding flux is used for (a) Radiation (b) Oxidation (c) Reduction (d) Stopping oxidation RRB ALP Bangalore 08.07.2007 Ans. (d) : Welding flux is used for protect the surface from stopping oxidation. The function of flux in gas welding-1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc meeting welding morecess? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process RRB ALP Bangalore 25.01.2004 Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 1/2 inch.	proce	ess is used primaril	y for welding two or more metal	32. Which of these is a fusion welding process?
 c) Stud welding (d) Resistance welding RRB ALP Ajmer 23.05.2004 (c) Stud welding (d) Resistance welding RRB ALP Ajmer 23.05.2004 (d) Rasistance welding (d) Resistance welding RRB ALP Ajmer 23.05.2004 (e) Reduction (d) Stopping oxidation RRB ALP Bangalore 08.07.2007 Ans. (d) : Welding flux is used for protect the surface from stopping oxidation. The function of flux in gas welding-1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding models without edge preparation in submerged arc welding for the statistic inert gas welding for a model with o cleap reparation. With dege preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). 4. High current density results in a high electrode mett off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium (e) Lathe Edds (f) The function? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	sheet	s together by appl	ying pressure and heat from an	(a) Forge welding (b) Arc welding
 28. Welding flux is used for	elect	ric current to the w	eld area.	(c) Stud welding (d) Resistance welding
 (a) Radiation (b) Oxidation (c) Reduction (d) Stopping oxidation RRB ALP Bangalore 08.07.2007 Ans. (d) : Welding flux is used for protect the surface from stopping oxidation. The function of flux in gas welding– To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to to 17.2 mm) can be welded with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode meta of frate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion ant penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	28.	Welding flux is u	ised for .	RRB ALP Ajmer 23.05.2004
 (c) Reduction (d) Stopping oxidation RRB ALP Bangalore 08.07.2007 Ans. (d) : Welding flux is used for protect the surface from stopping oxidation. The function of flux in gas welding-1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process RRB ALP Bangalore 25.01.2004 Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode methoff frate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 		(a) Radiation	(b) Oxidation	Ans. (b) :
 RRB ALP Bangalore 08.07.2007 Ans. (d) : Welding flux is used for protect the surface from stopping oxidation. The function of flux in gas welding- 1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 1/2, rmm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode meth off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 		(c) Reduction	(d) Stopping oxidation	Fusion or non-pressure welding (with additional filler metal)
 Ans. (d): Welding flux is used for protect the surface from stopping oxidation. The function of flux in gas welding– 1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b): Metal thickness from 1/16 to 1/2 inch. (1.6 to 1/2, rmm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 		F	RB ALP Bangalore 08.07.2007	
 from stopping oxidation. The function of flux in gas welding– 1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding morecess? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 1/2.7 mm) can be welded with no edge preparation. With a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	Ans.	(d) : Welding flux	x is used for protect the surface	Heat created by
 The function of flux in gas welding– 1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 1/2.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	from	stopping oxidation		
 1. To dissolve oxides and to prevent impurities and other inclusion that could affect the weld quality. 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode mettoff rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	The f	function of flux in g	gas welding-	Electric are Gas Chemical relation
 other inclusion that could affect the weld quality. 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 1/2.7 mm) can be welded with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	1. T	o dissolve oxides	and to prevent impurities and	
 2. Fluxes act as cleaning agents to dissolve and remove oxides and clean the metal for welding from dirt and other impurities. 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RB ALP Allahabad 09.12.2007 	other	inclusion that could	d affect the weld quality.	
 a) Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process RRB ALP Bangalore 25.01.2004 Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode meltoff rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	2. Fl	luxes act as cleanin	g agents to dissolve and remove	Atomic
 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 1/2 nm) can be welded with a edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode metaff rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	oxide	es and clean the n	netal for welding from dirt and	hydrogen
 29. Why upto 12 mm thick plates can be welded without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 1/2 inch. (1	other	impurities.		weiding
 without edge preparation in submerged arc welding process? (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process RRB ALP Bangalore 25.01.2004 Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). • High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 	29.	Why upto 12 m	m thick plates can be welded	
 (a) High arc time (b) High current density (c) Use of granular flux (d) Semi-automatic process RRB ALP Bangalore 25.01.2004 Ans. (b): Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 		without edge p	reparation in submerged arc	Carbon arc Metal arc Submerged arc Inert gas Stud arc
 (a) High are time (b) High current density (c) Use of granular flux (d) Semi-automatic process RRB ALP Bangalore 25.01.2004 Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 33. Thermit welding is a process of joining large sections whose special application at– (a) Normal short (b) Short (c) Long (d) Medium ALP Allahabad 09.12.2007 		(a) High are time		weiding weiding weiding weiding
 (b) High current density (c) Use of granular flux (d) Semi-automatic process RRB ALP Bangalore 25.01.2004 Ans. (b): Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). • High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 33. Thermit welding is a process of joining large sections whose special application at— (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 		(a) High arc tills	density	
 (c) Ose of granular flux (d) Semi-automatic process RRB ALP Bangalore 25.01.2004 Ans. (b): Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). • High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 33. Thermit welding is a process of joining large sections whose special application at- (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 Thermit welding is mainly used for joining steel parts. The usual thermit mixture, aluminium and iron oxide mixed at a ratio of about 1:3 by weight. 		(c) Use of granu	lor flux	Tungsten inert Metallic inert
 33. Thermit welding is a process of joining large sections whose special application at— (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 33. Thermit welding is a process of joining large sections whose special application at— (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 		(d) Semi-automa	tic process	gas welding gas welding
 Ans. (b) : Metal thickness from 1/16 to 1/2 inch. (1.6 to 12.7 mm) can be welded with no edge preparation. With edge preparation, welds can be made with a single pass on material from 1/4 to 1 inch (6.4 to 25.4 mm). High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 sections whose special application at- (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 		(u) Senn-automa	PRB AL P Bangalore 25 01 2004	33. Thermit welding is a process of joining large
 (a) Locomotive rail and ship hulls (b) Engine blocks (c) Long (d) Medium (e) Long (e) Medium (f) Short (f) Long (g) Medium (h) Short (h) Medium (h) Short (h) Medium (h) Medium	Ans	(b) • Metal thickne	$\frac{1}{16} \frac{1}{16} \frac{1}{2} \frac{1}{16} $	sections whose special application at–
 (b) Engine blocks (c) Lathe beds (d) Medium (e) Long (f) Minip current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. (f) Which arc length is correct for fusion and penetration? (g) Normal short (h) Short (h) Medium (h) Medium	12 7	(b) . Metal uncking	with no edge preparation. With	(a) Locomotive rail and ship hulls
 (c) Lathe beds (d) Sheet metal works (e) Long (f) Short (c) Long (d) Medium (e) Long (f) Medium (f) Short (g) Normal short (h) Short (h) Medium (h) M	edge	preparation welds	can be made with a single pass	(b) Engine blocks
 High current density results in a high electrode melt off rate and a concentrated, deep penetrating arc. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Sheet metal works RB ALP Almabad 09.12.2007 (d) Sheet metal works RB ALP Almabad 09.12.2007 	on m	aterial from 1/4 to	1 inch (6.4 to 25.4 mm).	(c) Lathe beds
RKB ALP Ajmer 10.10.2004 Ams. (a) concentrated, deep penetrating arc. 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007	• Hig	th current density	results in a high electrode melt	(a) Sneet metal works
 30. Which arc length is correct for fusion and penetration? (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 Ans. (a) : Thermit welding is a process of joining large sections whose special application at locomotive rail and ship hulls and steel casings and forgings. Thermit welding is mainly used for joining steel parts. The usual thermit mixture, aluminium and iron oxide mixed at a ratio of about 1:3 by weight. 	off ra	ite and a concentrat	ted, deep penetrating arc.	KRB ALP Ajmer 10.10.2004
penetration?Sections whose special appreation at recompute fail(a) Normal short(b) Short(c) Long(d) MediumRRB ALP Allahabad 09.12.2007The usual thermit mixture, aluminium and iron oxidemixed at a ratio of about 1:3 by weight.	30.	Which arc leng	th is correct for fusion and	Ans. (a): I hermit welding is a process of joining large
 (a) Normal short (b) Short (c) Long (d) Medium RRB ALP Allahabad 09.12.2007 • The usual thermit mixture, aluminium and iron oxide mixed at a ratio of about 1:3 by weight. 		penetration?		and ship hulls and steel casings and forgings
(c) Long (d) Medium RRB ALP Allahabad 09.12.2007 • The usual thermit mixture, aluminium and iron oxide mixed at a ratio of about 1:3 by weight.		(a) Normal short	(b) Short	• Thermit welding is mainly used for joining steel parts
RRB ALP Allahabad 09.12.2007 mixed at a ratio of about 1:3 by weight.		(c) Long	(d) Medium	• The usual thermit mixture, aluminium and iron oxide
		R	RB ALP Allahabad 09.12.2007	mixed at a ratio of about 1:3 by weight.

34. The gas metal arc welding process is also	Ans. (b) : Cast iron forms refractory oxides and the
known as-	melting point of these oxide is higher than the material
(a) MIG welding	• High carbon content in cast iron also result in
(b) Flux cored arc welding	cracking problems and thermal control issues
(c) Self-shielding process	• Silicon produces high silicon oxide which is highly
(d) Shielded metal arc welding	refractory.
BARC Stipendiary Trainee Maintainer 2021	• Thus, silicon and graphite are two elements, which
RRB ALP Mumbai 05.01.2003	make it difficult to cut it by gas cutting.
Ans. (a) : The gas metal arc welding process is also	38. In acetylene cylinder, the acetylene is dissolved
known as MIG welding.	in—
• In this welding process, an arc is formed in between	(a) Water (b) Carbon dioxide
the continuous self-fed metal consumable electrode and	(c) Acetone (d) Mercury
is known as metal inert gas welding (MIG)	RRB ALP Secunderabad 06.06.2010
• The shielding gases for MIG welding are mixtures of	Ans. (c) : In acetylene cylinder, the acetylene is
argon oxygen and CO_2 and special gas mixtures may	dissolved in acetone.
contain helium.	• Acetylene is highly unstable and flammable and
35. To prevent the hardening and cracking of High	would explode in elevated pressure when reacting with
Carbon steel plate when flame cutting, it is	oxygen in air.
advisable to-	• Dissolved acetylene in acetone will no longer be in
(a) Pre-heat the plate	contact with oxygen and is not subject to
(b) Soak the plate in oil	decomposition.
(c) Cool the plate quickly after cutting	39. Acetylene is a fuel gas for gas cutting and
(d) Increase the cutting oxygen pressure	welding composed of—
RRB ALP Muzaffarpur 15.02.2009	(a) 7.7% of carbon and 92.3% of hydrogen
Ans. (a) : To prevent the hardening and cracking of	(b) 92.3% carbon and 7.7% hydrogen
High Carbon steel plate when flame cutting, it is	(c) 100% carbon
advisable to pre-heat the plate.	(d) 50% carbon and 50% hydrogen
• when fiame cutting of heavy plate of alloy plate,	RRB ALP Gorakhpur 08.10.2006
with which the steel behind the cut edge can pull heat	Ans. (b) : Acetylene is a fuel gas for gas cutting and
away from the cut.	welding composed of 92.3% carbon and 7.7% hydrogen.
36. In reverse polarity welding —	• Acetylene is a colorless, inflammable gas widely used
(a) Electrode holder is connected to the negative	as a fuel in oxyacetylene welding and cutting of metals.
and work to positive	40. According to Ohm's law—
(b) Electrode holder is connected to the positive	(a) $V = I/R$ (b) $R = V I$
and work to negative	(c) $I = V/R$ (d) $I = VR$
(c) Work is positive and holder is earthed	RRB ALP Bangalore 08.07.2007
(d) Work is negative and holder is earthed	Ans. (c) : According to Ohm's law : I \propto V (current
RRB ALP Patna 04.02.2007	directly proportional to the voltage)
Ans. (b) : In reverse polarity welding electrode holder	, V
is connected to the positive and work to negative.	$I = \frac{1}{R}$
• It is also known as direct current electrode positivity	where, I = Current
(DCEF). • More heat on the electrode (66%) and loss heat on the	V = voltage
work piece (33%).	R = Resistance
• Filler material weld deposition rate is high.	41. In a gas cut plate, the cut is high quality
37. Cast iron contains two elements which make it	although there is some surface roughness
difficult to cut it by gas cutting what are these	(a) Less preheating flame
elements?	(a) Loss prenearing name (b) Impure cutting oxygen
(a) Sulphur and phosphorous (b) Silicon and graphita	(c) Too slow cutting speed
(b) Sincon and graphile	(d) Smaller size outting nozzle
(c) Graphice and phosphorous (d) Silicon and subhur	RCAT Stingendiary Trainag Maintainer 2010
(u) Sincon and Sulphul DDD ALD Danak: 2014	DDR AI D Bilosnur 15 07 2012
KKB ALP Kanchi 2014	KKD ALT BHASPUT 15.07.2012

Ans. (c) : In a gas cut plate, the cut is high quality although there is some surface roughness caused by	46. The size of the cutting nozzle used in oxy- acetylene cutting process depends mainly on-
vertical drag lines too slow cutting speed.	(a) The chess of metal to be eut (b) Purity of cut
42. The correct flame for preheating before cutting	(c) Duration of cut
	(d) Type of cutting blowpipe
(a) Oxidizing flame	RRB ALP Patna 11.11.2001
(b) Neutral flame	Ans. (a) : The size of the cutting nozzle used in oxy-
(c) Carburising flame	acetylene cutting process depends mainly on thickness
(d) Slightly carbunzing fiame DDD ALD Chandigarh 14 00 2009	of metal to be cut.
KKB ALF Chandigarii 14.09.2008	47. In a transformer, if the number of turns in the
Ans. (b) : The correct flame for preheating before	winding the secondary voltage will be-
• The neutral flame is obtained by supplying equal	(a) Half that of primary voltage
volume of oxygen and acetylene	(b) Same as that of primary voltage
It has the following two sharply defined zones-	(c) Twice the primary voltage
(i) An inner luminous cone (3200°C)	(d) Four times the primary voltage
(ii) An outer cone or envelope of bluish color.	RRB ALP Ranchi 04.09.2005
• The most of the oxy-acetylene welding (example-	Ans. (c) : In a transformer, the voltage in secondary is
welding of steel, cast iron, copper, aluminium etc.) is	calculated by-
done with neutral flame.	$\frac{N_s}{N_s} = \frac{V_s}{N_s}$
43. In a gas cut plate, the cut shows grooves and	N _p V _p
has deep drag lines. This is due to–	Where, $\overline{N_{p}}$ and $\overline{N_{s}}$ are the numbers of turn in the
(a) Tip too close to the cut surface	primary and secondary coils.
(b) Too much travel speed	• V_p and V_s are the voltages across the primary and
(c) Less oxygen pressure	secondary winding.
(d) Smaller size cutting nozzle	Given $N_s = 2 N_p$
RRB ALP Gorakhpur 21.10.2001	$\frac{N_s}{N_s} = \frac{V_s}{N_s}$
Ans. (a) : In a gas cut plate, the cut shows grooves and	N _p V _p
has deep drag lines due to tip too close to the cut surface.	$2N_p V_s$
44. In a transformer, the winding to which electric	$\overline{N_p} = \overline{V_p}$
(a) Drimory winding (b) Secondary winding	$V_s = 2V_p$
(a) Main winding (b) Secondary winding	So the secondary voltage will be twice the primary
(c) Main winding (d) Auxiliary winding NLC Technician 24,00 2022	voltage.
RRR ALP Kolkete 07 11 2008	48. The chief alloying elements of stainless steel
Ans (a) : In a transformer the winding to which	are-
electric supply is given as input is called primary	(a) Chromium and fungsten
winding.	(c) Nickel and vanadium
• The secondary winding generates the output signal.	(d) Nickel and tungsten
45. Which one of the following is the type of	RRB ALP Ahamadabad 17.10.2004
transformer used in arc welding?	Ans. (a) : The chief alloying elements of stainless steel
(a) Step down	are chromium and nickel.
(b) Step up	• Stainless steel is a corrosion-resistant alloy of iron,
(c) One-to-one	chromium and in some cases nickel and other metals
(d) Capable of increasing supply voltage	49 The welding processes submerged are welding
RRB ALP Mumbai 16.07.2006	and electroslag welding are similar in that—
Ans. (a) : Arc welding usually requires high current.	(a) Both are arc welding processes
• The voltage requirement is low for arc welding.	(b) Both use shielding gases
• To get the required current and voltage, a welding	(c) Both use a granular flux, which becomes
transformer is required which converts the high voltage	molten
and low current into a low voltage and high current i.e.	(d) All of these
step down transformer.	RRB ALP Ajmer 05.06.2005

Ans. (c) : The welding processes submerged arc	54. The flux used in electroslag welding has ——
welding and electroslag welding are similar in that both	(a) Low electrical resistance
use a granular flux, which becomes molten.	(b) Medium electrical resistance
• Granular flux provides shielding to the weld pool from	(c) High electrical resistance
atmospheric gases and control of weld metal	(d) No electrical resistance
composition through the presence of an alloying	RRB ALP Mumbai 03.06.2001
50 The next in a f the base metal that has not been	Ans. (c) : The flux used in electroslag welding has high
50. The portion of the base metal that has not been malted but whose microstructure has been	electrical resistance.
altered by heat of welding is called	• The flux used in electro slag welding must have the
(a) Fusion zone (b) Heat affected zone	following properties-
(c) Dead zone (d) Twilight zone	1. It must transform electrical energy to heat energy in
RRB ALP Allahabad 03.08.2008	its molten state.
Ans. (b) : The portion of the base metal that has not	2. It must protect the weld from atmospheric gases.
been melted but whose microstructure has been altered	55. Which one of the following is NOT the
by heat of welding is called heat affected zone.	characteristic of electroslag welding?
51. In the welding process, removal of weld metal	(a) It results in coarse grain structure of the weld
and base metal from the opposite side of a	(b) It results in low toughness of the weld
welded joint it ensure complete penetration	(c) It is done in vertical position
upon welding from that side is called—	(d) Its welding speed is low
(a) De-welding (b) Bevelling	RRB ALP Ranchi 21.09.2003
(c) Back gouging (d) Joint preparation	Ans. (d) : Welding speed is low, not the characteristic
RRB ALP Bhubneswar 14.06.2009	of electroslag welding.
Ans. (c) : In the welding process, removal of weld	Disadvantages of electrosiag weiding-
ioint it ensure complete penetration upon welding from	1. Coarse grain structure of the weld.
that side is called back gouging	2. Low toughness of the weld.
52 A solid state welding process using a non-	3. Only vertical position is possible.
consumable, cylindrical tool is called—	Advantages of electrosiag weiding-
(a) Resistance welding	1. High deposition rate
(b) Friction stir welding	2. Low lag consumption
(c) Carbon arc welding	5. Low distolution
(d) Electroslag welding	4. Omminied unckness of workpiece.
RRB ALP Gorakhpur 11.10.2009	56. Which one of the following welding processes
Ans. (b) : A solid state welding process using a non-	(a) TIG (b) MIG
consumable, cylindrical tool is called friction stir	$ \begin{array}{c} (a) & \Pi O \\ (c) & SAW \\ (d) & MAG \\ \end{array} $
welding.	BRO Vehicle Mechanic 2021
• Solid state welding–In this process, the joining of part	RRB ALP Secunderabad 29 06 2008
take place by application of pressure alone or a	Ans (c) : In submerged arc welding the arc is produced
used	between a bare metal electrode and the workpiece.
 Commonly used solid-state welding processes are 	• The arc and the weld zone are completely covered
diffusion welding, friction stir welding, ultrasonic	under a blanket of granular, fusible flux which melts
welding, forge welding, projection welding, seam	and provides protection to the weld pool from the
welding etc.	atmospheric gases.
53. When two wires of different metals are twisted	57. In which of the following processes, heat is
together and heat applied to the junction, an	created by blacksmith fire?
e.m.f. is produced. This effect is used in a	(a) Forge welding (b) Spot welding
thermocouple to measure —	(c) Projection welding (d) Seam welding
(a) e.m.t. (b) Temperature	RRB ALP Ajmer 23.05.2004
(c) Expansion (d) Heat	Ans. (a) : In forge welding processes, heat is created by
KKB ALP Kolkata 06.02.2005	blacksmith fire.
Ans. (b) : When two wires of different metals are	• Forge welding is a solid state welding process (under
is produced. This affect is used in a thermocourted	pressure without additional filler metal) that joints two pieces of metal by beating them to a high temperature
to monouve temperature	and then hammering them together
to measure temperature.	

