

2024-25

English Medium

MECHANIC DIESEL

Chapterwise
Solved Papers

**Youth
Competition
Times**

■ **RRB ALP (STAGE II)** ■ **RRB TECHNICIAN**

■ NTPC ■ ISRO ■ DRDO ■ IOF ■ COAL INDIA ■ SAIL ■ BHEL ■ VIZAAG STEEL
■ ONGC ■ BARC ■ DFCCIL ■ DMRC ■ BMRC ■ LMRC ■ NMRC ■ JMRC ■ MES
■ TRADESMAN ■ CRPF CONSTABLE ■ TRADESMAN/OVERSEER
■ HAL ■ MAZAGON DOCK SHIP BUILDERS LTD. ■ OTHER TECHNICIAN EXAM

MECHANIC DIESEL

**Based on NCVT & NSQF
(Level-V) NIMI PATTERN**



106
Solved
Papers

4849⁺

OBJECTIVE
QUESTION

**CHAPTERWISE
SOLVED PAPERS**

ANSWER WITH DETAILED ANALYTICAL EXPLANATION
AND BASED ON **REVISED ANSWER-KEY**

MECHANIC DIESEL

Solved Papers (With Explanation)


Useful for : RRB Assistant Loco Pilot, Indian Ordnance Factory (IOF), Maintainer (DMRC, LMRC, NMRC, BMRC, JMRC), ISRO Technician, CRPF Constable Tradesman, CRPF Overseer, HAL Fitter, MES Fitter, VIZAAG Steel Fitter, SAIL, GAIL, BHEL, NTPC, ONGC, BARC, DFCCIL, MAZAGON DOCK Ltd. and Other Technician Exams.

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ALP/Technician Online Exam Syllabus

Mechanic Diesel

Short listing of Candidates for the Second Stage CBT exam shall be based on the normalized marks obtained by them in the First Stage CBT Exam.

Total number of candidates to be shortlisted for second stage shall be 15 times the community wise total vacancy of ALP and Technician Posts notified against the RRB as per their merit in First Stage CBT. However, Railways reserve the right to increase/decrease this limit in total or for any specific trade (s) as required to ensure availability of adequate candidates for all the notified posts.

Total Duration : 2 hours and 30 minutes (for Part A and Part B together)

The Second Stage CBT shall have two parts viz Part A and Part B as detailed below.

PART A

Duration: 90 Min.

No. of Questions: 100

Minimum percentage of marks for eligibility in various categories: UR-40%, OBC-30%, SC-30%, ST-25%. These percentages of marks for eligibility may be relaxed by 2% for PWD candidates in case of shortage of PWD candidates against vacancies reserved for them.

The marks scored in Part A alone shall be used for short listing of candidates for further stages of recruitment process subject to the condition that the candidate is securing qualifying mark in Part B.

(A) Mathematics

Number system, BODMAS, Decimals, Fractions, LCM, HCF, Ratio and Proportion, Percentages, Mensuration, Time and Work; Time and Distance, Simple and Compound Interest, Profit and Loss, Algebra, Geometry and Trigonometry, Elementary Statistics, Square Root, Age Calculations, Calendar & Clock, Pipes & Cistern etc.

(B) General Intelligence and Reasoning

Analogies, Alphabetical and Number Series, Coding and Decoding, Mathematical operations, Relationships, Syllogism, Jumbling, Venn Diagram, Data Interpretation and Sufficiency, Conclusions and Decision Making, Similarities and Differences, Analytical reasoning, Classification, Directions, Statement– Arguments and Assumptions etc.

(C) Basic Science and Engineering

The board topics that are covered under this shall be Engineering Drawing (Projections, Views, Drawing Instruments, Lines, Geometric figures, Symbolic Representation), Units, Measurements, Mass Weight and Density, Work Power and Energy, Speed and Velocity, Heat and Temperature, Basic Electricity, Levers and Simple Machines, Occupational Safety and Health, Environment Education, IT Literacy etc.

General awareness on current affairs in Science & Technology, Sports, Culture, Personalities, Economics, Politics and other subjects of importance.

PART B

Duration: 60 Min.

No. of Questions: 75

Syllabus For Semester System For The Trade of MECHANIC DIESEL Under Craftmen Training Scheme (CTS) By Government of India Ministry of Labour & Employment (DGE&T)

First Semester–

■ **Admission & introduction to the trade:** Introduction to the Course duration, course content, study of the syllabus. General rule pertaining to the Institute, facilities available– Hostel, Recreation, Medical and Library working hours and time table ■ **Occupational Safety & Health–** Importance of Safety and general Precautions to be observed in the shop. Basic first aid, safety signs - for Danger, Warning, caution & personal safety message. Safe handling of Fuel Spillage, Fire extinguishers used for different types of fire. Safe disposal of toxic dust, safe handling and Periodic testing of lifting equipment, Authorization of Moving & road testing vehicles.