58.	 Spot welding process basically depends on— (a) Generation of heat and application of forging pressure (b) Generation of heat (c) Ohmic resistance 	63.	What percent (a) Ox (c) Nit	is tage) ygen rogen	the gas in	most n the a RRB	con atmosp (b) ((d)] ALP]	amon phere? Carbon Methan Kolkata	(maxi dioxide e a 16.07	mum e .2006
	(d) Application of forging pressure RRB ALP Allahabad 09.12.2007	Ans.	(c) : A	Atmos	sphere	e is c	ompos	sed of	about	78%
Ans. genera	(a) : Spot welding process basically depends on ation of heat and application of forging pressure.	gases.	en, 219	% OX	ygen,	0.9%	argo	n and	0.1%	other
• Spo pressu	t welding is a resistance welding process (under ire without additional filler metal).	64.	Weldin mains b	ig is becau	not c ise—	lone d	lirectly	y from	the su	upply
• The	electrodes are made up of copper or copper alloy.		(a) Its	voltag	ge ke	eps flu	ctuatir	ıg		
59.	Leftward gas welding technique is used for		(b) It is	s imp	ractic	al to d	raw he	eavy cui	rent	
	weiding of mild steel plates upto a thickness of		(c) It is	s cust	omar	y to us	e welc	ling ma	chines	
	(a) 15 mm (b) 30 mm		(d) No	ne of	the a	bove				
	(a) 1.5 mm (b) 5.0 mm					RRB /	ALP N	Aumba	i 05.06	.2005
	RRB ALP Bangalore 15.07.2012	Ans. ((b) : We	elding	g is no	ot done	e direc	tly fron	n the su	upply
Ans.	(b) : Leftward or fore-hand welding-In this	mains	because	e it is	impra	actical	to dra	w heavy	y curre	nt.
metho	od, the welding torch is held in the operator's right	65.	Interm	ittent	t weld	ling m	ethod	is used	to	
hand,	the tip pointing towards the left and the weld is		(a) mir	nimiz	e the	amoun	t of w	eld met	al	
made 60° 7	from right to left. The torch makes an angle of Ω° with the plate and the welding rod makes an		(b) red	luce th	he res	idual s	tress i	n the jo	int	
angle	of 30° - 40° The plates above 3.0 mm thickness are		(c) get	unif	form	distrib	oution	of he	at ove	r the
not ec	conomical to weld this method.		wel	lded j	oint					
60.	Heat-affected zone is that portion of the metal which		(d) hav wit	ve the	e plat h bea	es exp d	anded	to a l	esser d	egree
	(a) Melts and becomes plastic			I	NAL	CO Jr.	Oper	ative T	rainee	2021
	(b) Neither melts nor becomes plastic					RRB	ALP	Ranch	i 08.07	.2007
	(c) Melts but does not become plastic	Ans	(a) • I	Intern	nitten	t weld	ling r	nethod	is use	d to
	(d) Does not melt but becomes plastic	minim	ize the	amou	int of	weld n	netal	netnou	15 450	u to
	RRB ALP Chandigarh 15.07.2012	• In	termitte	nt v	veldir	o is	used	wher	eithe	er a
Ans.	(b) : Heat-affected zone is that portion of the	co	ontinuou	IS WE	eld i	s not	nece	ssarv (or who	en a
metal	which neither melts nor becomes plastic.	co	ontinuou	s wel	d thre	atens f	the ioi	nt by w	arping.	
• Hea	it affected zone may range from small to large	66	The n	rogos	s of	home	norina	a tho	wold	motol
aepen	along on the rate of neat input. A process with low	00.	immedi	iatelv	s ur After	namn r it is d	lenosi	fed is c	alled	inctai
14105 0	Which one of the following googe is supported		(a) Tin	ning	ance	11 15 1	(b)	Peening	ancu	
01.	of combustion?		(a) Pre	ning			(0)	Dressin	a	
	(a) Oxygen (b) Acetylene		(c) 110	ssing					5 Slianni	2014
	(c) Nitrogen (d) Carbon dioxide					6.1	KND		1 1 1	2014
	RRB ALP Chennai 27.10.2002	Ans.	(b) : 11	he pro	ocess	of ha	mmeri	ing the	weld 1	netal
Ans.	(a) : Fire needs oxygen because when we burn a	nnineo . Daor			:	posite		med pee	ming.	
mater	ial we actually induce a reaction of the material	• Peen	iing can	int	Impr	ove the	e latig	ue me a	ind stre	engin
with o	bxygen. The energy that is released during this by	of a w								
this cl	hemical reaction produces what we call fire. So the	67.	Colum	bium	add	led el	ectro	les are	e used	l for
fire is	the side product of the reaction with oxygen.		welding	g stan	nless	steel b	ecaus	e it pre	vents	
62.	An electrical circuit is a path taken by flow of current A path with no brooks is called		(a) dist	tortio	n		(b) (excess p	enetral	tion
	(a) Closed circuit (b) Open circuit		(c) spa	itter			(d) 1	weld de	cay	
	(c) Continuous circuit (d) Limited circuit	-				RRI	B ALF	' Ajmei	· 10.10	.2004
	RRB ALP Gorakhnur 12.10.2003	Ans.	(d) : C	olum	bium	added	l elect	rodes a	re use	d for
Ans	(a): An electrical circuit is a path taken by flow of	weldin	ng stainl	less st	teel b	ecause	it pre-	vents w	eld dec	ay.
currer	it. A path with no breaks is called closed circuit.	• We	ld deca	y is	a fo	rm of	inter	granula	r corre	osion
• If t	he circuit is incomplete or broken, the current	usuall	y of sta	inles	s stee	el. Tha	t occu	urs as t	he rest	ılt of
doesn	't flow. This type of circuit is called an open	sensiti	ization	in th	he he	eat af	fected	zone	during	the
circui	t.	weldin	ng opera	ation.						

68. Porosity in stainless steel weld is due to	Ans. (a) : The flame used for oxy-acetylene welding of
(a) oversize electrodes	stainless steel is neutral flame or slightly carburizing.
(b) small diameter electrodes	• A neutral oxy-acetylene flame, the ratio of
(c) damp electrodes	acetylene to the oxygen is 1 : 1. It is chemically
(d) unsterilised stainless steel electrodes	neutral, neither oxidizes nor carburizes.
RRB ALP Bangalore 25.01.200	4 Slightly carburizing or reducing flames are used to
Ans. (c) : Porosity in stainless steel weld is due to damp	weld or braze easily oxidized alloys such as
electrodes.	aluminium stainless steel and nickel alloys.
• Porosity is caused by the absorption of nitrogen	73. Which one of the following statements is not
oxygen and hydrogen in the molten weld pool which is	(a) Welding is started at the right hand edge of
released on solidification to become trapped in the weld	(a) welding is stated at the right hand edge of the job and proceeds towards the left
metal.	(b) The blownine is held at an angle of $60^\circ - 70^\circ$
69. If H is the amount of heat produced in 'Joules'	; with the welding line
I is the amount of current passing in amps.;]	(c) The filler rod is held at an angle of $30^{\circ} - 40^{\circ}$
is the resistance of medium n ohms; t is th	e with the welding line
time in seconds during which the current flows	(d) The welding rod follows the welding
then the relationship for converting electrics	blowpipe
energy to neat energy is: (a) $II = I^2 Dt$ (b) $II = ID^2 t$	RRB ALP Gorakhpur 14.04.2002
(a) $H = IRt$ (b) $H = IRt$ (c) $H = IRt^2$ (d) $H = IRt$	Ans. (d) : Leftward or forehand welding-
$\begin{array}{c} (c) & \Pi = IKt \\ \hline \\ DDD & A I D D hand 06 06 201 \\ \hline \end{array}$	• In this method, the welding torch is held in the
KKB ALF Bliopal 00.00.201	operators right hand, the tip pointing towards the left
Ans. (a) : $H = 1$ Kt	and the weld is made from right to left.
where, $I = Current$, $K = Resistant$, $t = time$.	• The torch makes an angle 60° - 70° with the plate and
• This equation is called the joule's equation of electrica	the weiding fod makes an angle of 30°-40°.
The atting.	/4. Leitward weiding technique is used for mild
70. In resistance weiging, if the current is doubled	(a) 15 mm (b) 30 mm
(a) double (b) four times	(d) 1.5 mm (d) 10.0 mm
(c) eight times (d) sixteen times	RRB ALP Guwahati 22.01.2006
RRB ALP Bhubneswar 15 07 201	Ans. (b) : Leftward welding technique is used for mild
Ans (b) · Heat is directly proportional to the square of	steel plates upto thickness of 3.00 mm.
current	Welding
• If current (I) is doubled heat (H) will be four times	Torch
71 It is a pressure welding process in which th	
heat is obtained from the resistance offered t	
the flow of current	30°-40°
(a) Spot welding	
(b) Atomic hydrogen welding	
(c) High pressure oxy-acetylene welding	
(d) T.I.G. welding	Left ward Technique
NALCO Operator Boiler 202	1 In leftward welding technique welding proceeds
RRB ALP Chandigarh 25.05.200	3 from right to left.
Ans. (a) : Spot welding is a resistance welding process	It is also known as forwarding or forehand welding
(under pressure without additional filler metal).	• The inclination of the welding rod with plate is 30°
• The electrodes are made up of copper or copper alloy.	to 40° and the inclination of the blow pipe with
2. Spot welding depends on the generation of heat and	plate is 60° to 70° .
the application of forging pressure.	75. It is recommended to use rightward welding
72. The flame used for oxy-acetylene welding of	f technique, if the mild steel plates to be welded
stainless steel is Neutral or	are of thickness more than
(a) Slightly carburizing (b) Slightly oxidizing	
	(a) 1.5 mm (b) 3.0 mm
(c) Heavily carburizing (d) Heavily oxidizing	(a) 1.5 mm (b) 3.0 mm (c) 5.0 mm (d) 10.0 mm



 82. What is the size of electrode suitable for welding 2.5 mm thick mild steel sheet? (a) Ø 1.6 mm (b) Ø 2.50 mm (c) Ø 3.15 mm (d) Ø 4.00 mm RBB ALP Banchi 19 01 2003 	 87. Which one of the following is the easiest position in welding? (a) Vertical (b) Overhead (c) Horizontal-vertical (d) Flat or down head
Ans. (b) : Generally the size of the electrode that should be used depend on the thickness of the part to be welded. Generally the size of electrode same as thickness of plate. For example if a plate of 2.5 mm thick the electrode of 2.5 mm should be used.	 Ans. (d) : Flat welding position also known as the downward position, the flat position is the easiest of all the welding positions. 88. A hair line separation in root or middle of surface of the weld metal or base metal is mainly due to
 83. This type of electrodes deposit a large amount of weld metal per unit time. (a) Low hydrogen electrode (b) Iron powder electrode (c) Deep penetration electrode (d) Heavy coated S.S. electrode RRB ALP Secunderabad 11.11.2001 	 (a) Slow cooling (b) larger dia. electrode (c) long arc length (d) lack of preheating and post heating RRB ALP Allahabad 03.08.2008 Ans. (d) : A hair line separation in root or middle of purfere of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is mainly due to be a set of the wold metal or been metal is more been metal is mainly due to be a set of the wold metal or been metal is more been metal is more been metal is a set of the wold metal or been metal is more been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal is a set of the wold metal or been metal or been metal is a set of the wold metal or been metal or been metal or been metal
Ans. (b) : Iron powder type of electrode deposit a large amount of weld metal per unit time. It has very high efficiency and excellent arc re-striking property.	 89. The effect of arc blow will be totally absent in (a) D.C. straight polarity (b) D.C. reverse polarity
 84. The electrodes that are not coated are called (a) Bare electrodes (b) Raw electrodes (c) Base electrodes (d) Nude electrodes RRB ALP Trivandrum 20.06.2004 	(b) D.C. reverse polarity (c) A.C. welding (d) Welding with long arc RRB ALP Allahabad 09.12.2007
 Ans. (a) : Types of welding electrodes–Basically, depending upon the process there are two types of welding electrodes. 1. Consumable electrodes 2. Non-consumable electrodes 	 Ans. (c) : Arc blow in DC welding–When the arc deviates from its regular path due to the magnetic disturbances it is called arc blow. The effect of arc blow will be totally absent in AC welding.
 Bare electrodes-Bare electrodes are electrodes without any type of coating and mostly used in applications where there is no need of cooled electrode. 85. Heavy coated electrode is normally suitable for (a) Welding in flat position (b) Deep groups is in the particul position 	 90. Arc blow is especially noticeable when welding with (a) Bare electrodes (b) Coated electrodes (c) Heavily coated electrodes
 (b) Deep groove joint in vertical position (c) AC welding (d) Thick plates in any position RRB ALP Ahamadabad 2014 	(d) Low hydrogen electrodes RRB ALP Bangalore 25.01.2004 Ans. (a) : Arc blow is especially noticeable when welding with bare electrodes.
Flat position welding —In this position, you are not welding against gravity. The workpiece that are to be welded are placed flat. An electric arc is passed over the workpieces in a horizontal direction. The top surface of the joint is welded allowing the molten metal to flow	 91. A material placed at the root of a weld to contain or support the molten metal is called (a) Sealing (b) Backing (c) Weaving (d) Facing RRB ALP Bangalore 08.07.2007 Ans. (b) : Backing is defined as material placed at the
 downward into the joint groove or edges. 86. Contact electrodes have in their coatings a large amount of (a) carbon (b) manganese 	root of a weld joint for the purpose of supporting molten weld metal. Its function is to facilitate complete joint penetration. 92. The little hole produced at the leading edge of
(c) silicon (d) iron BPCL Operator (Field) 2016 RRB ALP Ajmer 10.10.2004 Ans. (d) : Contrast electrodes have in their sections of	the crater right under the tip of electrode is called (a) blow hole (b) key hole (c) pin hole (d) root gap
large amount of iron.	RRB ALP Bangalore 15.07.2012

Ans. (b) : The keyhole welding method is a type of laser welding. It is used for butt joints or open groove weld	Ans. (b) : AC or DC both are suitable to weld low
iginta. In this technique, a gap is maintained between the	carbon steer.
joints. In this technique, a gap is maintained between the	98. It is suitable to weld high carbon steel with
	(a) AC only (b) AC or DC
93. The depth of fusion from the surface of the	(c) DCEN (d) DCEP
weld metal is known as	RRB ALP Chandigarh 15.07.2012
(a) fusion zone (b) heat-affected zone	Ans. (d) : DCEP is suitable to weld high carbon steel
(c) penetration (d) leg length	DCFP is used for-
RRB ALP Bhopal 06.06.2010	• Welding of non-ferrous metals
Ans. (c) : According to American Welding Society	Welding of non-terrous incluis
(AWS), penetration or depth of fusion is the distance up	• Welding of cast iron
to that fusion extends into the base metal from the	• Welding with heavy and super heavy coated
surface melted during welding.	electrodes.
Bead width	99. In general, fillet welds should be the
Heat affected zone	thickness of the metal plate.
Bead height	~ 1 ~ 1
	(a) $\frac{1}{3}$ (b) $\frac{1}{2}$
Depth of	2
penetration weid rusion	(c) $\frac{2}{3}$ (d) $\frac{3}{3}$
Parent metal \longrightarrow	3 4
94. The most likely reason for porosity to be	RRB ALP Chandigarh 25.05.2003
caused is due to	Ans. (d) : In general fillet welds should be 3/4 of the
(a) incorrect electrode manipulation	thickness of the metal plate.
(b) too less current	This is based on the formula:
(c) too high current	Size of fillet weld = $0.707 \times$ thickness of plate.
(d) damp electrodes	100. To get DC for welding, it is necessary to have
RRB ALP Bhubneswar 14.06.2009	either
Ans (d) : Damp electrode is the cause of porosity	(a) Transformer or motor-generator set
The electrode absorb moisture and become wet or	(b) Rectifier or transformer set
damp under the action of heat due to welding arc, the	(c) Rectifier or motor-generator set
vanour and gases produced hence cracks and porous	(d) Canacitor or Reactor set
are formed	(a) Supultor of Reactor Set BRR ALP Channel 06 06 2010
95 The welding position of a weld is defined by	Ans (a) + Wolding nower supplies may use constants
two parameters namely	Ans. (c) . We during power supprises may use generators
(a) Weld slope and weld angle	of alternators to convert mechanical energy into
(a) Weld stope and weld angle	. In older machines, the electric motor is used to drive
(b) Weld alight and weld rotation	• In older machines, the electric motor is used to drive
(c) weld slope and weld rotation	the generator of alternator.
(d) weld slope and weld cut	101. The voltage drop across an arc depends upon
KKB ALP Bhubneswar 15.07.2012	(a) Arc length and atmosphere in which it is
Ans. (c) : The welding position of a weld is defined by	operating
two parameters namely weld slope and weld rotation.	(b) Arc length and base metal
96. It is suitable to weld medium carbon steel with	(c) Base metal and atmosphere in which arc is
(a) AC only (b) AC or DC	operating
(c) DCEN (d) DCEP	(d) Base metal, arc length and atmosphere in
RRB ALP Bilaspur 15.07.2012	which it is operating
Ans. (d) : DCEP is suitable to weld medium carbon	BEML 2022
steel.	RRB ALP Chennai 27.10.2002
DCEP (Direct Current Electrode Positive) or DCRP	Ans. (a) : The voltage drop across an arc depends upon
(Direct Current Reverse Polarity)-In reverse polarity	arc length and atmosphere in which it is operating.
the electrode to the positive and the work to the	102. In arc welding, the metal narticles expelled
negative terminal of the power source.	during welding and which do not form a nart
97. It is suitable to weld low carbon steel with	of the weld are called
(a) AC only (b) AC or DC	(a) Splinter Spade (b) Spade
(c) DCEN (d) DCEP	(c) Snam (d) Spatter
	(c) Spann (u) Spanne

Ans. (d) : In arc welding, the metal particles expelled during welding and which do not form a part of the	108. An arc cannot be maintained with a voltage lower than
weld are called spatter.	$\begin{array}{c} (a) 14 \text{ volts} \\ (b) 24 \text{ volts} \\ (c) 34 \text{ volts} \\ (d) 44 \text{ volts} \\ \end{array}$
103. A weld made to hold parts of a weldment in	
proper alignment until the final welds are	RRB ALP Jammu-Kashmir 06.06.2010
(a) Tag weld (b) Tag weld	Ans. (a) : An arc cannot be maintained with a voltage
(a) Tag weld (b) Toe weld (c) Tie weld (d) Tack weld	lower than 14 volts.
RRB ALP Gorakhnur 11 10 2009	• The value of arc voltage will vary from 18V to 55V
Ans $(d) \cdot A$ weld made to hold parts of a weldment in	depending on the type of machine.
proper alignment until the final welds are made is called	109. In arc welding the source of heat is
tack weld	(a) current
104 When the current flowing through a given	(b) arc voltage
resistance increases, the voltage will	(c) electricity
(a) increase	(d) Welding transformer
(b) decrease	
(c) remain the same	Ans. (c) : In arc welding the source of heat is
(d) increase initially and then decrease	• When the welding machine is switched on and the
RRB ALP Gorakhpur 12.10.2003	electrode tip just touched the work. Electric circuit is
Ans. (a) : When the current flowing through a given	completed.
resistance increases, the voltage will increase.	• Current starts flowing but the interface between
105. The stub end of an electrode should normally	electrode and workpiece faces contact resistance.
be not more than	110. The process of removing the unwanted weld
(a) 5% of the electrode	bead is known as
(b) 10% of the electrode	(a) Melting (b) Chipping
(c) 15% of the electrode	(c) Grinding (d) Gouging
(d) 2% of the electrode	KRB ALP Kolkata 00.02.2005
RRB ALP Gorakhpur 14.04.2002	head is known as gouging
Ans. (b) : The stub end of an electrode should normally	Chipping – A method of removing surface defects with
be not more than 10% of the electrode.	a chisel, so that the defects will not be worked into the
106. The distance between the tip of the electrode	finished product.
and the parent metal where the arc strikes is	In welding, chipping is used when preparing a joint.
called	Grinding– Grinding is a type of abrasive machining
(a) Arc gap (b) Arc length	is used to finish workpiece that must show high surface
(c) Arc distance (d) Arc width DDD ALD Correlement 21 10 2001	quality and high accuracy of shape and dimension.
Ans (b) • The distance between the tip of the electrode	111. Metallization process is done on wafers to
and the parent metal where the arc strikes is called arc	make it:
length.	(a) Stiff
• An arc weld gap, also known as an electrode stick out	(b) Conductor of electricity
or simply stick out, refers to the distance from the tip to	(c) Conductor of heat
the workpiece.	(d) Flexible
107. The arc utilized in electric arc welding is a	RRB ALP Kolkata 16.07.2006
(a) High voltage, high current discharge	Ans. (b) : Metallization process is done on waters to make conductor of electricity
(b) Low voltage, low current discharge	Metallization process The metallizing process uses a
(c) Low voltage, high current discharge	welding spray gun to enable the welder to place
(d) High voltage, low current discharge	precisely as much as little weld metal as necessary over
RRB ALP Guwahati 22.01.2006	any desired surface.
Ans. (c) : The arc utilized in electric arc welding is a	112. The size of the particles used in powder coating
low voltage, high current discharge.	process is:
The voltage rating usually 70-100 V on AC supply and	(a) $10 - 20$ microns (b) $50 - 60$ microns
SU-OUV ON DU System.	(c) $30 - 50$ microns (d) $70 - 100$ microns
• The current rating is usually 50-1000 A.	KRB ALP Kolkata 2014



Ans. (c) : Long arc length is the cause for under cut.	125. The most brittle material among the given is:
Too short an arc length will cause difficulty with	(a) Aluminium (b) Cast iron
starting and maintaining a consistent arc, while too long	(c) Brass (d) Copper
an arc length can result in excessive spatter and poor	BDL Technician 2022
weld quality.	RRB ALP Ranchi 04.09.2005
120. At the time of spot welding the pressure	Ans. (b) : The most brittle material is cast iron among
between electrodes is applied through:	the given.
(a) Halid level	126. As per ASM code welding a groove at vertical
(b) Motor (c) Hudroulie press	position indicates position.
(c) Hydraulic press (d) East layer and hydraulia press	(a) 3G (b) 2G
(d) Foot level and hydraulic press DDD ALD Mumbe: 05 01 2003	(c) 4G (d) 6G
RRB ALF Mullipal 05.01.2005	RRB ALP Ranchi 08.07.2007
Ans. (d) : At the time of spot weiging the pressure between electrodes is applied through foot lever and	Ans. (a) : As per ASM code welding a groove at
bydraulic press	vertical position indicates 3G position.
121 To lit the gas welding torch first open:	As per ASM code welding, an architect's blueprints
(a) Oxygen (b) Acetylene	would indicates the welding symbol.
(a) Oxygen (b) Activitie (c) Both (a) and (b) (d) None of these	• 1 refers to a flat position – either 1 F or 1 G
RRB ALP Muzaffarnur 15 02 2009	• 2 refers to a horizontal position – either 2F or 2G
Ans (b) : To lit the gas welding torch first open	• 3 refers to a vertical position – either 3F or 3G
acetylene	• 4 is an overhead position – either 4F or 4G.
122 The expansion of base metal due to high heat	Where, $F = Fillet$, $G = Groove$.
flow causes.	127. A reverse polarity switch is used in GTAW to
(a) Undercut (b) Porosity	reverse the:
(c) Blowhole (d) Distortion	(a) Current flow
IGCAR Stinendiary Trainee Maintainer 2021	(b) Filler material
RRB ALP Patna 04.02.2007	(c) Electrode material
Ans. (d): The expansion of base metal due to high heat	(d) Direction of movement
flow causes distortion.	RRB ALP Ranchi 19.01.2003
Weld spatter-This is due to high welding current and	Ans. (a) : A reverse polarity switch is used in GTAW to
too low welding speed and arc blow.	reverse the current flow.
123. To weld cast-iron jobs, the electrode required	Reverse polarity - Reverse polarity is used for weiding
is:	of non-ferrous metals.
is: (a) Nickel-iron (b) Mild steel	of non-ferrous metals.It is also used for welding of cast iron.
is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon DBB AL B Patro 11 11 2001	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes.
is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead
is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions.
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124 The heat generation at the time of spot welding 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding.
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no:
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these
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 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance RRB ALP Patna 2014 Ans. (c) : The heat generation at the time of spot 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these RRB ALP Ranchi 2014 Ans. (d) : During SAW (Submerged Arc Welding)
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance RRB ALP Patna 2014 Ans. (c) : The heat generation at the time of spot welding is due to resistance. 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these RRB ALP Ranchi 2014 Ans. (d) : During SAW (Submerged Arc Welding) process there is no sparks outside, ultraviolate radiation
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance RRB ALP Patna 2014 Ans. (c) : The heat generation at the time of spot welding is due to resistance. Resistance – It is a measure of the opposition to current 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these RRB ALP Ranchi 2014 Ans. (d) : During SAW (Submerged Arc Welding) process there is no sparks outside, ultraviolate radiation and spatters.
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance RRB ALP Patna 2014 Ans. (c) : The heat generation at the time of spot welding is due to resistance. Resistance— It is a measure of the opposition to current flow in an electrical circuit. 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these RRB ALP Ranchi 2014 Ans. (d) : During SAW (Submerged Arc Welding) process there is no sparks outside, ultraviolate radiation and spatters. SAW is suitable for welding of carbon steels, as in
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance RRB ALP Patna 2014 Ans. (c) : The heat generation at the time of spot welding is due to resistance. Resistance – It is a measure of the opposition to current flow in an electrical circuit. Resistance is measured in ohm (Ω). 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these RRB ALP Ranchi 2014 Ans. (d) : During SAW (Submerged Arc Welding) process there is no sparks outside, ultraviolate radiation and spatters. SAW is suitable for welding of carbon steels, as in structure and vessel construction.
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance RRB ALP Patna 2014 Ans. (c) : The heat generation at the time of spot welding is due to resistance. Resistance – It is a measure of the opposition to current flow in an electrical circuit. Resistance is measured in ohm (Ω). Inductance – It is a property of a conductor, that is 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these RRB ALP Ranchi 2014 Ans. (d) : During SAW (Submerged Arc Welding) process there is no sparks outside, ultraviolate radiation and spatters. SAW is suitable for welding of carbon steels, as in structure and vessel construction. It is used for welding low alloy steels.
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance RRB ALP Patna 2014 Ans. (c) : The heat generation at the time of spot welding is due to resistance. Resistance – It is a measure of the opposition to current flow in an electrical circuit. Resistance is measured in ohm (Ω). Inductance – It is a property of a conductor, that is measured by the size of the electromotive force or 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these RRB ALP Ranchi 2014 Ans. (d) : During SAW (Submerged Arc Welding) process there is no sparks outside, ultraviolate radiation and spatters. SAW is suitable for welding of carbon steels, as in structure and vessel construction. It is used for stainless steels and nickel based
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance RRB ALP Patna 2014 Ans. (c) : The heat generation at the time of spot welding is due to resistance. Resistance—It is a measure of the opposition to current flow in an electrical circuit. Resistance is measured in ohm (Ω). Inductance—It is a property of a conductor, that is measured by the size of the electromotive force or voltage, induced in it, compared with the rate of change field to the field of the size of change field to the field of the size of the size of change field to the size of the size of change field to the size of change field to the size of the size of change field to the size of chan	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these RRB ALP Ranchi 2014 Ans. (d) : During SAW (Submerged Arc Welding) process there is no sparks outside, ultraviolate radiation and spatters. SAW is suitable for welding of carbon steels, as in structure and vessel construction. It is used for welding low alloy steels. It is also used for stainless steels and nickel based alloys.
 is: (a) Nickel-iron (b) Mild steel (c) Manganese silicon (d) Silicon RRB ALP Patna 11.11.2001 Ans. (a) : To weld cast-iron jobs, the electrode required is nickel-iron. 124. The heat generation at the time of spot welding is due to: (a) Inductance (b) Reactance (c) Resistance (d) Capacitance RRB ALP Patna 2014 Ans. (c) : The heat generation at the time of spot welding is due to resistance. Resistance – It is a measure of the opposition to current flow in an electrical circuit. Resistance – It is a property of a conductor, that is measured by the size of the electromotive force or voltage, induced in it, compared with the rate of change of the electric current that produces the voltage. 	 of non-ferrous metals. It is also used for welding of cast iron. Welding with heavy and super heavy coated electrodes. Welding in horizontal, vertical and overhead positions. Reverse polarity is used for sheet metal welding. 128. During SAW process there is no: (a) Sparks outside (b) U.V. radiation (c) Spatters (d) All of these RRB ALP Ranchi 2014 Ans. (d) : During SAW (Submerged Arc Welding) process there is no sparks outside, ultraviolate radiation and spatters. SAW is suitable for welding of carbon steels, as in structure and vessel construction. It is used for welding low alloy steels. It is also used for stainless steels and nickel based alloys. It can also be used for surfacing applications such as

129. The welding process used to weld thin sections	Ans. (d) : In gas metal inert gas welding (GMAW)
of stainless steel, aluminium, copper alloys etc	process, the rate of wire feeding is expressed in meter /
18	min.
(a) GTAW (b) SMAW	135. As per AWS codification of electrodes ER 65 S-
(c) LBW (d) SAW	3, the number 65 indicates:
NFC Stipendiary Trainee Maintainer 2021	(a) Dia of wire
RRB ALP Ranchi 21.09.2003	(h) Length of wire
Ans. (a) : The welding process used to weld thin	(c) Tengile strength of weld
sections of stainless steel, aluminium, copper alloys is	(d) Name of these
GTAW (Gas Tungsten Arc Welding).	(d) None of these
130 SAW is suitable only for Position welding	RRB ALP Ahamadabad 2014
(a) Vertical (b) Overhead	Ans. (c) : As per AWS codification of electrodes ER 65
(a) Flat (d) Inclined	S-3, the number 65 indicates the tensile strength of
DDD ALD Secundariabed 06 06 2010	weld.
	136. As gas is commonly available and of low
Ans. (c) : SAW is suitable only for flat position	cost, used for welding steel.
welding.	(a) Argon (b) Oxygen
• SAW is used for stainless steels and nickel based	(c) Helium (d) CO_2
alloys.	BRR ALP Ahamadahad 17 10 2004
• It is ideally suited for longitudinal and	And All Anamadabad 17.10.2004
circumferential butt and fillet welds.	Ans. (d) : As CO_2 gas is commonly available and of
• In SAW, tubular electrode (Metal cored) is used.	low cost, used for weiging steel.
• Heat affected zone is high.	• Argon is used in welding of stainless steel because it is
131. The normal spark gap between tungsten	inert gas.
electrode and base metal is:	137. During GMAW process a type wire feed
(a) 0.5 to 1 mm (b) 1.5 to 3 mm	roll is selected to feed hard wire.
(c) $3 \text{ to } 45 \text{ mm}$ (d) $45 \text{ to } 6 \text{ mm}$	(a) Flat type (b) U-type
RRB ALP Secunderabad 11 11 2001	(c) V-type (d) None of these
Ans (b) : The normal spark can between tungsten	BARC Stipendiary Trainee Maintainer 2021
electrode and base metal is 1.5 to 3 mm	RRB ALP Ajmer 05.06.2005
122 During CMAW spottoring is more in Type	Ans. (c) : During GMAW process a V-type wire feed
152. During GWAW spattering is more in Type	roll is selected to feed hard wire
(a) Short circuit (b) Sprov	• U shaped for soft wire
(a) Clabular (d) Bulas	 Usualed for tabular using
(c) Giobulai (u) Puise	
KRB ALP Secunderabad 29.06.2008	138. While selecting electrode for welding, one has
Ans. (c) : During GMAW spattering is more in globular	to consider of base metal
type of metal transfer.	(a) Ductility
Globular transfer– This mode generates the most	(b) Chemical combination
spatter, nowever, when higher current are used with	(c) Tensile strength
CO_2 since and buried arc.	(d) All of these
• It is also known as open arc welding.	RRB ALP Ajmer 10.10.2004
133. During constant voltage GMAW process,	Ans. (d) : While selecting electrode for welding
current is controlled by:	ductility, chemical reaction and tensile strength
(a) Wire feed speed (b) Arc length	consider.
(c) Current regulator (d) None of these	139 The presence of Increases the possibility
RRB ALP Siliguri 2014	of cracking in weld
Ans. (a) : During constant voltage GMAW process,	(a) Oxygen (b) Hydrogen
current is controlled by wire feed speed.	(a) CO (d) Acetylene
In GMAW, the voltage and wire feed rate are preset,	(0) (0)
and the welding current is controlled by the wire feed	RRB ALP Ajmer 25.05.2004
speed.	Ans. (b) : The presence of hydrogen increases the
134. In GMAW process, the rate of wire feeding is	possibility of cracking in weld.
expressed in:	Cracking usually occurs at temperatures at or near
(a) feet / min (b) cm / min	normal ambient. It is caused by the diffusion of
(c) meter/sec (d) meter/min	hydrogen to the highly stressed, hardened part of the
RRB ALP Trivandrum 20.06.2004	weldment.