Energy conservation-Definition, Energy Conservation Opportunities (ECOs)-Minor ECos and Medium ECos, Major ECos), Safety disposal of Used engine oil, Electrical safety tips. ■ **Hand & Power Tools:-** Marking scheme, Marking material-chalk, Prussian blue. Cleaning tools- Scraper, wire brush, Emery paper, Description, care and use of Surface plates, steel rule, measuring tape, try square. Calipers-inside and outside. Dividers, surface

gauges, cribber, punches-prick punch, center punch, pin punch, hollow punch, number and letter punch. Chisel-flat, cross-cut. Hammer- ball pein, lump, mallet. Screw drivers-blade screwdriver, Phillips screw driver, Ratchet screwdriver. Allen key, bench vice & C-clamps, Spanners- ring spanner, open end spanner & the combination spanner, universal adjustable open end spanner. Sockets & accessories, Pliers - Combination pliers, multi grip, long nose, flat-nose, Nippers or pincer pliers, Side cutters, Tin snips, Circlip pliers, external circlips pliers. Air impact wrench, air ratchet, wrenches- Torque wrenches, pipe wrenches, car jet washers Pipe flaring & cutting tool, pullers-Gear and bearing

■ **Systems of measurement, Description, care & use of - Micrometers-** Outside and depth micrometer, Micrometer adjustments, Vernier calipers, Telescope gauges, Dial bore gauges, Dial indicators, straightedge, feeler gauge, thread pitch gauge, vacuum gauge, tire pressure gauge. ■ **Fasteners-** Study of different types of screws, nuts, studs & bolts, locking devices, Such as lock nuts, cotter, split pins, keys, circlips, lock rings, lock washers and locating where they are used. Washers & chemical compounds can be used to help secure these fasteners. Function of Gaskets, Selection of materials for gaskets and packing, oil seals. ■ **Cutting tools :-** Study of different type of cutting tools like Hacksaw, File- Definition, parts of a file, specification, Grade, shape, different type of cut and uses., OFF-hand grinding with sander, bench and pedestal grinders, safety precautions while grinding. ■ **Limits, Fits & Tolerances:-** Definition of limits, fits & tolerances with examples used in auto components

■ **Drilling machine** - Description and study of Bench type Drilling machine, Portable electrical Drilling machine, drill holding devices, Work Holding devices, Drill bits. ■ **Taps and Dies :** Hand Taps and wrenches, Calculation of Tap drill sizes for metric and inch taps. Different type of Die and Die stock. Screw extractors. Hand Reamers – Different Type of hand reamers, Drill size for reaming, Lapping, Lapping abrasives, type of Laps. ■ **Sheet metal** - State the various common metal Sheets used in Sheet Metal shop Sheet metal operations - Shearing, bending, Drawing, Squeezing Sheet metal joints - Hem & Seam Joints Fastening Methods - Riveting, soldering, Brazing, fluxes used on common joints. Sheet and wire-gauges. The blow lamp- its uses and pipe fittings. ■ **Basic electricity**, Electricity principles, Ground connections, Ohm's law, Voltage, Current, Resistance, Power, Energy. Voltmeter, ammeter, Ohmmeter Multimeter, Conductors & insulators, Wires, Shielding, Length vs. resistance, Resistor ratings Fuses & circuit breakers, Ballast resistor, Stripping wire insulation, cable colour codes and sizes, Resistors in Series circuits , Parallel circuits and Series-parallel circuits, Electrostatic effects, Capacitors and its applications, Capacitors in series and parallel. Description of Chemical effects, Batteries & cells, Lead acid batteries & Stay Maintenance Free (SMF) batteries, Magnetic effects, Heating effects, Thermo-electric energy, Thermistors, Thermo couples, Electrochemical energy, Photo-voltaic energy, Piezo-electric energy, Electromagnetic induction, Relays, Solenoids, Primary & Secondary windings, Transformers, stator and rotor coils.

■ **Basic electronics :** Description of Semi conductors, Solid state devices- Diodes, Transistors, Thyristors, Uni Junction Transistors (UJT), Metal Oxide Field Effect Transistors (MOSFETs), Logic gates-OR, AND & NOT and Logic gates using switches. ■ **Introduction to welding and Heat Treatment Welding processes** – Principles of Arc welding, brief description, classification and applications. Manual Metal Arc welding -principles, power sources, electrodes, welding parameters, edge preparation & fit up and welding techniques; Oxy – Acetylene welding - principles, equipment, welding parameters, edge preparation & fit up and welding techniques; Heat Treatment Process– Introduction, Definition of heat treatment, Definition of Annealing, Normalizing, Hardening and tempering. Case hardening, Nitriding, Induction hardening and Flame Hardening process used in auto components with examples. ■ **Non-destructive Testing Methods-** Importance of Non-Destructive Testing In Automotive Industry, Definition of NDT, Liquid penetrant and Magnetic particle testing method – Portable Yoke method

Introduction to Hydraulics & Pneumatics: - Definition of Pascal law, pressure, Force, viscosity. Description, symbols and application in automobile of Gear pump-Internal & External, ■ **single acting**, double acting & Double ended cylinder; Directional control valves-2/2, 3/2, 4/2, 4/3 way valve, Pressure relief valve, Non return valve, Flow control valve used in automobile. Pneumatic Symbols, Description and function of air Reciprocating Compressor. Function of Air service unit (FRL-Filter, Regulator & Lubricator). ■ **Auto Industry** - History, leading manufacturers, development in automobile industry, trends, new product. Brief about Ministry of Road transport & Highways, The Automotive Research Association of India (ARAI), National Automotive Testing and R&D Infrastructure Project (NATRIP), & Automobile Association. Definition: - Classification of vehicles on the basis of load as per central motor vehicle rule, wheels, final drive, and fuel used, axles, position of engine and steering transmission, body and load. Brief description and uses of Vehicle hoists – Two post and four post hoist, Engine hoists, Jacks, Stands.