 is more while welding (a) Thick section (b) Medium section (c) Thin section (d) None of these RRCAT Stipendiary Traince Maintainer 2019 RRB ALP Allahabad 03.08.2006 Ans. (a) : The rate of heat flow away from the weld (c) To the temperature indicating crayons will meth within ± % of rated temperature (a) 5 (b) S (c) 4 (c) 1 RRB ALP Allahabad 09.12.2007 Ans. (a) : The temperature indicating crayons will meth within ± % of rated temperature (a) 5 (b) S (c) 4 (c) 4 (d) 1 RRB ALP Allahabad 09.12.2007 Ans. (d) : The temperature indicating crayons will meth within ±1% of rated temperature. 142. In a welding process, granular flux is fed through hopper to the weld spot. (a) SAW (b) GMAW (c) GMAW (c) GMAW (d) GTAW RRB ALP Bangalore 25.01.2004 Ans. (a) : In a SAW (Submerged are welding) process. (a) Eliminates moisture (b) Reduces heat flow away (c) Eliminates wapour presence (d) All of these RRB ALP Bangalore 08.07.2007 Ans. (d) : Pre-heating of jobs for welding- 1. Eliminates moisture 2. Reduces heat flow away 3. Eliminates moisture 3. Eliminates moisture 3. Eliminates wapour presence (d) All of these RRB ALP Bangalore 08.07.2007 Ans. (d) : Pre-heating of jobs for welding- 1. Eliminates moisture 3. Eliminates wapour presence (a) Ar flash (b) Slag (c) Spatter (d) Both (a) (c) RRB ALP Chandigarh 14.09.20
 (a) Thick section (b) Medium section (c) Thin section (d) None of these RRCAT Stipendiary Trainee Maintainer 2019 RB ALP Allahabad 03.08.2008 Ans. (a) : The rate of heat flow away from the weldzone is more while welding thick section. 141. The temperature indicating crayons will melt within ± % of rated temperature (a) 5 (b) 8 (c) 4 (d) 1 RRB ALP Allahabad 09.12.2007 Ans. (d) : The temperature indicating crayons will melt within ±1% of rated temperature. (a) SAW (b) SMAW (c) GMAW (d) GTAW RRB ALP Bangalore 25.01.2004 Ans. (a) : In a SAW (Submerged arc welding) process, granular flux is fed through hopper to the weld spot. (a) SIM (Submerged arc welding) process, granular flux is fed through hopper to the weld spot. (c) GMAW (c) GMAW (d) All of these RRB ALP Bangalore 08.07.2007 Ans. (d) : Pre-heating of jobs for welding- 1. Eliminates moisture (b) AReduces heat flow away (c) Eliminates moisture (b) ARI OF meangalore 08.07.2007 Ans. (d) : Pre-heating of jobs for welding- 1. Eliminates moisture (b) ARI OF meangalore 08.07.2007 Ans. (d) : Pre-heating of jobs for welding- 1. Eliminates moisture (c) Eliminates wapour presence (d) All of these RRB ALP Bangalore 08.07.2007 Ans. (d) : Pre-heating of workpiece is essential in welding cast Ans. (d) : Pre-heating of workpiece is essential in welding cast Ans. (d) : Pre-heating of workpiece is essential in
 (c) Thin section (d) None of these RRCAT Stipendiary Trainee Maintainer 2019 RRB ALP Allahabad 03.08.2008 Ans. (a) : The rate of heat flow away from the weld zone is more while welding thick section. 141. The temperature indicating crayons will melt within ± % of rated temperature (a) 5 (b) 8 (c) 4 (d) 1 Ans. (d) : The temperature indicating crayons will melt within ±1% of rated temperature. (c) 4 (d) 1 RRB ALP Allahabad 09.12.2007 Ans. (d) : The temperature. (a) 5 5 (b) 8 (c) 4 (c) 4 (d) 1 Ba.LP Allahabad 09.12.2007 Ans. (d) : The temperature. (a) 5 for rated temperature. (c) 6 frade temperature. (c) 6 frade temperature. (d) 5 SMAW (e) GMAW (d) GTAW (e) GMAW (f) GMAW (g) GMAW (g) GMAW (h) SMAW (c) GMAW (d) GTAW (d) GTAW (e) GMAW (f) Fre-heating of jobs for welding. (a) Eliminates moisture (b) Reduces heat flow away (c) Eliminates moisture (d) All of these RRB ALP Bangalore 08.07.2007 Ans. (d) : Pre-heating of jobs for welding-1. Eliminates moisture (c) Eliminates moisture (d) All of these Reduces heat flow away (e) Eliminates moisture (f) Eliminates moisture (g) Art flash (h) Reduce cracking due to distortion * (h) Reduce cracking due to distortion * (c) Eliminates moisture (d) Are flash (e) Spatter (d) Both (a) & (c) (f) Fre-heating of workpiece is essential in we
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 Ans. (c) : During arc welding, undercut happens due high current. (a) SAW (b) SMAW (c) GTAW (c) GMAW (d) GTAW (c) GMAW (d) GTAW (c) GMAW (d) GTAW (c) GMAW (d) GTAW (c) Environment of the senter set of the senter set of the weld as sharp recess notch. Under cutting—It is the melting or burning away to base metal at the toe of the weld as sharp recess notch. Undercut can be as stress raiser and can redut the fatigue strength of the joint. In submerged arc welding the deposition rates with cored wires at the same welding current are 20% to 30% higher than with the equivalent diameter solid wire. Ital. Pre-heating of jobs for welding (c) Eliminates moisture (b) Reduces heat flow away (c) Eliminates vapour presence (d) All of these RRB ALP Bangalore 08.07.2007 Ans. (d) : Pre-heating of jobs for welding—1. Eliminates moisture Reduces heat flow away 3. Eliminates wapour presence 4. To reduce cracking due to distortion Pre-heating of workpiece is essential in welding cast
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 (c) Eliminates vapour presence (d) All of these RRB ALP Bangalore 08.07.2007 Ans. (d) : Pre-heating of jobs for welding– 1. Eliminates moisture 2. Reduces heat flow away 3. Eliminates vapour presence 4. To reduce cracking due to distortion • Pre-heating of workpiece is essential in welding cast the welding process. Skin exposure to ultraviolet or result in severe burns, in many cases without prevashing. UV radiation can also damage the lens of employed arc welders are aware of the condition known 'arc eye' a sensation of sand in the eyes. 149. In a submerged arc welding process there were not be any: (a) Arc flash (b) Slag (c) Spatter (d) Both (a) & (c)
 (d) All of these RRB ALP Bangalore 08.07.2007 Ans. (d) : Pre-heating of jobs for welding– 1. Eliminates moisture 2. Reduces heat flow away 3. Eliminates vapour presence 4. To reduce cracking due to distortion • Pre-heating of workpiece is essential in welding cast result in severe burns, in many cases without pr washing. UV radiation can also damage the lens of ey washing. UV radiation can also damage the lens of ey Many arc welders are aware of the condition known 'arc eye' a sensation of sand in the eyes. 149. In a submerged arc welding process there would be any: (a) Arc flash (b) Slag (c) Spatter (d) Both (a) & (c) RRB ALP Chandigarh 14.09.20
RRB ALP Bangalore 08.07.2007Ans. (d) : Pre-heating of jobs for welding–1. Eliminates moisture2. Reduces heat flow away3. Eliminates vapour presence4. To reduce cracking due to distortion• Pre-heating of workpiece is essential in welding castwashing. UV radiation can also damage the lens of emails of and in the eyes.Many arc welders are aware of the condition known 'arc eye' a sensation of sand in the eyes.149. In a submerged arc welding process there were not be any:(a) Arc flash(b) Slag(c) Spatter(d) Both (a) & (c)RRB ALP Chandigarh 14.09.20
Ans. (d) : Pre-heating of jobs for welding- 1. Eliminates moisture 2. Reduces heat flow away 3. Eliminates vapour presence 4. To reduce cracking due to distortion • Pre-heating of workpiece is essential in welding cast
 Eliminates moisture Reduces heat flow away Eliminates vapour presence To reduce cracking due to distortion Pre-heating of workpiece is essential in welding cast In a submerged arc welding process there vantum of beany: (a) Arc flash (b) Slag (c) Spatter (d) Both (a) & (c) RRB ALP Chandigarh 14.09.20
 2. Reduces heat flow away 3. Eliminates vapour presence 4. To reduce cracking due to distortion • Pre-heating of workpiece is essential in welding cast (a) Arc flash (b) Slag (c) Spatter (d) Both (a) & (c) RRB ALP Chandigarh 14.09.20
3. Eliminates vapour presence(a) Arc flash(b) Slag4. To reduce cracking due to distortion(c) Spatter(d) Both (a) & (c)• Pre-heating of workpiece is essential in welding castRRB ALP Chandigarh 14.09.20
 4. To reduce cracking due to distortion • Pre-heating of workpiece is essential in welding cast (c) Spatter (d) Both (a) & (c) RRB ALP Chandigarh 14.09.20
Pre-heating of workpiece is essential in welding cast RRB ALP Chandigarh 14.09.20
iron, high carbon steel or alloy steel etc. [] Ans. (d) : Submerged arc welding -In submerged a
144. Submerged arc welding process is done with: welding, the arc is produced between a bare me
(a) Flux coated wire (b) Gas shielding electrode and the workpiece. The submerged a
(c) Flux paste cover (d) Granular flux cover (welding is mostly done on low carbon and alloy stee
RRB ALP Bangalore 15.07.2012
Ans (d): Submerged are welding process is done with 150. A flux has the ability to dissolve:
granular flux cover. (a) Nutrides (b) Oxides
• Submerged arc welding is semi-automatic version of
shielded metal arc welding. It is used for long weld run.
• Only flat position welding is possible.
145. A——is used to position the components for formation of oxides and other unwanted contamination
assembly welding.
(a) Jig (b) Fixture (b) Fixture (b) Fixture (c) During welding the flux melts and becomes a lique
(c) Guide (d) Holder Islag, covering the operation and protecting the molt
RRB ALP Bhopal 06.06.2010 weld metal.
151. Reverse polarity arc welding is adopted when:

(a) Job thickness is more
(b) Job thickness is less
(c) Electrode dia is more
(d) Electrode dia is less
NLC Technician 24-09.202
RRB ALP Chandigarh 25.05.200
Ans. (b) : Reverse polarity arc welding is adopted when
job thickness is less.
• When the work is connected to the positive terminal to
a DC welding machine and the negative terminal to an
electrode noider, the weiding set up said to have straigh
• When the work is connected to negative and the
electrode to a positive terminal then the welding set up
is said to have reversed polarity.
152. Brass is an alloy of:
(a) Copper & tin (b) Copper & lead
(c) Copper & zinc (d) Copper & silver
RRB ALP Chennai 06.06.201
Ans. (c) : • Brass is an alloy of copper and zinc.
Brass is also corrosion resistance.
• Brass is widely used for making motor car radiato
core and water taps etc.
153. During SMAW, sometimes sticking of electrod
to base metal is known as:
(a) Arc freezing (b) Arc peening
(c) Arc shielding (d) None of these
RRB ALP Chennai 27.10.200
Ans. (a) : During SMAW, sometimes sticking o
electrode to base metal is known as arc freezing.
Shielded metal arc welding (SWAM) also known as
manual arc weiging (MMAW or MMA) is weiging
154 The starting point of flome outting has to h
154. The starting point of name cutting has to b
(a) 250° C (b) 300° C
(a) 250° C (b) 500° C (c) 1500° C
RRB ALP Gorakhpur 08.10.200
Ans. (d) : The starting point of flame cutting has to be
preheated up to 900°C.
• The purpose of preheating of metals to decreases
stress and spattering during flame cutting operation.
• It can cut metals into small sizes and shapes that are
difficult to machining by other mechanical method.
• The equipment used in the process of flame cutting is
portable and can be effectively used for field work.
155. During welding of lap joint, the angle of
electrode with respect to work is:
(a) $60^{\circ} - 75^{\circ}$ (b) $30^{\circ} - 40^{\circ}$
(c) $40^{\circ} - 50^{\circ}$ (d) $50^{\circ} - 60^{\circ}$
RRB ALP Gorakhpur 11.10.200

Ans. (c) : The best flame to gas weld a mild steel job is neutral flame.	165. Mostly the arc blow happens during welding with:
Neutral flame–	(a) D.C. welding M/c (b) A.C. welding M/c
• Oxygen and acetylene are mixed in equal proportion	(c) Bare electrode (d) Both (a) & (c)
in the blowpipe.	NALCO Operator Boiler 2021
• It is used to weld most of the common metals i.e. mild	RRB ALP Kolkata 29.09.2002
steel, cast iron, stainless steel, copper and aluminium.	Ans. (d) : • Mostly the arc blow happen during DC
161. During gas welding nozzle no. 1 is used when	welding machine with bare electrode.
the thickness of the job is:	• Arc blow is basically a deflection of a welding arc
(a) Less than 1 mm (b) 1 to 2 mm	from its intended pair i.e. axis of the electrode.
(c) 2 to 3 mm (d) more than 3 mm	166. The election of an electrode diameter depends
RRB ALP Kolkata 02.11.2008	(a) Length (b) Position
Ans. (a) : During gas welding nozzle no. 1 is used when	(c) Thickness (d) Quantity
the thickness of the job is less than 1 mm.	HAL Apprentice 10.11.2022
162. In case of cast iron welding, pre-heating is done to avoid:	RRB ALP Malda 16.07.2006
(a) Cracks (b) Oxidation	sound quality weld to depend upon:
(c) Blowholes (d) Nitriding	Thickness of metal to be welded
RRB ALP Kolkata 06.02.2005	Edge preparation of joints
Ans. (a) : In case of cast iron welding, pre-heating is	• Root run, intermediate or covering run
done to avoid cracks.	• Welding position
Preheating–Heating the job before welding operation is	• Welder's skill.
known as preheating. The purpose of the preheating of	167. Selection of a specific welding process depends
the cast iron job is to reduce cracking due to distortion.	on:
The rate of cooling and gas consumption etc. are also	(a) Material of the work
	(b) Availability of equipment
163. During gas cutting, the cutting nozzle is held	(c) Quality required
a_1 with respect to work (a) 20° (b) 45°	(d) All these $\mathbf{D}\mathbf{D}\mathbf{D}\mathbf{A}\mathbf{I}\mathbf{D}\mathbf{M}$ where $\mathbf{C}\mathbf{A}\mathbf{C}\mathbf{C}\mathbf{A}\mathbf{C}\mathbf{C}\mathbf{A}\mathbf{C}\mathbf{C}\mathbf{A}\mathbf{C}\mathbf{C}\mathbf{A}\mathbf{C}\mathbf{C}\mathbf{C}\mathbf{C}\mathbf{A}\mathbf{C}\mathbf{C}\mathbf{C}\mathbf{C}\mathbf{C}\mathbf{C}\mathbf{C}\mathbf{C}\mathbf{C}C$
(a) 50° (b) 45°	RRB ALP Mumbai 03.06.2001
RRB ALP Kolkata 16 07 2006	Ans. (a) : Selection of a specific weiging process
Ans. (c) : During gas cutting the cutting nozzle is held	Material of the work
at 90° with respect to work.	• Availability of equipment
The welding nozzle directs gas into the weld puddle and	• Quality required
also protects the contact tip from molten metal.	168. The material with which a stick electrode is
164. The capacity of an arc welding machine is	coated is known as-
indicated by:	(a) Protective coating (b) Flux coating
(a) Input current in Amps	(c) Shield coating (d) None of these
(b) Closed circuit voltage	RRB ALP Mumbai 05.06.2005
(c) Output current in Amps	Ans. (b) : The material with which a stick electrode is
(d) Open circuit voltage	coated is known as flux coating.
RRB ALP Kolkata 2014	• A flux coating is a layer of a chemical that acts as a cleaning agent a purifying agent or a flowing agent
Ans. (c) : The capacity of an arc welding machine is	• It protects the weld pool and solid metal from
indicated by output current in Amps.	atmospheric contamination and helps in removing
Amperage output–The maximum output of the power	impurities from the weld pool.
supply determines the thickness of metal that can be	169. Identify the true statement-
• 185 to 225 amps is used for common size walding	(a) Welding can be done in a closed area
For an individual wald, the entirgy output emperade	(b) Welding can be done near inflamm- able
is determined by-	substance
(i) thickness of the metal	(c) Welding can be done without wearing
(ii) type of joint and	goggles (d) Walding fumas are harmful to health
(iii) type of electrode	(a) weiging tumes are narmful to health DDD ALD Mumbel 14.06 2000
() of the of the data	ККВ ALP Mumbai 14.06.2009

 Ans. (d) : Welding fumes is a complex and variable mixture of gases and particulates of varying sizes. It is produced when metals are heated above their melting point, vaporise and condense into fumes. The fume consists of very fine particulate which comes mostly from the consumable products i.e. the rod wire and flux material. 170. Identify the 'X' shown in the fig. 'X' 	 173. What is the other name of backward welding technique by GMAW? (a) Pushing technique (b) Pulling technique (c) Forward technique (d) Pressure technique BPCL Operator (Field) 2016 RRB ALP Muzaffarpur 15.02.2009 Ans. (b) : The other name of backward welding technique by GMAW is pulling technique. It is allows the welder to see the weld pool and the arc more clearly than in forward welding. 174. Which one is very suitable cutting for non-
Thermit welding process (a) Refractory sand (b) Thermit mixture (c) Sand mould (d) slag basin RRB ALP Mumbai 15.07.2012	(a) MMAW process (b) Submerged arc welding (c) Plasma cutting (d) Oxy-Acetylene cutting RRB ALP Patna 04.02.2007 Ans. (c) : Plasma cutting is very suitable cutting for pon-ferrous metals and allows
 Ans. (b) : Thermit welding–In thermit welding, a mixture of iron oxide and aluminium known as thermit is used. The mixture is ignited only at a temperature of about 1500°C. A major advantage of the thermit welding is that all parts of the weld section are molten at the same time and the weld cools almost uniformly. Note–The ratio of iron oxide and aluminium is 3:1. 171. Which one is very best in electro-slag welding? (a) Thicker steels can be welded in a single pass (b) Low deposition rate (c) More flux consumption (d) More spatter RRB ALP Mumbai 16.07.2006 Ans. (a) : Electro-slag welding–Welding is started by generating the electric arc and completed by resistance heating effect of slag material. 	 Plasma is the state of the matter when part of the gas is ionised making it a conductor of electric current. In plasma arc welding the plasma arc is tightly constrained. Plasma cutting is often used in fabrication shops, automobile repair and restoration, industrial construction and other scraping operation. Tungsten electrode Ocoling water Power Source Nozzle Nozzle Wantanting gas
 weiding progresses in the vertical direction and due to that temperature of the molten pool keeps on increasing. 172. What is the necessity of welding flux in electroslag welding? (a) Shielding the molten metal and reduce the oxidation (b) Clean the surfaces (c) Strengthen the molten metal (d) Avoid defects RRB ALP Mumbai 05.01.2003 	 175. How the arc is formed in plasma arc welding? (a) The arc formed between a tungsten electrode and the welding job (b) To create from an electric arc (c) Through the gas (d) Through the filler rod BEML 2022 RRB ALP Patna 11.11.2001 Ans. (a) : In plasma arc welding, the arc is formed between a mainted tungsten electron and the second se
 Ans. (a) : In electro slag welding, welding flux shielding the molten metal and reduce the oxidation. Electro-slag welding- Welding flux consumption is lower in case of electroslag welding. It gives high deposit rate upto 20 kg/h. Due to uniform heating of the weld area the distribution and residual stresses are reduced to the minimum amount. 	 The electrode is placed within the body of the torch so the plasma arc can be separate from the shielding gas envelope. Then plasma is forced through a fine-bore copper nozzle which constricts the arc. This results in the arc plasma exiting at very high velocities and reaching temperatures upto 20000-25000 degrees Celsius.

 176. Which one of the metal can be welded by SAW? (a) brass (b) low and medium carbon steel (c) aluminium (d) copper 	 Plasma are cutting (PAC) can be defined as an electric arc cutting process that severs or cuts metal by melting a localized area with a considered arc that removes the molten material with a high velocity set of extremely hot ionized gas emerging from the constricting orifice in the torch. 180. For what position the 70° torch angle is used in 			
Ans (b) : I ow and medium carbon steel can be welded	MIG/MAG welding?			
hy SAW	(a) Down hand position			
• The shielded metal arc welding (SMAW) process	(b) Horizontal vertical position			
submerged arc welding is commonly applied to	(c) Inclined position			
stainless steels and nickel alloys.	(d) Vertical position			
• Submerged arc welding (SAW) is a process in which	IOCL 2020			
an arc is developed between a consumable bore wire.	RRB ALP Ranchi 2014			
• A pile of granular flux is deposited on the work	Ans. (b) : Horizontal vertical position the 70° torch			
surface ahead of the electrode.	angle is used in MIG/MAG welding.			
• The granular flux gives protection from atmospheric	• In MIG welding the electrode is consumable. The filler metal is denosited by the are which is completely			
contamination.	surrounded by an inert gas			
177. Which type of edge preparation taken by SAW	181 What is the standard distance to be maintained			
for 16 mm thickness?	between contact tip and tip of the filler wire?			
(a) Square butt joint	(a) 1 to 3 mm (b) 4 to 5 mm			
(b) Single V butt joint	(c) 6 to 13 mm (d) 14 to 16 mm			
(c) Single U butt joint (d) Double 'W' butt joint	RRB ALP Ranchi 21.09.2003			
(d) Double v but joint DDD ALD Danch: 04.00 2005	Ans. (c) : The standard distance to be maintained			
KKB ALF Kancin 04.09.2003	between contact tip and tip of the filler wire is 6 to 13			
Ans. (a): • we can use the square but joint of square	mm.			
• In the case of thicker metal on one side weld with a	• The distance between the end of extended electrode			
large roof face we may remove the backing bar	wire and tip of contact tube is known as electrode			
• The thickness of 1.6-12.7 mm can be welded and there	extensions or stick out.			
is no need to prepare their edges.	• For the dip transfer mode, the electrode extension ranges from 5 to 15 mm and in case of other modes of			
• The metal of 6.4-25.4 mm thickness requires edge.	metal transfer the extension are required above 15 mm			
178. Which one of the operation is not controlled by	upto 25 mm.			
semi automatic SAW?	182. Which weld defect can be eliminated by			
(a) Arc length (b) Flux feeding	adjusting local position in electron beam			
(c) Electrode feeding (d) Speed of travel	welding			
RRB ALP Ranchi 08.07.2007	(a) crack (b) blowhole			
Ans. (d) : Speed of travel is not controlled by semi	(c) slag inclusion (d) porosity			
automatic welding.	RRB ALP Secunderabad 06.06.2010			
• Arc length, flux feeding and electrode feeding is	Ans. (d) : Porosity weld defect can be eliminated by			
controlled by semi automatic welding.	• Electron beam welding joins metals by bombarding a			
• Semi-automatic weiging is manual weiging with equipment that automatically controls one or more of	specific confined area of the base metal with high			
the welding conditions	velocity electrons.			
179 Which gas use for PAC?	• The operation is performed in a vacuum to prevent the			
(a) Carbon dioxide (b) Oxygen gas	reduction of electron velocity.			
(c) Ethylene gas (d) Nitrogen and air	183. Which one is hidden by a granular flux?			
RRB ALP Ranchi 19.01.2003	(a) Arc			
Ans. (d) : The plasma gas usually is nitrogen or air	(b) Slag			
which is fed into the torch around the electrode. The	(c) Plate			
electric arc is established between the nozzle and the	e (d) Short length of weld			
substrate (transferred arc).	KRB ALP Secunderabad 11.11.2001			