SECOND SEMESTER–

■ **Introduction to Engine:** Description of internal & external combustion engines, Classification of IC engines, Principle & working of 2&4-stroke diesel engine (Compression ignition Engine (C.I)), Principle of Spark Ignition Engine(SI), differentiate between 2-stroke and 4 stroke, C.I engine and S.I Engine, Direct injection and Indirect injection, Technical terms used in engine, Engine specification. Study of various gauges/instrument on a dash board of a vehicle- Speedometer, Tachometer, Odometer and Fuel gauge, and Indicators such as gearshift position, Seat belt warning light, Parking-brake-engagement warning light and an Engine-malfunction light. Different type of starting and stopping method of Diesel Engine Procedure for dismantling of diesel engine from a vehicle..

■ **Introduction to Engine:** Description of internal & external combustion engines, Classification of IC engines, Principle & working of 2&4-stroke diesel engine (Compression ignition Engine (C.I)), Principle of Spark Ignition Engine(SI), differentiate between 2-stroke and 4 stroke, C.I engine and S.I Engine, Direct injection and Indirect injection, Technical terms used in engine, Engine specification. Study of various gauges/instrument on a dash board of a vehicle- Speedometer, Tachometer, Odometer and Fuel gauge, and Indicators such as gearshift position, Seat belt warning light, Parking-brake-engagement warning light and an Engine-malfunction light. Different type of starting and stopping method of Diesel Engine Procedure for dismantling of diesel engine from a vehicle.. Description & functions of different types of **pistons**, piston rings and piston pins and materials. Used recommended clearances for the rings and its necessity precautions while fitting rings, common troubles and remedy. Compression ratio. Description & function of connecting rod, importance of big- end split obliquely, Materials used for connecting rods big end & main bearings. Shells piston pins and locking methods of piston pins. Description & function of connecting rod, importance of big- end split obliquely, Materials used for connecting rods big end & main bearings. Shells piston pins and locking methods of piston pins. Description and function of the fly wheel and vibration damper. Crank case & oil pump, gears timing mark, Chain sprockets, chain tensioner etc. Function of clutch & coupling units attached to flywheel. Description of Cylinder block, Cylinder block construction, and Different type of Cylinder sleeves (liner). ■ **Engine assembly procedure** with aid of special tools and gauges used for engine assembling. Introduction to Gas Turbine, Comparison of single and two stage turbine engine, Different between gas turbine and Diesel Engine. ■ **Engine assembly procedure** with aid of special tools and gauges used for engine assembling. Introduction to Gas Turbine, Comparison of single and two stage turbine engine, Different between gas turbine and Diesel Engine. ■ **Intake & exhaust systems** – Description of Diesel induction & Exhaust systems. Description & function of air compressor, exhauster, Super charger, Intercoolers, turbo charger, variable turbo charger mechanism. Intake system components- Description and function of Air cleaners, Different type air cleaner, Description of Intake manifolds and material, ■ **Exhaust system components-** Description and function of Exhaust manifold, Exhaust pipe, Extractors, Mufflers- Reactive, absorptive, Combination., Catalytic converters, Flexible connections, Ceramic coatings, Back-pressure, Electronic mufflers. ■ **Diesel Fuel Systems-** Description and function of Diesel fuel injection, fuel characteristics, concept of Quiet diesel technology & Clean diesel technology. Diesel fuel system components – Description and function of Diesel tanks & lines, Diesel fuel filters, water separator, Lift pump, Plunger pump, Priming pump, Inline injection pump, Distributor-type injection pump, Diesel injectors, Glow plugs, Cummins & Detroit Diesel injection. Electronic Diesel control- Electronic Diesel control systems, Common Rail Diesel Injection (CRDI) system, Hydraulically actuated electronically controlled unit injector (HEUI) diesel injection system. Sensors, actuators and ECU (Electronic Control Unit) used in Diesel Engines. ■ **Marine & Stationary Engine:-** Types, double acting engines, opposed piston engines, starting systems, cooling systems, lubricating systems, supplying fuel oil, hydraulic coupling, reduction gear drive, electromagnetic coupling, electrical drive, generators and motors, supercharging. ■ **Emission Control:-** Vehicle emissions Standards- Euro and Bharat II, III, IV, V Sources of emission, Combustion, Combustion chamber design. Types of emissions: Characteristics and Effect of Hydrocarbons, Hydrocarbons in exhaust gases, Oxides of nitrogen, Particulates, Carbon monoxide, Carbon dioxide, Sulfur content in fuels Description of Evaporation emission control, Catalytic conversion, Closed loop, Crankcase emission control, Exhaust gas recirculation (EGR) valve, , Controlling air-fuel ratios, Charcoal storage devices, Diesel particulate filter (DPF). Selective Catalytic Reduction (SCR), EGR VS SCR Description .of charging circuit operation of alternators, regulator unit, ignition warning lamp- troubles and remedy in charging system. Description of starter motor circuit, Constructional details of starter motor solenoid switches, common troubles and remedy in starter circuit. ■ **Troubleshooting :** Causes and remedy for Engine Not starting – Mechanical & Electrical causes, High fuel consumption, Engine overheating, Low Power Generation, Excessive oil consumption, Low/High Engine Oil Pressure, Engine Noise.