 Ans. (a) : The welding area is provided with a granular fusible flux with the task to create a protective atmosphere. The electric arc is hidden under the flux. Granular flux is used in welding is a type of flux that is made up of numerous small particles. In submerged arc welding (SAW) the granular flux provides a blanket over the weld which protects against 	 187. What is the effect on the weld if the inert gas flow is blocked while in process in a TIG welding process? (a) Weld metal not oxidized (b) Lack of fusion (c) Blowhole (d) Weld metal become oxidized
sparks and spatter.	RRB ALP Ahamadabad 2014
184. What action will you take just before striking the arc in 'TIG' welding process?	Ans. (d) : If the inert gas flow is blocked while in process in TIG welding process the weld metal becomes
(a) Set the polarity	oxidized.
(b) Set the argon gas flow rate	• The purpose of there gas used in TIG weiding process
(c) Crack the argon gas cylinder	and the molen metal from atmospheric
(d) Open the argon gas flow	• Argon belium are used like inert or shielding gas
RRB ALP Secunderabad 29.06.2008	199 What is the second of since during gas.
Ans. (d) : Open the argon gas flow just before striking	188. What is the purpose of water supply in TIG
the arc in TIG welding process.	(a) Capity of the inh (b) Work the terrel
Tungsten inert gas welding (TIG)-	(a) Cooling the job (b) wash the torch
• This is also known as gas tungsten arc welding	(c) Avoid distortion (d) Cooling the torch
(GIAW) also.	RRB ALP Ahamadabad 17.10.2004
• In this technique non-consumable electrode will be	Ans. (d) : The purpose of water supply in TIG welding
resistance of tungsten alloying elements like_"Thorium	process is cooling the torch.
and Bervllium" are added	• Welding torch is water cooled or air cooled.
• Melting point of tungsten electrode is 3420°C.	• Water cooled torches have longer duty cycles without
• Argon and helium are used like shielding gas.	damaging the equipment. A water cooled torch is easier
185. What is the purpose of inert gas used in TIG	to hold and the welder doesn't have to rush to finish the
welding process?	
(a) To protect the molten metal from atmospheric	189. One of the advantages of the submerged arc
contamination	(a) high deposition rate and speed
(b) Contamination in the weld metal	(a) high deposition rate and speed (b) the joint will be totally defect free
(c) Stabilizing the arc	(a) this sheets can also be welded
(d) To get more spatter	(d) welding of non farrous metals can
RRB ALP Siliguri 2014	(d) weiding of non-ferrous metals can
Ans. (a) : The purpose of inert gas used in TIG welding	DDB ALD Aimor 05 06 2005
process to protect the molten metal from atmospheric	Are (a) - The educate are of the submaneed are welding
• Argon and belium are used like shielding gas or inert	Ans. (a): The advantages of the submerged arc weiging
gas.	depth of penetration
• TIG (Tungsten inert gas) welding is also known as gas	• Submerged arc welding is semi-automatic version of
tungsten arc welding (GTAW).	shielded metal welding. It is used for long weld run.
• By TIG welding copper alloy, aluminium, magnesium,	• In this technique arc will be submerged inside the
stainless steel, non-ferrous metal (silver, gold, etc.) are	molten weld pool any length of welding with high
welded.	thickness of materials.
186. What is the angle range for TIG welding torch	190. What holds molten metal in place when a
position during welding?	welder is welding by gas on the bottom side of a
(a) $30^{\circ} - 40^{\circ}$ (b) $40^{\circ} - 45^{\circ}$	horizontal pipe?
(c) $50 - 55$ (d) $60 - 75$	(a) Flame pressure (b) Surface tension
NITU FILLET 2010 DDR AID Trivondrum 20.06.2004	(c) Gravitational force (d) Filler rod
Ans. (d) • The angle range is 60° 75° for TIC1 direct	RRB ALP Ajmer 10.10.2004
torch position during welding	Ans. (b) : Surface tension holds molten metal in place
• The angle between the torch and the base metal is	when a welder is welding by gas on the bottom side of a
important too. You need to angle the torch slightly to	horizontal pipe.
see the paddle and provide access for the filler rod.	• Surface tension force (F _{st})–

$-2\sigma \times \pi R^2$	194. In 2G welding position, the plates are kept			
$F_{st} = \frac{1}{4R}$	in			
	(a) surface level (b) norizontal			
where, $\mathbf{R}_{e} = electrode radius$	(c) vertical (d) top			
R = molten groups radius	RRB ALP Bangalore 25.01.2004			
$\sigma = $ Surface tension	Ans. (b): In 2G welding position, the plates are kept in			
101 What is the number of comparison the	• The American welding society has defined the four			
191. what is the purpose of copper coating on the mild steel filler rods?	basic welding positions			
(a) To conduct the heat faster	1 = Flat position			
(h) To increase the strength of the joint	2 = Horizontal position			
(c) To avoid rusting of mild steel filler rod during	3 = Vertical position			
long storage	4 = Overhead position			
(d) To give good appearance to the filler rod	• An architects blueprints would indicate the welding			
RRB ALP Ajmer 23.05.2004	symbol.			
Ans. (c) : The purpose of copper coating on the mild	• 1 refers to a flat position \rightarrow either 1F or 1G.			
steel filler rods is to avoid rusting of mild steel filler rod	• 2 refers to a horizontal position \rightarrow either 2F or 2G.			
during long storage.	• 3 refers to a vertical position \rightarrow either 3F or 3G.			
• Welding wires with a copper coating ensure corrosion	• 4 refers to a overhead position \rightarrow either 4F or 4G.			
protection and efficient contact with current.	195. The main reason for backfire is			
Conducting components of the weiding system.	(a) The gas pressure is low			
192. Precipitation of chromium carbide along the	(b) nozzle size is more			
grain boundaries in neat affected zone in stainlass staal walding is called	(c) nozzle size is less			
(a) slag inclusion (b) gas inclusion	(d) nozzle not tightened properly			
(c) weld decay (d) weld porosity	RRB ALP Bangalore 08.07.2007			
IGCAR Stipendiary Trainee Maintainer 2021	Ans. (a) : The main reason for backfire is the gas			
RRB ALP Allahabad 03.08.2008	pressure is low.			
Ans. (c) : Precipitation of chromium carbide along the	• Backfire -The same thing can happen with high			
grain boundaries in heat affected zone in stainless steel	oxygen pressure and low fuel gas pressure. If a backfire			
welding is called weld decay.	torch too close to your work.			
Weld decay–It is a corrosion process that mainly occurs	196. Name the weld defect which will occur if a no. 2			
as a result of sensitization in the heat affected zones of	nozzle is used of welding a 3 mm thick sheet?			
inetal during weiding operations.	(a) Undercut (b) Burn through			
193. In which welding position, the rate of filler	(c) porosity (d) Lack of penetration			
(a) Flat position	RRB ALP Bangalore 15.07.2012			
(b) Vertical position	Ans. (d) : Lack of penetration happen when both sides			
(c) Overhead position	of the root fail to fuse to the weld. For example, when			
(d) Horizontal vertical position	the groove of the metal is not filled completely.			
RRB ALP Allahabad 09.12.2007	Cause of lack of penetration-			
Ans. (a) : In flat position of welding, the rate of filler	2. Root gap too small			
metal deposition is more.	2. Root gap too small			
• The American welding society has defined the four	4 Longer arc length			
basic welding positions	107 The following gas outting defect is due to			
1 = Flat position	197. The following gas cutting defect is due to			
2 = Horizontal position				
3 = Vertical position				
4 = Overhead position				
• An architects blueprints would indicate the welding	(a) gas cutting speed too fast			
• 1 refers to a flat position _> either 1E or 1G	(b) gas cutting speed slightly fast			
• 1 refers to a harizontal position \rightarrow either 2F or 2C	(c) gas cutting speed too slow			
• 2 refers to a nonzonial position \rightarrow either 2F or 2C.	(d) cutting oxygen too high			
• J refers to a vertical position \rightarrow either 4E or 4C	NFC Stipendiary Trainee Maintainer 2021			
• 4 refers to a overhead position \rightarrow either 4F or 4G.	KKB ALP Bhopai 06.06.2010			

Ans. (b) : The following gas cutting defect is due to gas cutting speed slightly fast.	201. In which type of arc welding machines, the parts of the primary winding is fixed in the arc
Gas cutting defects are occurs due to-	welding machine?
• Cutting speed is too low.	(a) Transformer set (b) Motor generator set
• Cutting speed is too high.	(c) Rectifier set (d) Engine driven set
• Nozzle is too for from the surface.	RRB ALP Chandigarh 14.09.2008
• Nozzle is too close to the surface.	Ans. (a) : Transformer set arc welding machines, the
198 The gas cutting guides shown in the following	parts of the primary winding is fixed in the arc welding
figure is useful for	machine.
	202. Which one of following metals cannot be
	welded by AC welding machine?
- Det	(a) Brass (b) Mild steel
	(c) Cast iron (d) High carbon steel
100 - 100 -	RRB ALP Chandigarh 15.07.2012
5 200	Ans. (a) : Brass metals cannot be welded by AC
St. 1	Welding machine.
8	• The main problem with brass metals in fusion weiging
	is the evaporation of zinc during the welding process.
	203. Which one is an ancient method of joining
and the second	(a) Forging (b) Welding
	(a) Forging (b) Weiding (c) Brazing (d) Machining
	BARC Stinendiary Trainee Maintainer 2021
	RRB ALP Chandigarh 25 05 2003
(a) straight line gas cutting	Ans (a) · Forging is an ancient method of joining
(b) bevel cutting	metals permanently
(c) arc cutting	Examples of various temporary joining techniques
(d) circular cutting	Fasteners, press fit, cotter joint, knuckle joint
RRB ALP Bhubneswar 14.06.2009	Examples of various permanent joining techniques-
Ans. (a) : The gas cutting guides shown in the	Welding, brazing and soldering.
1010 ming figure is useful for straight line gas cutting.	204. What is the size of gas nozzle for 1.5 mm
199. The chemical formula for acetylene is	diameter, tungsten electrode in TIG welding
(a) C_3H_2 (b) C_2H_2	process?
(c) \Box_{13} (d) $\Box_2 \Box_3$ NBCH ST /(Eitter) Dewethbete 16 10 2022	(a) 10 mm dia (b) 12 mm dia (c) 14 \cdot 17 \cdot 16 \cdot 17 \cdot
DI Toobnioion 2022	(c) 14 mm dia (d) 16 mm dia \mathbf{DDD} ALD Chemici 0(0(2010)
BDL Technician 2022 RRR AI P Rhubneswar 15 07 2012	RRB ALF Chennai 00.00.2010
Ans (b) • The chemical formula for acetylene is C.H.	tungsten electrode in TIG welding process
• C ₂ H ₂ is the simplest alkyne chemical compound with	• A 1.5 mm diameter tungsten should be used with a 16
the chemical name acetylene. Acetylene is also called	mm diameter ceramic.
ethyne or vinylene.	205. Which welding technique did make it
• Acetylene is a major fuel gas used in welding and	successful for electron beam welding?
cutting process.	(a) Key holing (b) Soldering
200. Which heat treatment is required after	(c) Weaving (d) Weld stream
repairing broken cast iron part using a low	RRB ALP Chennai 27.10.2002
heat input electrode?	Ans. (a) : The keyhole refers to a literal hole in the
(a) Hardness (b) Annealing	material, caused by its vaporization, which allows the
(c) Tempering (d) Normalizing	electron beam welding to penetrate even more deeply.
RRB ALP Bilaspur 15.07.2012	206. Voltage less than 50 volts
Ans. (b) : Annealing heat treatment is required after	(a) can cause fatal shock under all conditions
repairing broken cast iron part using a low heat input	(b) cannot cause tatal shock under any conditions
• Nickel allow electrodes are the most nonular for cost	(c) can cause tatal shock under some conditions (d) none of the above
iron welding	(a) none of the above
non wording.	KKB ALP Goraknpur 08.10.2006



(a) Current conduct filler wire	218. The current range to weld 6.3 mm diameter			
(b) Shielding gas	wire in submerged arc welding is			
(c) Filler wire	(a) 230 – 700 amps (b) 300 – 900 amps			
(d) Wire guide	(c) 480 – 1100 amps (d) 700 – 1600 amps			
RRB ALP Kolkata 06.02.2005	RRB ALP Malda 16.07.2006			
Ans (b) • Shielding gas shown in MIG/MAG welding	Ans. (d) : Submerged Arc Welding (SAW)-The			
operation	process requires a continuously fed consumable solid or			
• Most common shielding gases uses in MIG welding	tubular (metal cored) electrode. The molten weld and			
are argon helium carbon dioxide	the arc zone are protected from atmospheric			
These gases do not react with the filler material or weld	contamination by being "submerged" under a blanket of			
pool.	granular fusible flux consisting of limes, silica,			
• MIG welding works best with aluminium, carbon steel	manganese oxide, calcium fluoride, and other			
and stainless steel.	and provides a current path between the electrode and			
215 In MIG / MAG welding filler wire is used Why	the work. This thick layer of flux completely cover the			
the filler wire is copper coated?	molten metal thus preventing spatter.			
(a) To prevent base metal reaction	• SAW filler material usually is a standard wire as well			
(b) To prevent contamination by atmosphere	as other special forms.			
(c) To prevent gas shield	Diameter (mm) Current range (Amps)			
(d) To prevent rust	1.6 150-350			
RRB ALP Kolkata 16.07.2006	3.2 250-800			
Ans (d) : In MIG / MAG welding filler wire is used	6.3 650-1350			
The filler wire is copper coated to prevent rust	219. Which defect can be found by visual			
• In this process the arc is formed between a continuous	examination of the welded joint?			
automatically fed. metallic consumable electrode and	(a) Lack of fusion			
welding job in an atmosphere of inert gas and hence this	(b) Misalignment of parts			
is called metal inert gas arc welding (MIG) process.	(c) Root defect in a T fillet weld			
216. Guided bend test is used to determine	(d) Interbead slag inclusion			
(a) Ductility	RRB ALP Mumbai 03.06.2001			
(b) Impact value	Ans. (b) : Some welding defects can be revealed by			
(c) Tensile strength	visual inspection-			
(d) Percentage of elongation	11. Crack, 2. Underfill, 3. Misalignment of parts, 4.			
NLC Technician 24-09.2022	Undercul, 5. Surface porosity, 6. Overlap, 7. Lack of side wall fusion & Arc strike 9 Spatters			
Ans. (a) : Guided bend tests provide a guality control	Side wan fusion, 8. Are surke, 9. Spatiers.			
check that helps determine the ductility of weld metal at	220. In MIG / MAG welding, a long slick out			
the face and root of a welded joint.	(a) excess weld metal (b) low weld metal			
217. The fusion is produced by the heat obtained	(c) weld metal rough (d) weld metal smooth			
from a concentrated beam composed primarily	BRO Vehicle Mechanic 2021			
of	Ans (c) · MIC / MAC welding-Welding is a versatile			
(a) Velocity	technique suitable for both thin sheet and thick section			
(b) Vacuum chamber	components. The wire serves as both heat source and			
(c) Velocity electron	filler metal for the welding joint.			
(d) high velocity electrons	• A long stick out distance will give the result of weld			
RRB ALP Kolkata 29.09.2002	metal rough.			
Ans. (d) : The EBW is defined as a fusion welding	221. The test is conducted to know the quality of			
process wherein coalescence is produced by the heat	weld. Name the test to find out the percentage			
obtained from the concentrated beam composed of high	of elongation of weldment?			
velocity electrons.	(a) Guided bend test (b) Tensile test			
• The kinetic energy of the electron beam which is	(c) Fatigue test (d) Impact test			
hitting the surface of the workpiece will be converted	RRB ALP Mumbai 14.06.2009			
into heat energy.	Ans. (b) : The test is conducted to know the quality of			
• Due to high velocity electron beam high depth of	f weld. Tensile test to find out the percentage of			
welds can be performed by using this technique.	elongation of weldment.			







process is ferrous and non-ferrous metals can be electrode is to reduce the time required to complete weld.
gouged. weld.
245 What is the reason for selecting DC reverse . The more stable are characteristic - result in re-
245. What is the reason for selecting De reverse []. The more stable are characteristic - result in re
polarity for welding copper by arc? spatter losses and accordingly, increased dependent
(a) Copper is good conductor of heat efficiencies.
(b) Copper when melted does not flow freely 250. What is the preheating temperature for
(c) 1/3 rd of arc heat concentrated on the electrode welding of cast iron?
(d) $2/3^{rd}$ of the arc heat is concentrated on the (a) 80° C to 90° C (b) 150° C to 250°
electrode (c) 350° C to 400° C (d) 450° C to 600°
RRB ALP Trivandrum 20.06.2004
Ans. (d) : Reverse polarity-In reverse polarity the $Ans. (b) : 150^{\circ}$ C to 250° C is the preh
electrode is connected to the positive and the work to temperature for arc welding of cast iron
the negative terminal of the power source.
• In DC welding 2/3 rd of heat is liberated from the 251. The purpose of using the RUN ON-RUP
positive and 1/3 rd from the negative end.
246. The angle of torch to the work in rightward generator is
(a) To distribute the heat input uniformly
(a) $30-40^{\circ}$ (b) $40-50^{\circ}$ (b) To reduce the longitudinal distortion
(c) $50-60^{\circ}$ (d) $60-70^{\circ}$ (c) To avoid slag inclusion defect
RRB ALP Siliguri 2014 (d) To prevent arc blow
Ans. (b) : Rightward welding technique RRB ALP Ranch
• It is an oxy-acetylene gas welding technique, in which Ans. (d) : The purpose of using the RUN ON
the welding begins at the left hand edge of the welding OFF plates during arc welding by using a weld
Job and it proceeds toward the right.
• In this case filler/electrode makes 30°-40° and torch
at the bottom and passes through
247. Preheating is necessary when copper plates are compartments.
bigh The first compartment contained i
(a) thermal conductivity (b) melting point purifier is
(a) expansion (d) dustility (a) Purifying material (b) Pumice stone
BBB ALP Secundershad 20 06 2008 (c) Filter stone (d) Water
Ans (a) : Preheating is necessary when conner plates RRB ALP Ranchi 19.0
are welded by arc to compensate the effect of its high Ans. (b) : The first compartment contained
thermal conductivity
• Preheating involves heating the base metal either in 253. In goot wolding, the size of the involves
its entirely or just the region surrounding the joint, to a
specific desired temperature.
248. What is the current range required for \emptyset 1.6 (b) Current
mm M.S. electrode in arc welding?
(a) $40-60$ A (b) $50-80$ A (c) Pressure
(c) $120 - 170 \text{ A}$ (d) $180 - 270 \text{ A}$ (d) Electrode contact area
RRB ALP Secunderabad 11.11.2001 RRB ALP Ranchi 08.0
Ans. (a): 40 – 60 Ampere current range required for \emptyset Ans. (d): In spot welding, the size of the 'nug
1.6 mm M.S. electrode in arc welding.
249. The main advantage of using an iron powder [] • This is essentially done to join two sheet-metal j
electrode is to
(a) avoid crack in the joint [] two plates.
(b) increase the strength of the flux coating
(c) reduce the time required to complete the weld
(d) easily conduct the electricity through the
electrode
RRB ALP Secunderabad 06.06.2010