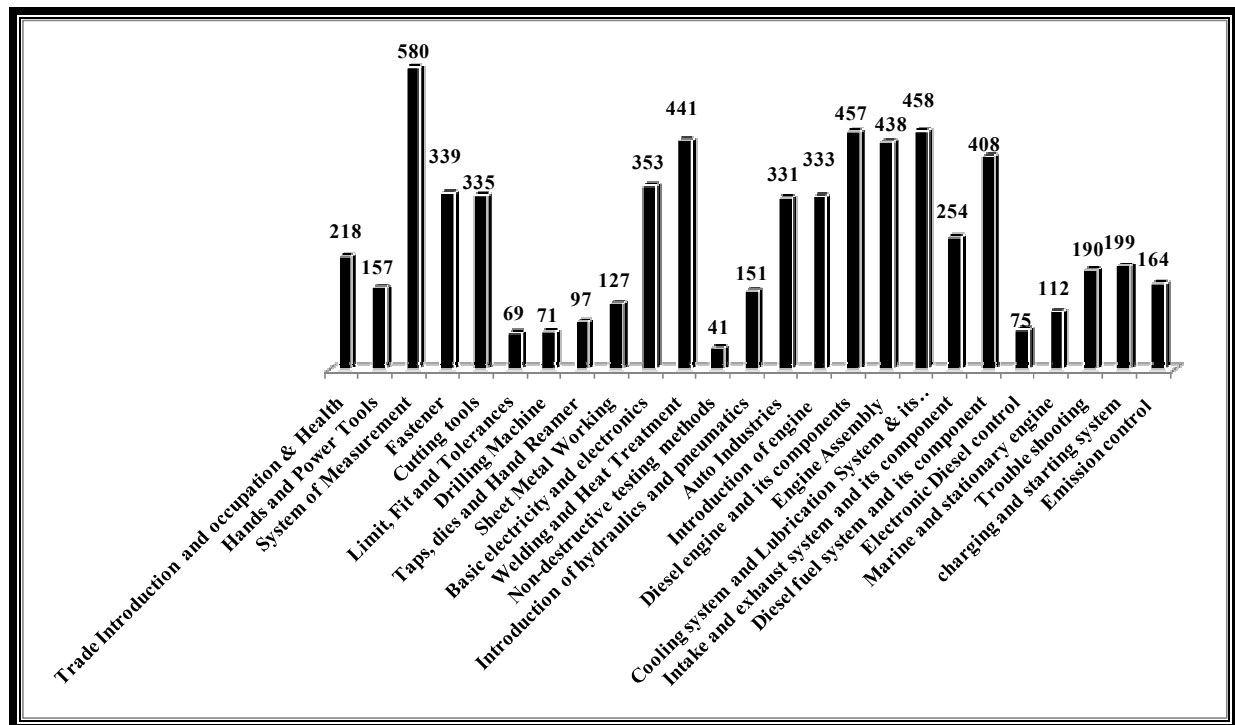
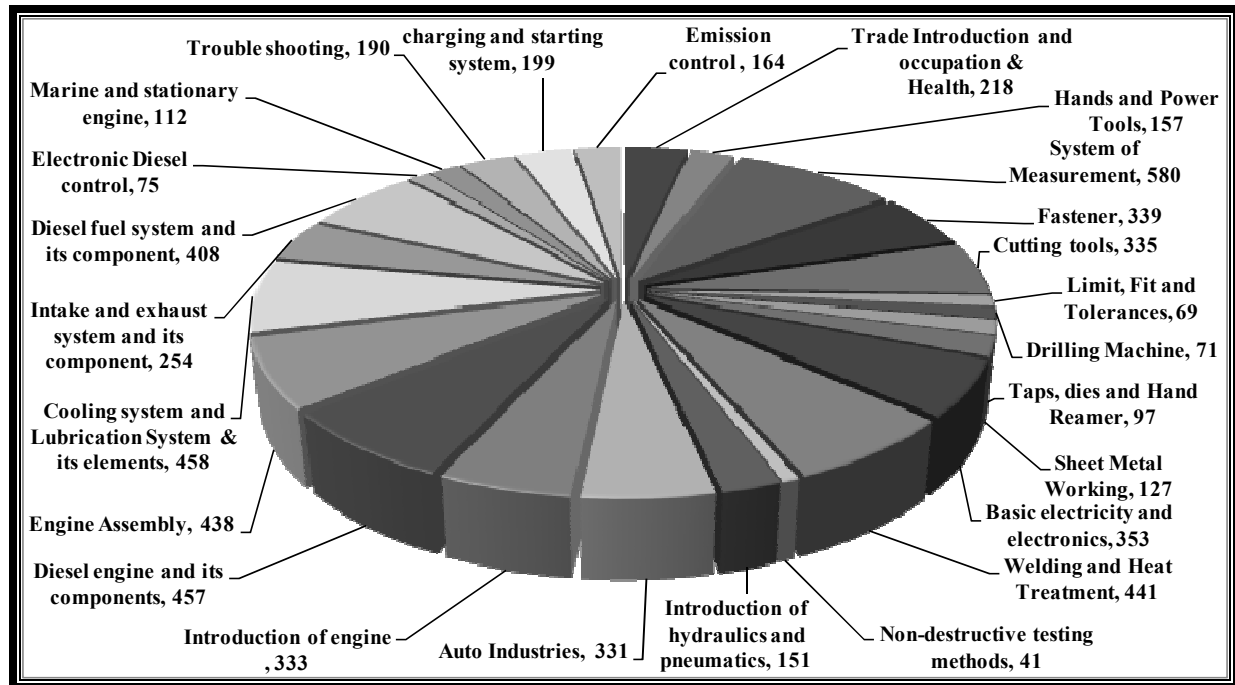
Mechanic Diesel Trade & Other Technician Exam Paper Analysis Chart