 254. The flame starts burning from the tip. How can this be corrected? (a) The pressure of gases is to be reduced (b) The orifice of the nozzle is to be cleaned (c) Cool the torch (d) Decrease the volume of oxygen RRB ALP Ranchi 04.09.2005 Ans. (a) : The flame starts burning from the tip. The pressure of gases is to be reduced this be corrected.	 259. Where "all round" weld symbol should be drawn in the welding symbol? CONTINUOUS REFERENCE LINE TAIL DASHED REFERENCE LINE (a) Over continuous reference line (b) Over dashed reference line (c) At tail end (d) At junction
Type of flame-	BEML 2022
1. Neutral flame	RRB ALP Mumbai 05.01.2003
2. Oxidizing flame	Ans. (d) :
255 Wolding of conner in resistance wolding	CONTINUOUS DEFEDENCE LINE -
nrocess is difficult because of its	- TAIL
(a) High thermal conductivity	TAIL
(b) High electrical conductivity	DASHED
(c) High toughness	REFERENCE LINE
(d) High ductility	• At junction "all round" weld symbol should be drawn
RRB ALP Patna 2014	in the welding symbol.
 Ans. (a) : Welding of copper in resistance welding process is difficult because of its high thermal conductivity. 256. What is the size of the electrode suitable for welding a fillet joint of 4 mm thick mild steel plate in arc welding? (a) 2.50 mm (b) 3.15 mm (c) 4.00 mm (d) 5.00 mm RRB ALP Patna 11.11.2001 Ans. (b) : 3.15 mm is the size of the electrode suitable for welding a fillet joint of 4 mm thick mild steel plate in arc welding. 257. What is the current range required for \$\$ 5 mm M.S. electrode in arc welding? (a) 90 - 130 A (b) 120 - 170 A (c) 180 - 270 A (d) 300 - 140 A 	 260. Spelter of different composition is required to braze different metals. Which one of the following composition is suitable for brazing steel? (a) 1 part copper + 1 part zinc (b) 2 parts copper + 1 part zinc (c) 3 parts copper + 2 parts zinc (d) 4 parts copper + 3 parts zinc RRB ALP Mumbai 16.07.2006 Ans. (a) : Spelter of different composition is required to braze different metals. 1 part copper + 1 part zinc composition is suitable for brazing steel. Brazing is a process of joining two similar or dissimilar metal pieces by means of heat and a special non-ferrous filler metal known as spelter (an alloy of copper and zinc, copper and aluminium, copper and silver)
KRD ALF Failing 04.02.2007 Ans. (a): 180 270 A is the current range required for	silver).
ϕ 5 mm M.S. electrode in arc welding.	201. what is the maximum temperature of weld zone in spot welding?
• Welding is positive process.	(a) 750° C - 900° C (b) 900° C - 1200° C
258. The electrode which deposits more amount of	(c) $1500^{\circ} \text{ C} - 1700^{\circ} \text{ C}$ (d) $1800^{\circ} \text{ C} - 2100^{\circ} \text{ C}$
weld metal per unit time is called	RRB ALP Mumbai 15.07.2012
(a) Basic coated electrode	Ans. (b) : $900^{\circ}C - 1200^{\circ}C$ is the maximum temperature
(b) Iron powder electrode	of weld zone in spot welding.
(c) Heavy coated electrode	• The process description given so far is called
(d) Deep penetration electrode	resistance spot welding or simply spot welding.
Ans. (b) : The electrode which deposits more amount of weld metal per unit time is called iron powder electrode. • A heavy coated, retile type high-efficiency electrode having a weld metal recovery of approximately 180%.	Nugget



Ans.	(a) : Hard solderin	g is the alternate name of	Ans.	(b) : • Cast i	iron contains silicon and graphite
brazing. • Brazing is the joining of metals through the use of heat		elements, which make it difficult to cut it by gas cutting.			
• Brazing is the joining of metals through the use of heat		• Cast iron has high compressive strength and retains			
and filler metal whose melting temperature is above $450^{\circ}C$		good	hardness and st	rength at a higher temperature.	
• All	metals can be joined b	by brazing	275.	One of the fur	nctions of electrode coating is
• Les	s defects	y oruzing.		(a) to increase	e welding current
270	Normally soldering	iron tin is made out of		(b) to stabilize	e the arc
270.	(a) Brass	(b) Bronze		(c) to prevent	rusting
	(c) Iron	(d) Copper		(d) to control	arc temperature
	(c) non R	RR ALP Kolkata 02 11 2008			RRB ALP Gorakhpur 12.10.2003
Ans	(d) · Normally solde	ring iron tin is made out of	Ans.	(b) :	
copp	er.	and non up is made out of	Electrode coating		
• Sid	e ring is a brazing type	e of operation where the filler	Func	tions	Ingredients
meta	l has a melting temper	ature below 450°C.	• Flux	king agents	Silica, CaO, flourspar
• Sol	dering is used for a n	eat leak-proof joint or a low	• Slag	o formers	Rutile Alumina Iron oxide
resist	tance electrical joint.	1 5	• Arc	stabilizers	Potassium silicate zircohium
271.	What is the process	s for soft joining of metal at	- Alt	staomzers	carbonate
	low temperature w	vithout being melt the base	276	Which one of	the following devices is used for
	metal ?		270.	convenience of	f fabrication of a job by welding
	(a) Brazing	(b) Soldering		that is set in t	his device to swiveled around 360°
	(c) Welding	(d) Forging		as ner require	ment?
	RRB ALP	Jammu-Kashmir 06.06.2010		(a) Fixture	(b) Gauge
Ans.	(b) : Soldering is th	e process for soft joining of		(c) lig	(d) Template
meta	l at low temperature	without being melt the base		(0) 515	NTPC Fitter 2016
meta	l.				RTE FILLE 2010 REB AL P Corekbour 11 10 2000
• Mo	st solders are alloys of	lead and tin.	Ans (a) + Fixture A welding fixture is designed in a		
• I hi	ree commonly used al	loys contain 60, 50 and 40%	Ans. (a) : Fixture A weiging lixture is designed in a way to support and locate the components to be welded		
tin ar	nd all melt below 240 ⁻		avoid distortions and weld stresses.		
272.	The tap drill size of	$M10 \times 1.5$ is	Type	anstortions und s of welding fiv	
	(a) 8.5 mm	(b) 8.4 mm	• Gas	welding fixture	
	(c) 8.5 mm	(d) 8.2 mm	• Arc	welding fixture	
		B ALF Guwanati 22.01.2008	• Resi	stance welding	fixture
Ans.	(a) :		277	Short and sh	arn angle taners are machined
I ap	size	Drill size	211.	using_	arp angle tapers are machined
MIU	× 1.5	8.5 mm		(a) A taper att	achment
	× 1.3 × 1.75	9.30 mm		(b) The comp	ound rest
	× 1./3	12.00 mm		(c) Morse tap	er attachment
M14		12.00 mm		(d) The tailsto	ock set over method
273.	If L (mm) is the len	igth of the inner cone of the		(u) The tansit	DDB AI D Corokhnur 08 10 2006
	name, the tip-to-me	(b) L + 2 mm		(L) . A tomon :	KKB ALT GOTAKIPUT 08.10.2000
	(a) $L mm$	(b) $L + 2 mm$ (d) $L + 6 mm$	Ans.	(b): A taper 1	s defined as a uniform increase of
	(c) $L + 4 \text{ mm}$	(d) $L + 0 \text{ mm}$	decrea	its longth In a	letter of a piece of work measured
		ALP Goraknpur 21.10.2001	along	duce a conical	surface by the gradual reduction in
Ans.	(b): If L (mm) is th	e length of the inner cone of	diame	ter from a cylir	drical job
the fi	lame, the tip-to-metal	distance should be $L + 2$ mm.	279	Ean ana waldi	
274.	Cast iron contains f	two elements, which make it	270.	(a) Direct our	ng-
difficult to cut it by gas cutting. What are these			(a) Direct cur	a surrent with high fragmeness is	
elements ?			(U) Alternatin	g current with high frequency is	
(a) Sulphur and phosphorous(b) Silicon and graphita			(a) Alternation	a surrout with low fragments is	
(b) Silicon and graphite			(c) Alternatin	g current with low frequency is	
(c) Graphite and phosphorous (d) Silicon and subhur			(d) None eff	2222	
(d) Silicon and sulphur		(d) None of these			
	RRB	ALP Gorakhpur 14.04.2002			KRB ALP Chennai 27.10.2002

Ans. (a) : For arc welding direct current is used.	282. Instruments which converts AC into DC is known as-
• Direct current (DC) always flows from the positive terminal to the negative terminal as per the	(a) Rectifier (b) VRD
conventional theory	(c) Transformer (d) Diode
270 To provent injury/damage caused by the	UPRVUNL (Fitter) 05.04.2021, 9:00 AM-12:00 PM
279. To prevent injury/damage caused by the	Ans. (a) : Rectifier – A rectifier is a device that
(a) The room should remain dark	converts an oscillating two directional alternating
(a) The foold should remain dark (b) Good lighting should be maintained in the	current (AC) into a single directional direct current
(b) Good fighting should be maintained in the	(DC).
(c) The face should be covered with cloth	from one alternating current circuit to one or more other
(d) Goggles and welding helmet should be used	circuits either increasing (step up) or reducing (step
UPRVUNL (Fitter) 05.04.2021, 9:00 AM-12:00 PM	down) the voltage.
BHEL 2020	Diode- A diode is a semiconductor device that
Ans. (d) : Goggles and welding helmet are used to	essentially acts as a one-way which for current.
prevent injury/damage due to the intensity of the glow	• It allows current to flow easily in one direction, but
of the weld arc.	severally restricts current from flowing in the
• During welding rays of ultraviolet harmful light	opposite direction.
emerse, which are harmful to the eyes and skin. So,	283. After the welding or soldering process is
helmet, aprons etc are used.	(a) Flux can cause corrosion of the base metal
280. Oxy-Acetylene welding is also known as-	and weld deposit
(a) Gas welding (b) Vaccum welding	(b) Fluxes increases the weight
(c) Arc welding (d) Spark welding	(c) Fluxes are chemically inert
UPRVUNL (Fitter) 05.04.2021, 9:00 AM-12:00 PM	(d) Flux catches fire easily
Ans. (a) : Oxy-acetylene welding is also known as gas	UPRVUNL (Fitter) 05.04.2021, 9:00 AM-12:00 PM
welding.	Ans. (a) : Flux can cause corrosion of the parent metal
• In gas welding oxygen & acetylene gas are used.	& weld deposited once the welding or soldering process
• In acetylene cylinder, acetylene is compressed till	is completed flux remove residual. The flux solder brings out the surface oxide by dissolving in itself &
15 kg/cm ² pressure.	preventing oxide formation again. It removes corrosion
• Acetylene cylinder is pointed with maroon.	flux is available in all three forms.
281. In this given figure 'X' represents that :	284. Which of the following welding process uses
X	carbon dioxide-
	(a) GTAW (b) SAW
	(C) SMAW (U) OMAW ICCAR Stinendiary Trainee Maintainer 2021
	DMRC Maintainer Fitter, 19-04-2018
and the second s	RRB ALP Fitter 21-01-2019, Shift-I
	Ans. (d) : Gas metal arc welding (GMAW) uses carbon
	dioxide in the welding process.
(a) A mask to prevent from welding spark	• The shielding gases in MIG welding comes out of the
(b) A mask to protect from ultra-violet rays	• Welding is possible in MIG due to the arc generated
(c) A Apron of leather	between the electrode and the workpiece
(d) A respirator pad to prevent inhalation of toxic	• Welding of both ferrous and non-ferrous by MIG
fumes	welding can processed.
UPRVUNL (Fitter) 05.04.2021, 9:00 AM-12:00 PM	• Inert gas is used as shielding gas in MIG welding and
Ans. (d) : In this given figure 'X' represents a respirator	active gas carbon is used as shielding gas in MIG
pad to prevent inhalation of toxic fumes.	Welding.
• A welding respirator is a piece of protective	different from GMAW welding
equipment that protects welders from fumes.	285. Unwanted deposit of weld in the shape of small
• Its protect workers against insufficient oxygen	balls on the working surface of the alloy to be
environments, narmini dusts, logs, smokes, mist,	welded called as
These hazards may cause cancer lung impairment	(a) Spatters (b) Porosity
diseases or death	(c) weld cut (d) Undercut DMPC Maintainer Fitter 10 04 2019
	DIVING Maintainer Fitter, 19-04-2018

Ans. (a) : Unwanted deposit of weld in the shape of	Ans. (a) : The colour of oxygen cylinder is black.
small balls on the working surface of the alloy to be	Gas cylinder Colour
welded is called as spatters. By using wrong polarity &	Oxygen Black
long arc alloy. This defect occurs due to arc blow. To	Acetylene Maroon
remedy this, completely dry flux & correct polarity are	Air Gray
	Chlorine Yellow
286. The size of filler rods is specified by–	Hydrogen Ked
(a) Type of main part used	Inclum Blown 200 Lease set less set line set line in in
(b) Length (c) Diameter	290. In oxy-acetylene welding, the gas chain is
(d) The type of welding used	the use of
(d) The type of weiding used BDL Technician 2022	(a) Regulator (b) Torch
DMRC Maintainer Fitter 19-04-2018	(c) Valve (d) Mixing chamber
Ans (c) · The size of filler rods is specified by	UPRVUNL Fitter. 09-05-2015
diameter The composition of the filler rod depends on	Ans. (a) : In gas welding pressure regulators are
the composition of the base metal. Filler rods are made	required when high pressure filled gas is used in gas
from a variety of materials, such as mild steel, copper	cylinders.
silver, aluminium, cast iron etc. Flux is used to protect	• As the gas continuous to be used, so does its
the filler metal from atmospheric influence in its molten	pressure in the cylinder keeps on decreasing. But
state.	the gas coming out of the pressure regulator the
287. Reducing feather is-	pressure remains the same.
(a) In oxidizing flame	• On the basis of design, there are two types of
(b) Both in neutral & oxidizing flame	regulator-
(c) In neutral flame	(a) Single stage regulator
(d) In carburizing flame	(b) Two stage regulator
UPRVUNL Fitter, 09-05-2015	291. In carburizing flame occurs
Ans. (d) : Reducing feather takes place in carburising	(a) Three cone (b) Two cone
flame.	(c) One cone (d) Four cone
• In this flame the ratio of oxygen & acetylene is about	NFC Stipendiary Trainee Maintainer 2021
0.9 : 1. It's maximum temperature is shout 2000°C	UPRVUNL Filler, 09-05-2015
• It is used for the welding of monel metals (nickel	flame is reduced then the flame is converted into a
• It is used for the weighing of moner metals (meker -	carburizing or reducing flame. It contains more
and materials with hard surfaces	acetylene than oxygen.
• Low ratio of oxygen & acetylene in neutral flame is	Three cones are found in a carburising flame the inner
about 1 : 1.	cone shown in the figure.
• The ratio of oxygen & acetylene in an oxidizing	Outer core
flame is about 1.5 : 1.	
288. Neutral flame is used for welding-	
(a) Steel and Cast Iron (b) Bronze and Stellite	Inner core
(c) Copper and Brass (d) Brass and Bronze	Carburizing flame
UPRVUNL Fitter, 09-05-2015	• Only two cones in neutral and oxidizing type of flame
Ans. (a) : Neutral flame is used for welding steel & cast	only are found.
iron.	Outer core
Metal Types of Flame	
Mild steel Neutral flame	C Printer V Printer
Grav cast iron Neutral/oxidizing flame	Inner core Inner core Neutral flame Oxidizing flame
Allov steel Neutral flame	292. In many applications, which flame is used for
Lead Neutral flame	oxy-acetylene welding:
Copper & bronze Neutral flame or sometimes	(a) Oxidizing (b) Carburizing
oxidizing flame	(c) Neutral (d) Reducing
289. The oxygen cylinder has the colour–	BARC Stipendiary Trainee Maintainer 2021
(a) Black (b) Red	Urkvunt ritter, 09-05-2015
(c) Blue (d) Maroon	Ans. (c) : In oxy-acetylene weiding, neutral flame is
NPCIL ST /(Fitter) Rawatbhata 16.10.2022	amounts of acetylene & ovygen in a neutral flame in an
UPRVUNL Fitter, 09-05-2015	amounts of accivience & oxygen in a neutral fiame in an
DMDCIM	lacetylene torch are burnt

It has the following properties-	2	2. Medium or Middle zone- It is commonly found in
(i) Its temperature is about 3260°	C c	carburising flame.
(ii) It consists of an outer shell ov	er the inner cone of 3	3. Outer zone– The temperature of this zone is about
the flame.	1	1200-1300°C.
(iii) It does not have a middle part.		Outer core
(iv) Its outer shell consists of s	superheated carbon	
monoxide and hydrogen	gases, which are	
obtained from the inner cone.		Inner core
• This flame is called neutral f	lame because of its	Carburizing flame
there is no chemical change in	the weld metal.	Outer core
293. In what proportion is oxy	gen and acetylene	trees to the second
mixed in neutral flame? $(x) = 2 + 2$	2.2	Perina Land
(a) 2:3 (b)	3:2 5:2	Inner core Inner core Neutral flame Oxidizing flame
	$\begin{bmatrix} 3 & 2 \\ 5 & 1 \end{bmatrix}$	297. The flame generated in oxy-acetylene gas
$\mathbf{U} \mathbf{F} \mathbf{K} \mathbf{V} \mathbf{U} \mathbf{N} \mathbf{I}$	neutrol flores 1 + 1	welding will be the highest temperature at:
Alls. (c): Oxygen & acceptene in a	lieutral fiante 1 . 1	(a) 3200°C (b) 2800°C
• Its temperature is about 2260°C		(c) 2100°C (d) 1200°C
 Mild steel steinlass steel apst in 	n & connor ato aro	UPRVUNL Fitter, 09-05-2015
• Wild steel, stallless steel cast if ioined by neutral flame		Ans. (a) : The highest temperature generated in oxy-
Neutral flame is most commonly	used for steel	acetylene gas welding is around 3260°C in (inner zone)
• This flame is called neutral flame	me because it does	& outer zone temperature is around 1200°C-1300°C
not cause any chemical change in	n the weld metal	208 As the are length increases the energy 1200
204 Which substance wolding the	are no use of flux	voltage will be
(a) Bronze (b)	Cast iron	(a) Increase
(c) Carbon steel (d)	Brass	(a) Increase
RRCAT Stinendiary Train	ee Maintainer 2019	(b) Decrease
UPRVUNI	Fitter. 09-05-2015	(c) Remains same
Ans. (b) : Flux is not used for welding	ng of cast iron.	(d) May increase or decrease
• Flux cleans the workpiece &	protect it from the	UPSSSC Tubewell Operator, 02-09-2018
environment & also improves ch	emical properties.	Ans. (a) : As the arc length increases, the operating
• Flux is a bad conductor of electric	icity.	voltage will also increase.
• Sand, sodium, borax, chloride,	salt in the form of	$[\mathbf{V} = \mathbf{a}l + \mathbf{b}]$
flux is used.	l IV	Where, $V = voltage$, $l = arc length$, a and $b = constant$
295. A welding transformer is use	ed to change:	$V \uparrow \text{then } l \uparrow$
(a) DC main supply to DC we	elding supply	^
(b) AC main supply to DC we	elding supply	
(c) AC main supply to AC we	elding supply	
(d) DC main supply to AC we	elding supply	age
UPRVUNI	J Fitter, 09-05-2015	olt
Ans. (c) : Welding transformer	is a step down	>
transformer which is used to conve	ert main alternating	A no lon oth (1)
current into welding alternating curre	ent.	Arc length (1)
• It generally converts 220-240 v	olt into 30-80 volts 2	299. The arc used in electric arc welding is–
of high current.		(a) High voltage, high current
296. The highest temperature of	the flame will be	(b) Low voltage, low current
generated:		(c) Low voltage, high current
(a) At the tip of the torch		(d) High voltage, low current
(b) In outer envelope	ar anvalar a	NLC Technician 24-09.2022
(d) In inner envelope	ler envelope	UPSSSC Tubewell Operator, 02-09-2018
	Fitter 09-05-2015	Ans. (c) : The arc used in electric arc welding is low
Ans (d) . The highest temperature	$\begin{bmatrix} 1 & 11111 \\ 0 & 7 & 0 \\ 0 $	voltage & high current discharge
generated in inner envelope of the fl		Flectric arc welding. In this welding high current is
There are three parts of any flowe		nassed between the metals to be joined this current is
1 Inner zone This zone has the h	nighest temperature	up to the melting points of those metals & they melted $\&$
Its temperature in neutral flame is ab	out 3260°C	ioined
no competature in neutral frame is ab	Jul 5200 C.	0111 04 .

 300. In welding, transformer is used to supply– (a) Low welding current (b) Low welding voltage (c) High welding voltage & high welding current (d) Low welding voltage & high welding current UPSSSC Tubewell Operator, 02-09-2018 Ans (d): On the basis voltage there are two types of 	 303. Lack of Penetration is caused by- (a) High current (b) Low current (c) Short length arc (d) Very low welding speed UPSSSC Tubewell Operator, 02-09-2018
transformer–	Ans. (c): The lack of penetration is caused by short of low length of are. If the weld is not able to reach the
(i) Step-up transformer– Increase the voltage, reduce	entire length of the joint it is called reduction in
the current.	penetration. As a result the joint he becomes weak.
(ii) Step-down transformer– Decrease the voltage &	Weld
The formation of the second se	Lack of penetration
• The transformer used in weiding is step down transformer.	Workpiece
501. There is a joint in which the members are in the same plane this joint called.	304. Some new welding helmets have a crystal type
(a) Butt joint (b) Lap joint	face plate what is their special feature–
(c) 'T' joint (d) Edge joint	(a) I hey are light in weight
BRO Vehicle Mechanic 2021	(b) I ney are easily to nandle (c) It darkens, coloured itself by exposure to
UPSSSC Tubewell Operator, 02-09-2018	ultraviolet rays become coloured
Ans. (a) : When members are in the same plane this	(d) They are cheep
joint is called butt joint. In butt joint two edges are	UPSSSC Tubewell Operator, 02-09-2018
i Dutticint	Ans. (c) : The special feature of some new welding
	helmets a crystal type face plate is they themselves
ii. 'T' joint	become darker in colour due to exposure to ultraviolet
	rays.
	305. The depth of fusion of a weld is known as
iii. Edge joint	(a) Penetration (b) Molten pool
	(C) Fusion (d) Drag
	Ans (a) \cdot The depth of fusion of a weld is known as
iv. Lap joint	penetration When the weld metal does not reach the
	root of the joint, it is called lack of penetration of
v. Corner joint	welding.
	• This occurs mostly in vertical or over head welding.
302 The position in which welding is essist to	306. Which of the following welding is done in high
perform-	vacuum chamber?
(a) Flat (b) Vertical	(a) Electron beam welding
(c) Horizontal (d) Overhead	(b) Arc welding
UPSSSC Tubewell Operator, 02-09-2018	(c) Laser weiding (d) TIC weiding
Ans. (a) in that position the weighing is easiest to perform There are two type of welding.	NALCO Jr Operative Trainee 2021
(i) Leftward welding – In this welding process, the	ISRO Technician-B Fitter 02-06-2019
weld is moved from right to left. It is also known as	Ans. (a) : Electron beam welding in done in a high
forward welding	vacuum chamber. In this welding 0.050 to 0.075 mm
weld is moved from left to right. It is also known as	distance should be maintained between the joining
backward welding.	surfaces. A vacuum pump is used to created vacuum in
Welding	whole chamber.
	307. Which of the following flame combination gives
30°-40° → /×	the highest temperature : (a) $Oxy = I PG$ flame
40°-50 40°-50°	(a) $Oxy = Di O fiame$ (b) $Oxy = Hydrogen flame$
	(c) Oxy – Coal gas flame
dor	(d) Oxy – Acetylene flame
Left ward Technique Right ward Technique	ISRO Technician-B Fitter 10-12-2017

 Ans. (d) : Oxy-acetylene flame combination gives the highest temperature. Oxy acetylene flame divided into three parts– 1. Neutral flame – 3260°C temperature. 2. Carburizing flame – 3038°C temperature 3. Oxidizing flame – 3480°C temperature 	 311. Which one of the following process does not require filler metal : (a) Arc welding (b) resistance welding (c) gas welding (d) none of these ISRO Technician-B Fitter 21-02-2015
Inner Cone (3300°C) Outer Envelope (1260°C)	plain metal workpiece together by running an electrical current through them. No filler metal and no flux are needed in this type of welding.
(a) Neutral Flame	312. Gas welding nozzles are made of (a) Aluminium (b) Steel (c) Copper (d) Brass
(b) Oxidizing Flame	Ans. (c) : In gas welding nozzles are made of copper. The flame is prepared in a nozzle of welding torch by mixing fuel gas and oxygen and air in proper proportion
Bright Luminous Acetylene Feather	313. In oxy acetylene gas welding, which type of flame is most commonly used? (a) Oxidising flame (b) Neutral flame
(c) Carburizing or Reducing Flame Blue Envelope	(c) Carburising flame (d) Any type of flame can be used ISRO Technician-B Turner 10.12.2017
308. In oxy acetylene welding which gas is closed first to avoid back fire : (a) Oxygen (b) Acetylene (c) Argon (d) Nitrogen NALCO Operator Boiler 2021	Ans. (b) : Neutral flame is commonly used in oxy- acetylene gas welding. In a neutral flame, approximately equal amount of acetylene and oxygen are burnt in acetylene torch. Their temperature is about 3260°C. This flame is called neutral flame because it
ISRO Technician-B Fitter 10-12-2017 Ans. (b) : Acetylene gas is closed first to avoid back fire in oxy-acetylene welding. Acetylene gas is kept in liquid form. Acetylene is	does not cause any chemical change in the weld metal. 314. The Permanent joints in Mild Steel section are obtained by
liquid acetone in a porous material like fire brick. This is the reason that the pressure of the container does not rise.	(c) Cooling (d) Boiling Ans. (b) : The permanent joints in mild steel section are obtained by welding. The melting point of steel is $1350^{\circ}\text{C} - 1530^{\circ}\text{C}$.
 309. In oxy-acetylene gas cutting the metal cutting is done by : (a) High pressure oxygen (b) High pressure acetylene (c) High pressure nitrogen (d) High pressure argon 	315. Which of the following is a permanent joining method?(a) Bolting(b) Screwing(c) Welding(d) None of theseISRO Plumber 02.06.2019
ISRO Technician-B Fitter 10-12-2017 Ans. (a) : In oxy-acetylene gas cutting the metal cutting is done by high pressure oxygen.	Ans. (c) : Welding is a permanent joining method. It is a fabrication process that joins materials, usually metals or thermoplastics, by using high heat to melt the parts
 310. In gas welding, the gas mixture used is : (a) oxygen-hydrogen (b) oxygen-propane (c) oxygen-acetylene (d) oxygen-coal gas ISRO Technician-B Fitter 21-02-2015 	together and allowing them to cool, causing fusion. 316. In arc welding electric arc is created between- (a) Two electrodes (b) Electrode and base material
Ans. (c) : In gas welding, oxygen & acetylene gas mixture are commonly used. In gas welding flammable gases are used to melt the metal, such as hydrogen methane, acetylene etc. Other than acetylene the	 (c) Electrode and filler material (d) Arc is not created RRB ALP Heat Engine 08-02-2019 Ans. (b) : In arc welding electric arc is created between
temperature of the other gases flam as comparatively low. So, they are used to joint thin metal sheets or tubes is done.	the electrode & base material. In this welding process heat is generated by electric arc. The thickness of filler rod is totally depend on plate thickness.

317. In TIG welding, which gas is used for shielding	322. The type of current employed during an arc
purpose?	welding process is:
(a) Oxygen (b) Acetylene (c) Argon (d) Uydrogon	(a) only alternating currents
(c) Algoni (d) Hydrogeni HAL Apprentice 10 11 2022	(b) only direct currents
IAL Apprentice 10.11.2022 ISBO Technician B Fitter 23.02.2020	(c) either alternating or direct currents
ISRO Technician-B Fitter 21-02-2015	(d) None of the above
ISRO Technician-B Fitter 10-02-2019	ISRO Technician-B Welder 25.09.2016
Ans (c) \cdot In TIG-welding argon gas is used for	Ans. (c) : Alternating current and direct current is used
shielding purpose. It is also called tungsten inert gas arc	during arc welding process. Arc welding requires a
welding (GTAW). It uses non-consumable electrodes.	constant supply of current, which is sufficient to
Argon or helium gas are used as inert gas. In this, both	maintain the arc in ampere and provides the correct
AC & DC power supplies can be used.	voltage to which the jobs are melted and joined.
318. Which one of the following term is not related	323. Laser welding finds widest application in:
to welding?	(a) heavy industry (b) structural work
(a) Fusion (b) bonding	(c) electronics industry (d) process industry
(c) bead (d) Penetration	ISRO Technician-B Welder 25.09.2016
ISRO Technician-B Turner 02.06.2019	Ans. (c) : Laser welding finds widest application in
Ans : (b) Bonding term is not related to welding	electronics industry. In this method the metal is melted
whereas fusion, bead, penetration all these come under	by focusing a laser beam on a spot of diameter thinner
the welding process.	than a hair. It has capacity to generate power of several
In fusion, the joining surfaces are heated with the help	lakn waus in 1 sq. cm.
of heat until melting when they cooled the molten	324. Weaving in an arc welding refers to:
metals join together and form a strong joint.	(a) side to side motion of the electrode at right
319. Type of weld edge preparation–	angles to the direction of weiding
(a) Square edges (b) Double U	(b) side to side motion of electrode along the
(c) Single V (d) All of the above	(c) spiral motion given to the electrode during
BPCL Operator (Field) 2016	welding
Ans. (d) : Square edges double V & single V all are the	(d) a technique of striking the arc
type of welding edge preparation.	ISRO Technician-B Welder 25.09.2016
Types of welding edge preparation-	Ans. (a) : Weaving is a side-to-side motion of the
(1) Square edge (2) single U (3) Double U (4) Single V	welding arc during transferring material to the joint to
(5) Double V	be welded. weaving allows filling the joint by moving
320. What is the percentage of tin in soft solder?	the arc. giving side-to-side motion for welding means
(a) 30% (b) 30%	moving the material in the joint to be welded.
(c) 63% (d) 42%	325. Weld spatter is:
DMRC Maintainer Fitter, 19-04-2018	(a) a welding defect
Ans. (c) : Soft solder contains 63% tin & 3/% lead. The	(b) an electrode coating
higher the amount to tin in the colder the lower its molting	(c) a welding technique
night the amount to the in the solder, the lower its mething point. Its melding point is below 450° C. Soft solder is used	(d) a type of flux
to join thin wires thin sheets and small parts	ISRO Technician-B Welder 25.09.2016
321 "Arc eve" is	Ans. (a) : Weld spatter is a welding defect. During the
(a) An acute irritation/pain in the eves caused due	welding process, many types of defects like weakness
to radiations emitted during welding	of joint, lack of fusion, cracks in joints & improper bead
(b) The distance from the tip of electrode to the	shape etc. are formed.
point where the arc makes contact with the	326. Undercuts are weld defects in weldments
workpiece	caused due to:
(c) Centre point of the arc in an arc welding	(a) low weiding current
process (d) None of the change	(b) excessive weiging current
(a) None of the above ISBO Technician D Welder 25 00 2016	(d) too high voltage speed
15001000000000000000000000000000000000	(u) 100 mgn vonage specu ISRO Technician R Wolder 25 00 2016
Ans. (a): Are eye is an acute initiation/pain in the eyes	Ans (b) : Undergut can acquire for accurat record
arc welding process ultra-voilet ray are formed to	Excessive heat from high current on voltage settings.
protect from these ravs black goggles & helmets must	the travel speed is too fast the electrode moves away
be used.	from the weld nool prematurely
	nom the word poor prematurery.

327. The density of slag is:	Ans. (b) : The purpose of setting root gap in a butt weld
(a) less than that of molten metal	joint is to obtain required depth of fusion.
(b) more than that of molten metal	333. Low hydrogen electrodes are baked prior to
(d) none of the above	use in order that:
ISRO Technician-B Welder 25.09.2016	(a) proper strength is obtained
Ans (a) · Welding slag is a form of slag or vitreous	(b) welding is free from arc blow
material produced as a hyproduct of some arc welding	(c) welding is free from moisture pick up
processes most specifically shielded metal arc welding	(d) current required is minimum
The density of slag is less than that of molten metal.	ISRO Technician-B Welder 25.09.2016
328. The heat generated (H) in resistance welding is	Ans. (c) : The low hydrogen electrodes are
expressed by:	charged/baked before use so that the welding is free
(a) I^2Rt (b) IR^2t	from moisture absorption.
(c) IRt^2 (d) $2IRT$	The electrode is used to complete the welding circuit
BEML 2022	and to fill the filler metal in the joint by an arc between
ISRO Technician-B Welder 25.09.2016	the workpiece and the tip of the electrode.
Ans. (a) : The heat generated in resistance welding is	334. In gas tungsten arc welding, the shape of the tip
expressed by $H = I^2 Rt$. The welding in which two	of tungsten electrode used for welding of
metals are joined together using the heat produced by	aluminium is:
the resistance due to the flow of current is called	(a) Point end (b) Flat end
resistance welding.	(c) Angular end (d) Spherical end
329. What is the effect if the tungsten electrode tip	ISRO Technician-B weider 25.09.2010
melts and deposits in the weld metal?	Ans. (d) : In gas tungsten arc weiding, the shape of the
(a) Poor penetration	tip of tungsten electrode used for welding of aluminium
(D) Crack (a) Contamination in wold motal	is spherical end. In this process of weiding the weid
(d) Lack of fusion	atea and electrode are protected from oxidation of other
(d) Lack of fusion ISBO Technician B Welder 25 00 2016	atmospheric containmation by an mert smelting gas.
Ans (a) : If the tungsten electrode tin melts and	335. Which of the following carbon steels is most
deposits in the weld metal contamination in weld metal	weidable: (a) 0.15% Carbon starl (b) 0.20% Carbon starl
occurs. In TIG welding non-consumable electrode is	(a) 0.15% Carbon steel (b) 0.30% Carbon steel
used. This electrode made by tungsten.	(c) 0.50% Carbon steel (d) 0.75% Carbon steel
330. In spot welding process, the size of nugget is	ISRO Technician-B Welder 25.09.2016
controlled by:	Ans. (a) : 0.15% of carbon steel is most weldable. The
(a) Time	higher carbon content present in steel it is too difficult
(b) Current	to weld. Low carbon steel can easily welded.
(c) Pressure	336. Straight polarity welding refers to :
(d) Electrode contact area	(a) Electrode holder is connected to negative and
	(b) Helden connected to negitive and much to
ISRO Lechnician-B welder 25.09.2016	(b) Holder connected to positive and work to
Ans. (d) : In spot welding process, the size of nugget is	(a) Holder is positive and work is earthed
controlled by electrode contact area. The joint made by	(d) Work is positive and holder is earthed
spot weiding is not airtight & waterproof. These joints	(d) Work is positive and notice is cartiled NTPC Fitter 2016
in the manufacture of bodies of tractors buses cycles	ISRO Technician-R Welder 25 09 2016
cars etc	Ans (a) · In straight polarity welding refers to the
331 The probable defect if cast iron is welded	electrode holder is connected to negative and work to
without nreheating is	the nositive
(a) Porosity (b) Blow hole	There are two types of polarity-
(c) Under cut (d) Crack	(i) Straight polarity
ISRO Technician-B Welder 25.09.2016	(ii) Reversed polarity
Ans. (d) : If cast iron is welded without preheating	Power Power
cracks are generated on the body of weld metal.	source source
332. The purpose of setting root gap in a butt weld	
joint is:	Holder Holder
(a) To control distortion	Electron Electrode Electron
(b) To obtain required depth of fusion	Workpiece Workpiece
(c) To maintain the alignment	Electron flow Electron flow
(d) To deposit more metal	
ISRO Technician-B Welder 25.09.2016	Straight Polarity Reverse Polarity

337. Brass is gas welded using: (a) Oxidising flame	Ans. (c) : In engineering drawing, the welding symbol \land
(b) Carburising flame	used for fillet weld as
(c) Neutral flame	Types of welding Symbol
(d) Cannot be welded by gas welding process	
ISRO Technician-B Welder 25.09.2016	Fillet
Ans. (a) : Brass is gas welded by oxidizing flame. The	$\overline{\mathbf{A}}$
length of the inner cone is an oxidizing a neutral flame.	Single 'V' butt
It's colour is blue, it makes holse while burning.	$\overline{\mathbf{v}}$
338. In arc welding, penetration is minimum for:	X
(a) DC-Electrode Positive	Double 'V' butt
(b) DC-Electrode Negative	\sim
$\begin{array}{c} (c) AC \\ (b) b c = 1 \\ \end{array}$	Single 'U' butt
(d) None of the above	\sim
ISRO Technician-B Welder 25.09.2016	Double 'II' butt
Ans. (a) : In arc welding, penetration is minimum for	
DC electrode positive.	Spot X
(1) Direct convert starisht a larit (DCSD)	Spot A
(1) Direct current straight polarity (DCSP)	Projection \bigtriangleup
(2) Direct current reverse polarity (DCRP)	342. Which one of the following joining methods
(3) Alternating current (AC) – $500/1$ best successful views	results in the fusion of the parent metal?
50% heat on workpiece,	(a) Riveting (b) Adhesive bonding
50% neat on electrode	(c) Soldering (d) Welding
339. Which of the following welding process utilizes	ISRO Technician-B Fitter 21-04-2018, Shift-III
heat and create a weld?	Ans. (d) : Welding is a process of joining methods
(a) Illtrasonic welding (b) Percussion welding	results in the fusion of the parent metal welding is a
(c) Stud welding (d) Acoustic welding	technique by which two similar or dissimilar metals are
(c) Stud weiding (d) Rebusile weiding BHFL 2020	joined together at a particular temperature with or
ISRO Technician-B Welder 25.09.2016	without pressure.
Ans. (a) : Ultrasonic welding process utilizes high	343. Which of the following weiding process is not generally employed for welding of plastics?
frequency acoustic vibration to generate heat and create	(a) Ultrasonic welding (b) Gas welding
a weld.	(c) TIG welding (d) Friction welding
• Ultrasonic welding is used to produce lap joints in	ISRO Technician-B Welder 25.09.2016
metals, plastic films in varied shapes as wires	Ans (c) · TIG welding is not used for welding of
(crossed and parallel).	plastics Inert gas welding is used for welding of conner
• The minimum frequency needed for this purpose is	material Tungsten electrode containing 2% thorium is
20,000 Hz.	used for tungsten inert gas welding.
340. Molten flux which solidifies over the weld in	344. The arc length in a submerged arc welding
Manual metal arc welding is called :	process is controlled by:
(a) Stag (b) Heat Affected Zolle (c) Cellulose coating (d) Flash	(a) Welding speed
ISRO Technician-B Fitter 23-02-2020	(b) Welding voltage
Ans. (a) : Molten flux which solidifies over the weld	(c) Welding current
after cool the manual metal arc welding is called slag.	(d) Electrode wire extension
Slag is formed when flux, the solid shielding material	IGCAR Stipendiary Trainee Maintainer 2021
used in the welding process, metals in or on top of the	ISBO Technician-B Welder 25 09 2016
weld zone.	Ans (b) : The arc length in a submerged arc welding
341. In engineering drawing, the welding symbol	process is controlled by welding voltage. There are two
used for fillet weld is :	method of submerged arc welding-
∇	1. Automatic submerged arc welding – Voltage, length
(a) \mathbf{v} (b) \smile	
	& electrode arc all are automatic.
\sim	& electrode arc all are automatic. 2. Semi automatic submerged arc welding– Voltage,
	& electrode arc all are automatic.2. Semi automatic submerged arc welding– Voltage, length are automatic & arc of electrode is controlled
(c) (d) (d) (d) (JSBO Technician-B Fitter 22-12 2012	 & electrode arc all are automatic. 2. Semi automatic submerged arc welding– Voltage, length are automatic & arc of electrode is controlled by operator.