S.L.	Exam Name	Exam Date/Time	No. of Questions
RRB ALP and Technician			
1.	RRB ALP Mechanic Diesel	08/02/2019 (Shift-I)	75
2.	RRB ALP Mechanic Diesel	23/01/2019 (Shift-I)	75
3.	RRB ALP Mechanic Diesel	23/01/2019 (Shift-II)	75
4.	RRB ALP Mechanic Diesel	23/01/2019 (Shift-III)	75
5.	RRB ALP Mechanic Diesel	21/01/2019 (Shift-I)	75
6.	RRB ALP Mechanic Diesel	21/01/2019 (Shift-II)	75
7.	RRB ALP Ajmer	10.10.2004	20
8.	RRB ALP Ajmer	23.05.2004	10
9.	RRB ALP Ajmer	05.06.2005	18
10.	RRB ALP Allahabad	03.08.2008	15
11.	RRB ALP Allahabad	09.12.2007	16
12.	RRB ALP Bangalore	25.01.2004	14
13.	RRB ALP Bangalore	08.07.2007	15
14.	RRB ALP Bangalore	15.07.2012	20
15.	RRB ALP Bhopal	06.06.2010	12
16.	RRB ALP Bhubneswar	14.06.2009	16
17.	RRB ALP Bhubneswar	15.07.2012	10
18.	RRB ALP Bilaspur	15.07.2012	19
19.	RRB ALP Chandigarh	14.09.2008	17
20.	RRB ALP Chandigarh	15.07.2012	18
21.	RRB ALP Chandigarh	25.05.2003	14
22.	RRB ALP Chennai	06.06.2010	13
23.	RRB ALP Chennai	27.10.2002	13
24.	RRB ALP Gorakhpur	08.10.2006	11
25.	RRB ALP Gorakhpur	11.10.2009	20
26.	RRB ALP Gorakhpur	12.10.2003	20
27.	RRB ALP Gorakhpur	14.04.2002	15
28.	RRB ALP Gorakhpur	21.10.2001	12
29.	RRB ALP Guwahati	22.01.2006	16
30.	RRB ALP Jammu-Kashmir	06.06.2010	18
31.	RRB ALP Kolkata	02.11.2008	15
32.	RRB ALP Kolkata	06.02.2005	22
33.	RRB ALP Kolkata	16.07.2006	14
34.	RRB ALP Kolkata	2014	15
35.	RRB ALP Kolkata	29.09.2002	15
36.	RRB ALP Malda	16.07.2006	16
37.	RRB ALP Mumbai	03.06.2001	12
38.	RRB ALP Mumbai	05.06.2005	24
39.	RRB ALP Mumbai	14.06.2009	15
40.	RRB ALP Mumbai	15.07.2012	15
41.	RRB ALP Mumbai	16.07.2006	18
42.	RRB ALP Mumbai	05.01.2003	12
43.	RRB ALP Muzaffarpur	15.02.2009	23
44.	RRB ALP Patna	04.02.2007	18
45.	RRB ALP Patna	11.11.2001	22
46.	RRB ALP Patna	2014	18
47.	RRB ALP Ranchi	04.09.2005	16
48.	RRB ALP Ranchi	08.07.2007	15
49.	RRB ALP Ranchi	19.01.2003	17
50.	RRB ALP Ranchi	2014	10
51.	RRB ALP Ranchi	21.09.2003	15
52.	RRB ALP Secunderabad	06.06.2010	16
53.	RRB ALP Secunderabad	11.11.2001	19

54.	RRB ALP Secunderabad	29.06.2008	18
55.	RRB ALP Siliguri	2014	12
56.	RRB ALP Trivandrum	20.06.2004	19
57.	RRB ALP Ahamadabad	2014	16
58.	RRB ALP Ahamadabad	17.10.2004	14
ISRO			
59.	ISRO VSSC Technician B Mechanic Diesel	2021	80
60.	ISRO Technician B Mechanic Diesel	27/11/2016	80
61.	ISRO Technician-B Carpenter	27.11.2016	60
62.	ISRO Technician-B Fitter	20.11.2016	80
63.	ISRO Technician-B Grinder	27.11.2016	60
64.	ISRO Technician-B Motor Mechanic	27.11.2016	80
65.	ISRO Technician-B Plumber	27.11.2016	60
66.	ISRO Technician-B Turner	22.11.2016	60
DMRC/LMRC/BMRC			
67.	DMRC (Maintainer) Fitter (Evening)	15.02.2017	75
68.	DMRC (Maintainer) Fitter (Morning)	15.02.2017	75
69.	DMRC (Maintainer) Fitter	20.07.2014	75
70.	DMRC (Maintainer) Fitter	24.12.2006	75
71.	BMRC Maintainer Fitter	2016	75
72.	LMRC (Maintainer) Fitter	16.03.2016	75
73.	Noida Metro Maintainer Fitter	2017	75
DRDO			
74.	DRDO Fitter	2016	100
75.	DRDO Turner	2011	100
76.	DRDO Machinist	2016	100
77.	DRDO Motor Mechanic	2016	100
78.	DRDO Mechanic Diesel	2016	100
Indian Ordnance Factory			
79.	Indian Ordnance Factory Fitter	10.09.2017	15
80.	Indian Ordnance Factory	2016	10
81.	Indian Ordnance Factory (Itarsi)	08.05.2016	12
82.	Indian Ordnance Factory	2015	13
83.	Indian Ordnance Factory	2014	15
84.	Indian Ordnance Factory	2013	16
85.	Indian Ordnance Factory	2012	15
Other Exam			
86.	HSSC Instructor Mechanic Diesel	25.12.2021	50
87.	NCVT NIMI Mechanic Diesel	2021	100
88.	Cochin Shipyard TA Mechanic Diesel	12.01.2020	100
89.	NSQF Mechanic Diesel	2020	100
90.	RSMSSB Jr. Instructor	23.12.2019	100
91.	NCVT Mechanic Diesel	01.11.2019	100
92.	NCVT NIMI Mechanic Diesel	2019	100
93.	HPSSC Mechanic Diesel (Instructor)	2018	120
94.	KPSC Jr. Instructor Mechanic Diesel	26.09.2018	80
95.	KPSC Instructor Mechanic Diesel	17.01.2017	80
96.	MP ITI TO Mechanic Diesel	08.11.2016	100
97.	SAIL Bokaro Steel Plant	2016	100
98.	SAIL Durgapur Steel Plant	05/09/2014	100
99.	VIZAAG Steel Fitter	2015	75
100.	NTPC Fitter	2014	80
101.	BHEL Hyderabad Fitter	2014	80
102.	COAL India Fitter	2013	100
103.	CRPF Constable Tradesman	2016	45
104.	HAL Fitter	2015	75
105.	Mazagon Dock Shipbuilders Ltd.	2013	100
106.	MES Automobile Tradesman	2015	100
Total			4849

Trend Analysis of Mechanic Diesel

Through Pie Chart and Bar Graph



01. TRADE INTRODUCTION AND OCCUPATION SAFETY & HEALTH

1. Which of the following statement regarding additives is incorrect?

- (a) Oxidizing inhibitors are used to prevent the oxidation of lubricants
- (b) Detergent depressor is used to remove & to loose the deposits caused by dirt
- (c) Antioxidants are used to prevent forming of oil
- (d) Pour point depressors are used to lower the temperature at which oil becomes too thick too flow

ISRO Technician-B Carpenter 27.11.2016

Ans : (c) Adding, Antioxidants are used to prevent forming of oil it is incorrect.

- Oxidizing inhibitors are used to prevent the oxidation of lubricants.
- Detergent depressor is used to removes to loose the deposit caused by dirt.

For additive, pour point depressors are used to lower the temperature at which oil becomes too thick to flow.

2. The preventive schedule of an engine which is checked after every 1500 hours of used is called:

- (a) Series A
- (b) Series C
- (c) Series D
- (d) Series B

ISRO Technician-B Fitter 20.11.2016

Ans : (b) The preventive schedule of an engine which is checked after every 1500 hours of used is called series C.

3. Metals, comes under which category of fire?

- (a) Category B
- (b) Category A
- (c) Category D
- (d) Category C

RRB ALP Mechanic Diesel 21/01/2019 Shift-III

Ans. (c) : Metals, comes under category D of fire.		
Fir class	Description	Fire extinguisher
Class A	• Carbonaceous fire (wood, paper, coal, jute etc.)	• Water, sand, soda acid F.E.
Class B	• Liquid fire (petrol, diesel kerosene, mobile oil etc.)	• CO ₂ and Halon type F.E.
Class C	• Gas fire (L.P.G. GNG, propane butane etc)	• CO ₂ and Holon type F.E.
Class D	• Electric fire or metallic fire.	• C.T.C. F.E. and CO ₂ F.E.

4. Oily surface of workshop is cleaned by :

- (a) Wood shavings and sand
- (b) Washing by water
- (c) Sprinkling carbon dioxide
- (d) Cotton vest

RRB ALP Mechanic Diesel 23/01/2019 Shift-II

ISRO Technician-B Grinder 27.11.2016

Ans. (a) :

- Oily surface of workshop is cleaned by wood shavings and sand.
- While working in the workshop, the following rules should often be adopted for safety
 - (i) If grease or oil is lying on the floor of the workshop put sawdust or sand on it so that no on slips.
 - (ii) Keep inflammable substances like petrol in a separate place and do not smoke in the workshop.

5. In a malfunction indicator lamp, green light indicates:

- (a) a serious problem or safety issue
- (b) the system needs service soon
- (c) the system is operating normally
- (d) the system needs to be repaired

RRB ALP Mechanic Diesel 23/01/2019 Shift-I

Ans. (c) : In a malfunction indicator lamp, symbol lights can appear in different colors.

Red-Indicates a potentially serious problem or safety issue.

Yellow/Orange-Something needs to be serviced or repaired soon.

Green/blue-Indicates that your system is operating normally.

6. Which colours are used on the signs for firefighting equipment?

- (a) Black pictogram on a yellow background
- (b) White pictogram on a green background
- (c) White pictogram on a red background
- (d) White pictogram on a black background

RRB ALP Mechanic Diesel 23/01/2019 Shift-I

ISRO Technician-B Motor Mechanic 27.11.2016

Ans. (c) : Any fire safety signs that are associated with firefighting equipment is red.