345. The edges of thick cylindrical sections can be welded without any edge propagation by	Ans. (b) : Flux used in submerged arc welding is in the
(a) Friction Stir welding	form of granular.
(a) Flectron beam welding	Submerged arc welding is used to weld in flat condition
(c) Electro slag welding	is done. By this the pipe fillet can also successfully
(d) Plasma welding	welded. On the basis of the thickness of the plate to be
ISRO Technician-B Welder 25.09.2016	welded, the speed can range from 0.5 m/min to 5 m/min.
Ans. (a) : The edges of thick cylindrical sections can be	350. During electron beam welding, vacuum is of
welded without any edge preparation by friction stir	the order of:
welding. Having fraction between two objects, the heat	(a) 10^{-3} torr (b) 10^{-4} torr
produced by the force of friction between two surfaces,	(c) 10^{-3} torr (d) 10^{-2} torr
bringing both surfaces till the plastic state & joining	ISRO Technician-B Welder 25.09.2016
them against each other with pressure is called friction	Ans. (a) : During electron beam welding vaccum is on
welding.	the order of 10^{-5} torr. To make high quality of joint
346. While repair welding a crack in a cast iron	electron welding is used. Electron beam welding is also
body, the extension of crack can be controlled	used for welding dissimilar metals. In this welding
by:	process joining of surfaces are maintain .0050 mm to
(a) Tacking at both ends of the crack	0.075 mm.
(b) Preheating	351. In which of the following resistance welding, a
(c) Grooving the crack	large number of welds can be carried out
(d) Drilling at both ends of the crack	simultaneously:
ISRO Technician-B Welder 25.09.2016	(a) Spot welding
Ans. (b) : While repair welding a crack in a cast iron	(b) Projection welding
body, the extension of crack can be controlled by	(c) Seam welding
preheating.	(d) Percussion welding
347. The presence of which of the following gases	ISRO Technician-B Welder 25.09.2016
has the harmful effect of leading to cracking of	Ans. (b) : In projection resistance welding a large
a weldment?	number of welds can be carried out simultaneously.
(a) Oxygen (b) Hydrogen	Projection welding can used to weld small & large
(c) Nulder (d) Algon ISPO Technician B Welder 25 00 2016	workpieces. By this method handles & hinged are
Ans (b): The presence of hydrogen gases has the harmful	welded.
effect of leading to cracking of a weldment. After burning	352. Welding in horizontal, vertical and overhead
this gas with oxygen flame can be produced which is used	position is difficult because the molten metal is
in oxy-hydrogen welding By this gas metals which have	deposited against gravity. Which physical
low melting points such as aluminium (Al), magnesium	property of metal helps in retaining the molten
(Mg) and lead (Pb) etc. are welded.	metal on the joint in overhead position?
348. The word 'LASER' is an acronym for:	(a) Thermal contraction (b) Magnetic attraction
(a) Light Amplification by Stimulated Emission	(c) Surface tension (d) Density
of Radiation	ISRO Technician-B Welder 25.09.2016
(b) Light Augmentation by Stimulated Emission	Ans. (c) : Welding in horizontal, vertical & overhead
of Radiation	position is difficult because the molten metal is
(c) Light Amplification by Sustained Emission of	deposited against gravity surface tension is a property of
Radiation	metal helps in retaining the molten metal on the joint in
(d) Light Augmentation by Sustained Emission	overhead position.
of Radiation	353. Which one of the following elements has the
BDL Technician 2022 ISBO Technician B Welder 25 00 2016	highest metallurgical influence on the
Ang (a) + The word 'I ASED' is an acconvent for "light	weldability of steel?
amplification by stimulated emission of radiation"	(a) Carbon (b) Chromium
'I ASER' hear welding is also a method of welding In	(c) Manganese (d) Silicon
this process workpiece are method and joined together	ISRO Technician-B Welder 25.09.2016
combined by a thin beam of intense monochoromatic	Ans. (a) : Carbon element has the highest metallurgical
light.	influence on the weldability of steel.
349. Flux used in submerged arc welding is in the	• The percentage of carbon in low carbon steel ranges
form of:	from 0.15 to 0.3%.
(a) liquid (b) granular	• Medium carbon steel contains 0.30% to 0.8%
(c) solid rod (d) solid tube	carbon.
ISRO Technician-B Welder 25.09.2016	• High carbon steel contains 0.8% to 1.4% carbon.

354. Which of the following statements is not true	Ans. (a) : In an arc welding process, the three variables to
with respect to an Electron beam welding	be essentially controlled to obtain a satisfactory weldment
(a) The process essentially requires a vacuum	are weiding current, voltage & speed. The temperature of electric are is in range of 3500° C 4000° C
(b) The process essentially requires a filler wire	In this process welding current is obtained in two ways
(c) Highly reactive metals can be welded using	(a) Generator or Rectifier
the process	(b) Transformer.
(d) The cost of EBW equipments is	359. In fusion welding process, penetration is the
comparatively higher with respect to other arc	ratio of
welding processes	(a) Depth of weld to length
ISBO Technician B Welder 25 00 2016	(b) Depth of weld to width (c) Width of weld to depth
Ans (b) • The process essentially requires a filler wire	(d) Length of weld to depth
is not true with respect to an electron beam welding	ISRO Technician-B Welder 10.12.2017
process. It is a fusion welding process–	Ans. (c) : In fusion welding process, penetration is the
• This weld is usually done in vacuum.	ratio of width of weld to depth of the weld. In the fusion
• Welding of highly reactive metals by this process is	method, the surfaces to be joined are put together and
done.	heated with the help of heat until they melt.
• Cost of equipment in this weld as compared to arc	360. A welding are emits three types of non-ionising radiation. Which of the following types is likely
welding happens more.	to cause arc-eve?
355. Which is not a welding defect-	(a) Infra-red (b) Ultraviolet (UV)
(a) Chill (b) Folosity (c) Chill (d) Lack of fusion	(c) Visible (d) None of these
DMRC Maintainer Fitter 21-2-2020, Shift-I	ISRO Technician-B Welder 10.12.2017
Ans. (c) : Chill is not a welding defect. Undercut,	Ans. (b) : A welding are emits three types of non-
porosity lack of fusion are welding defects.	ionising radiation. There is a possibility of arc eye in
Undercut– It occurs with a depression, as a notch at the	greater than the intensity of light That is safe for the
foot of the cord.	eves. In arc-eve, the eves should be washed by
Undercut Porosity	preparing a solution by mixing boric acid (10g), zinc
	sulphate (10.5g), distilled water (30g).
	361. The distance between the root and toe of a fillet
	weld is called (a) Painforcement (b) Leg length
356. Non-Consumable electrode is used in the	(c) Root gap (d) Throat thickness
(a) CO Shielded (b) TIC	ISRO Technician-B Welder 10.12.2017
(a) CO ₂ Sincided (b) FIG	Ans. (b) : The distance between the root and toe of a
DMRC Maintainer Fitter 21-2-2020, Shift-I	fillet weld is called leg length
Ans. (b) : Non-consumable electrode are used in TIG	Throat thickness – It is the shortest distance from the
welding process. The melting point of tungsten	Foot to the face of the weld.
electrode is 3420°C. In this method straight polarity is	faces and size of the weld
used.	$T = k \times s$
357. Gamma rays are not generated by–	$\frac{\mathbf{I}_{t} - \mathbf{K} \cdot \mathbf{S}}{\mathbf{T}_{t} - \mathbf{L}_{t} \cdot \mathbf{I}_{t}}$
(a) welding (b) Nuclear fusion	where, $I_t = 10001$ thickness k = factor depending on angle between the
(c) Radioactive decay of atom	fusion faces.
(d) Lightening	s = size of the weld.
BARC Stipendiary Trainee Maintainer 2021	362. In Thermit welding process, iron oxide and
DMRC Maintainer Fitter 21-2-2020, Shift-I	aluminium oxides are mixed in the ratio:
Ans. (a) : Gamma rays can not produced by welding.	(a) $1:3$ (b) $3:1$
358. In an arc welding process, the three variables	(C) 1.2 (U) 2.1 ISBO Technician B Welder 10 12 2017
to be essentially controlled to obtain a	Ans (b) · In thermit welding process iron oxide and
satistactory weldment are:	aluminium oxides are mixed in the ratio 3 · 1 In thermit
(b) Welding current, voltage and arc length	welding 1 part of aluminium and 3 parts of iron-oxide
(c) Welding arc length and speed	dry mixed to form a mixture. Magnesium (Mg) is used
(d) Voltage, arc length and speed	as an igniter. It takes 25 sec - 60 sec to perform this
ISRO Technician-B Welder 10.12.2017	welding operation.

363. Property of a substance to oppose the flow of electric current through it is termed as:	Ans. (a) : The property of cast iron that makes it difficult to be welded is its hardness and brittleness
(a) Electrical conductivity	369 Thermit wolding process:
(b) Electric resistance	(a) Does not use heat
(c) Density	(a) Does not use neat (b) Employs exothermic chemical reaction to
(d) Electric pressure	(b) Employs exothermic chemical feaction to
ISRU Technician-B weider 10.12.2017	(a) Loga time consuming
Ans. (b) : Property of a substance to oppose the flow of algorithm algorithm and the algorithm of the substance of the subst	(d) None of the choice
resistance. The unit of electric resistance is ohm	(d) None of the above
Resistance of electric material-	ISRU Technician-B weider 10.12.2017
• If the length the material is greater than the	Ans. (b) : Thermit welding process uses exothermic
resistance will be greater.	reaction to produce high temperature. In thermit
• If the diameter of the material is greater, then the	welding a mixture is made by mixing aluminium and
resistance will be less.	iron oxide. Use of Magnesium (Mg) as an igniter.
• Resistance is more or less according to the nature of	369. In which type of welding, molten metal is
material.	poured to join the metals
364. Ohms law states that:	(a) GMAW (b) GTAW
(a) Current is directly proportional to voltage	(c) Thermit welding (d) Gas welding
(b) Current is directly proportional to (voltage) ²	ISRO Technician-B Welder 10.12.2017
(c) Current is inversely proportional to voltage	Ans. (c) : In thermit welding, molten metal is poured to
(d) Current is inversely proportional to (voltage) ²	join the metals. Thermit welding is used to joint the
ISRO Technician-B Welder 10.12.2017	railway tracks, locomotive engines, heavy machinery
Ans. (a) : Ohm's law states that–	etc.
"Current is directly proportional to voltage" If the	370. During a metal cutting operation using an oxy-
physical states and temperature of a conductor do not change, then the notential difference between ends of	acetylene flame, the metal is cut due to
the conductor is directly proportional to the current	(a) Molecular transfer
flowing through it	(b) Intensive oxidation
$V \propto I$	(c) Evaporation of metal
V	(d) Burning of metal
$\frac{r}{L} = R$ (Constant)	ISRO Technician-B Welder 10.12.2017
1 365 An earth elemptic used in any welding to:	Ans. (b) : During a metal cutting operation using an
(a) Hold the electrode during welding	oxy-acetylene flame the metal is cut due to
(b) Connect the earthing cable to electrode	intensive oxidation
(c) Connect the earthing cable to work piece	Types of gas cutting based on different gases
(d) Conduct current from earthing cable to	(1) Oxy-acetylene (2) Oxy-hydrogen
electrode	(3) Oxy-propane (4) Oxy-natural gas.
ISRO Technician-B Welder 10.12.2017	371 Welding of steel structures on-site of a building
Ans. (c) : An earth clamp is used in arc welding to	is done by
connect the earthing cable to work piece. Arc welding temperature ranges form 2500° C to 4000° C. It malta	(a) Snot welding (b) Arc welding
both the metal and filler	(c) Projection welding (d) Thermit welding
366 The slag formed during a Thermit welding	RCAT Stinendiary Trainee Maintainer 2019
nrocess is:	ISRO Technician-B Welder 10.12.2017
(a) FeO (b) Fe_2O_3	Ans (b) · Welding of steel structures at the site of a
(c) Al (d) Al_2O_3	huilding are welding
ISRO Technician-B Welder 10.12.2017	In arc welding process, heat is generated by electric arc.
Ans. (d) : The slag formed during a thermit welding	The use of filler rods will depends on the thickness of
process is Al ₂ O ₃ . Thermit welding is an exothermic	the plate
process. The welding process of mild steel, cast iron,	272 In manual CTAW presses the angle of the
railway line guard shaft is done by thermit welding.	5/2. In manual GIAW process, the angle of the
There must be a gap of upto 1.5 mm - 6 mm.	electrode holder with the direction of weiding is
56/. The property of cast fron that makes it difficult	$\begin{array}{c} \text{normally:} \\ \text{(a)} 20^{\circ} \\ \end{array} $
(a) Its hardness and brittleness	$ \begin{array}{cccc} (a) & 50 & (b) & 43 \\ (c) & 70^{\circ} & (d) & 00^{\circ} \\ \end{array} $
(b) High compressive strength	$(0) / 0 \qquad (0) 90^{\circ}$
(c) Low melting point	ISKU Technician-B weider 10.12.2017
(d) Low fluidity	Ans. (c) : In manual process, the angle of the electrode
ISRO Technician-R Welder 10 12 2017	notaer with the direction of welding is normally 70° .

 373. Arc length in an arc welding process should be nearly equal to: (a) Diameter of the electrode (d) (b) 1.5d 	Ans. (b) : The flame used for oxy-acetylene welding of stainless steel is neutral or slightly carburising flame is also known as reducing flame. The carburising flame has 0.9 : 1 ratio of oxygen and acetylene.
(c) $2d$ (d) $3d$	378. The filler rod is suitable for fusion welding of
(u) 5u ISRO Technician-B Welder 10.12.2017	copper is:
Ans. (a) : Arc length is an arc welding process should	(a) Silicon - bronze rod (b) Manganese - bronze rod
be nearly equal to diameter of the electrode (d). If the	(c) Pure copper rod
length of the arc produced at the tip of the electrode is	(d) Copper - silver alloy rod
less than the diameter of the electrode, then it is called	ISRO Technician-B Welder 10.12.2017
short arc length. It is used in position welding. In this	Ans. (d) : The filler rod suitable for fusion welding of
process electrode melts quickly.	copper is copper-silver alloy rod. The welding of copper
374. The electrode tip diameter selected for a spot	is done by metal arc method.
welding process is related to the thickness of	379. Which of the following modes of transfer is
the material being weided (t) by the relation:	liable to give high spatters?
(a) $D = t$ (b) $D = \sqrt{t}$	(a) Globular and short circuiting
(c) $D = t^2$ (d) $D = 2\sqrt{t}$	(b) Short circuiting and spray
ISRO Technician-B Welder 10.12.2017	(c) Spray and pulsed spray (d) Globular and pulsed spray
Ans. (b) : The electrode tip diameter selected for a spot	(d) Olobular and puised spray ISRO Technician-B Welder 10 12 2017
welding process is related to the thickness of the	Ans. (a) : Globular and shot circuiting modes of
material being weided (t) by the relation-	transfer are liable to giving highly spatters.
$D = \sqrt{l}$	380. For welding dissimilar metals, which of the
of 0.025 mm - 1.25 mm. The tip of electrode is made	following properties should not have wide
with copper. The distance between the spot welding are	variations:
2.5 d - 3 d.	(a) Density (b) Tensile strength
375. Metal active gas arc welding process uses:	(c) I hermal expansion (d) Ductility ISBO Technicican B Welder 10 12 2017
(a) Carbon dioxide (CO ₂) (b) Nitrogen $(N_2)^{T}$	Ans (a): There should be no wide variation in thermal
(c) Argon (Ar) (d) Helium (He)	expansion for welding of dissimilar metals. The change
ISRO Technician-B Welder 10.12.2017	in the length, area and volume of substance as a result
Ans. (a) : Metal active gas arc welding process uses	of change in temperature is called thermal expansion.
carbon dioxide (CO ₂)	381. Twin carbon arc welding refers to:
when CO_2 is used as a gas, it is known as metal active	(a) Arc welding process using two arc
376 The primery difficulty feeed in employing laser	established using a single electrode
beam welding process for welding conner	(b) Arc welding process in which arc is
is/are:	electrodes held with a special holder
(a) High reflectivity of copper	(c) Two joints simultaneously welded using a
(b) High thermal conductivity of copper	single electrode
(c) Both (a) and (b)	(d) None of the above
(d) High electrical conductivity of copper	MP ITI Training Officer 20.12.2022
NLC Technician 24-09.2022 ISDO Technician D Welder 10 12 2017	ISRO Technician-B Welder 10.12.2017
Ans (a) to The primary difficulty feed in employing	Ans. (b) : I win carbon arc welding refers to arc
laser beam welding process for welding copper is high	maintained using two carbon electrodes held with
reflectivity of copper and high thermal conductivity of	special holder.
copper.	382. Which of the following welding process
• Laser beam is a type of coherent light which is	employs a Langmuir torch?
identical and parallel. Laser beam welding is used for	(a) Atomic hydrogen welding
cutting and joint high temperature materials.	(b) Laser beam welding
377. The flame used for oxy-acetylene welding of	(c) Lungsten inert gas welding (d) Electron beem welding
stainless steel is neutral or:	(u) Election Jean welding ISRO Technician_R Welder 10 12 2017
(a) Slightly oxidising (b) Slightly carburising (c) Heavily carburising (d) Heavily oxidising	Ans. (a): Atomic hydrogen welding process employees
ISRO Technician-R Welder 10 12 2017	a Langmuir torch.