The writing and pictograms on these signs are white.

7. Flammable liquids comes under which class of fire?

- (a) Class A
- (b) Class B
- (c) Class C
- (d) Class D

RRB ALP Mechanic Diesel 21/01/2019 Shift-I

Ans. (b) : Flammable liquid comes under the class of B of fire.

Class-A – Carboneous fire

Class-B – Flammable liquids

Class-C – Gaseous fire

Class-D – Electrical fire/Metallic fire

8. Which fire extinguisher is suitable for a live electrical fire?

- (a) Halon (FE)
- (b) Water filled (FE)
- (c) Foam (FE)
- (d) Liquified chemical

RRB ALP Mechanic Diesel 21/01/2019 Shift-I

Ans. (a) : Live electrical fire is the category of class 'D' type fire.

- Halon (FE) type extinguisher is a C.T.C. fire extinguisher. It is suitable mostly for a live electrical fire or metallic fire.
- This type extinguisher is also used to extinguishes for all type fires.

Types of fire	Used material/ Device to extinguish	Class of fire
Carboneous fire	Water, sand, soil etc.	Class-A
Oily or liquid fire	Foam (FE), CO ₂ extinguisher etc.	Class-B
Gaseous fire	CO ₂ , Halon	Class-C
Electrical fire	Halon or CTC extinguisher	Class-D

9. If a worker suffers an electric shock–

- Be given alcoholic drinks
- Be given cold drinks
- Asked to walk
- Be kept warm and covered

RRB ALP Allahabad 09.12.2007

ISRO Technician-B Plumber 27.11.2016

Ans : (d) If a worker suffers an electric shock then be kept warm and covered.

10. Water is used to extinguish :

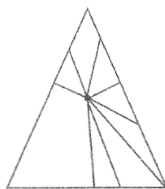
- Class A fires
- Class B fires
- Class C fires
- All of the options

Cochin Shipyard T.A. Mechanic Diesel 12.1.2020

Ans. (a) : Class 'A' type of fire– Fire caught on wood, paper, clothes and hard metals is classified as 'A' type of fire.

To extinguish this type of fire, we first direct the water-jet on the base of the fire and move it from side to side till the fire is extinguished.

11. Which type of indicator is shown in figure?



- Informative symbol
- Mandatory symbol
- Prohibitory symbol
- Warning symbol

RSMSSB Jr. Inst. Mechanic Diesel 23.12.2019

Ans. (d) : Warning symbol is shown in figure.

Warning signs–

- These signs are used to give warnings related to any danger, such as electric shocks, fear of fire etc.
- They are triangular in shape.
- Their surface area is yellow and the safety sign and border is coloured black.

12. Which of the following pairs is correct for Energy conservation opportunities?

- Class A-Major Energy Conservation Opportunities
- Class B-Medium Energy Conservation Opportunities

(c) Class C-Minor Energy Conservation Opportunities

(d) All of these

RSMSSB Jr. Inst. Mechanic Diesel 23.12.2019

ISRO Technician-B Turner 22.11.2016

Ans. (b) : Class B medium energy conservation opportunities.

Class 'B' type of fire– Fire in a flammable fluid or combustible solid. CO₂, foam and powder is used to extinguish type of fire.

13. Oily floor of the diesel workshop should be cleaned by using _____.

- Sand
- Water
- Carbon-di-oxide
- None of the above

MP ITI T.O. Mechanic Diesel 08.11.2016

NCVT 2016

Ans. (a) : Oily floor of the diesel workshop should be cleaned by using sand.

14. Which is the motive of occupational health and safety?

- Decrease employed morale
- Decreasing the quality
- Reducing absenteeism
- Minimising productivity

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (c) : Reducing absenteeism is the motive of occupational health and safety.

- The objective of occupational safety and health is to ensure the welfare, health and safety of workers employed in occupational work. Safe guarding workers from physical and mental harm at the workplace is also a function of occupational safety.

15. What type of safety covers the wearing of safety shoes in workshops?

- General safety
- Personal safety
- Machine safety
- Occupational safety

NCVT Mechanic Diesel 01.11.2019 Shift-II

DMRC (Maintainer) Fitter (Evening) 15.02.2017

Ans. (b) : Personal safety covers the wearing of safety shoes in workshops.

Safety– Safety means to protect oneself and other colleagues from any accidents. Different safety practices and standards are used in workshops to prevent accidents.

Types of safety–

- Self- safety/personal safety
- General safety
- Safety of machines.

16. Which is the occupational mechanical hazard ?

- Sickness
- Current leakage
- Unguarded machinery
- Wrong layout of machinery

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (c) : Mechanical hazard–

- Unguarded machinery
- No fencing
- No safety device
- No control device etc.

17. Which fire extinguisher used for flammable liquid fires?
 (a) Halon extinguisher
 (b) dry powder extinguisher
 (c) CTC extinguisher
 (d) Water extinguisher

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (b) : Dry powder extinguisher used for flammable liquid fires and foam extinguisher are most suitable.

18. Which type of personal protection recommended to handle loads with rough surfaces and pointed projections?

- (a) Paper gloves (b) Rubber gloves
 (c) Leather gloves (d) Polythene gloves

NCVT Mechanic Diesel 01.11.2019 Shift-II

DMRC (Maintainer) Fitter (Morning) 15.02.2017

Ans. (c) : Leather gloves recommended to handle loads with rough surfaces and pointed projections.

19. More harmful in place of harmful?

- (a) Oxygen (b) Water vapour
 (c) Carbon dioxide (d) Carbon mono oxide

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (d) : Carbon mono oxide is more harmful in place of harmful.

20. Which device is used to remove toxic waste?

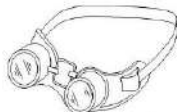
- (a) Water wash (b) incinerators
 (c) Compressed air (d) Vacuum cleaner

NSQF Mechanic Diesel 2020

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans.(b):Incinerators device is used to remove toxic waste.

21. What is the name of safety device?



- (a) Goggle (b) Hand gloves
 (c) Hand screen (d) Helmet screen

NCVT Mechanic Diesel 01.11.2019 Shift-II

DMRC (Maintainer) Fitter 20.07.2014

Ans. (a) : In given figure, goggle is the name of safety device.

22. Which distance is known as wheel base of the vehicle?

- (a) Centre to centre distance between front wheels
 (b) Centre to centre distance between rear wheels
 (c) Centre to centre distance between front and rear wheel
 (d) End to end distance between front and rear wheels

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (c) : Wheel base of the vehicle is centre to centre distance between front and rear wheel.

23. What is first aid?

- (a) It is the emergency medical treatment
 (b) It is an immediate life saving treatment
 (c) It is the intensive medical treatment
 (d) It is the rule to assessing the treatment

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (b) : First aid is an immediate life saving treatment.

24. Which class of fire involves liquified gases?

- (a) Class A (b) Class B
 (c) Class C (d) Class D

NCVT Mechanic Diesel 01.11.2019 Shift-II

DMRC (Maintainer) Fitter 24.12.2006

Ans. (c) : Class 'C' type of fire– Fire in a gas or a burning gas is classified as 'C' type of fire. This type of fire should be extinguished carefully because there is always a danger of blast or sudden spreading of fire. A dry powder fire extinguisher is used to extinguish this type of fire.

25. Which fire extinguisher suitable for class "C" fire?

- (a) Foam filled extinguisher
 (b) Water filled extinguisher
 (c) Dry powder fire extinguisher
 (d) Carbon-di-oxide fire extinguisher

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (c) : Dry powder fire extinguisher suitable for class 'C' fire.

26. Which factor isolate the fire from oxygen by blanketing ?

- (a) Cooling (b) starving
 (c) Misfiring (d) Smothering

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (d) : Smothering is the method of extinguishing the fire by removing the oxygen with blanketing fire with foam, sand etc.

27. Which class of fire involves wood?

- (a) Class 'A' fire (b) Class 'B' fire
 (c) Class 'C' fire (d) Class 'D' fire

NCVT Mechanic Diesel 01.11.2019 Shift-II

BMRC Maintainer Fitter 2016

Ans. (a) : Class 'A' type of fire– Fire caught on wood, paper, clothes and hard metals is classified as 'A' type of fire.

- To extinguish this type of fire, we first direct the water-jet on the base of fire and move it from side to side till the fire is extinguished.

28. How the waste oil is disposed?

- (a) Hand over back to the customer
 (b) Throw the removed oil in the drain
 (c) Keep in small containers in remote corners
 (d) Collect waste oil container and dispose to register vendors?

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (d) : Collect waste oil container and dispose the register vendors.

29. Which type of energy to minimize the waste without affecting production?

- (a) Utilization of energy
 (b) Modification of energy
 (c) Conservation of energy
 (d) Manipulation of energy

NCVT Mechanic Diesel 01.11.2019 Shift-II

LMRC (Maintainer) Fitter 16.03.2016

Ans. (c) : Conservation of energy to minimize the waste without affecting production.

30. What type of energy reduce consumption by replaces old bulb with new LED?

- (a) Utilization of energy
- (b) Modification of energy
- (c) Manipulation of energy
- (d) Conservation of energy

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (d) : Conservation of energy reduce consumption by replaces old bulb with new LED.

31. Which is the major energy conservation opportunities?

- (a) Stopping of leakage
- (b) Replacement machineries
- (c) Replacement of house hold appliance
- (d) Lap in house keeping

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (b) : Replacement machineries is the major energy conservation opportunities.

32. Dressing and bandages are used to?

- (a) Reduce the victim s pain.
- (b) Reduce internal bleeding.
- (c) Help control bleeding and prevent infection
- (d) Make it easier to take the victim to the hospital

NCVT NIMI Mechanic Diesel 2019

Noida Metro Maintainer Fitter 2017

Ans. (c) : Dressing and bandages are used to help control bleeding and prevent infection.

33. is best suited to extinguishing oil or flammable liquid fire?

- (a) Foam
- (b) Water
- (c) Dry chemicals
- (d) Soda acid

NCVT NIMI Mechanic Diesel 2019

Ans. (a) : Foam is the best suited to extinguishing oil or flammable liquid fire. They should not be used for extinguishing the fire has two containers, external and internal.

34. Which of these is correct about energy conversion in an engine?

- (a) Chemical energy to electrical energy
- (b) Electrical energy to kinetic energy
- (c) Chemical energy to kinetic energy
- (d) Electrical energy to heat energy

NCVT NIMI Mechanic Diesel 2019

Ans. (c) : The energy stored within the fuel is in the form of chemical energy. The engine of a car works by burning of fuel. It burns the fuel and produces mechanical energy (Kinetic energy + potential energy)
Energy conversion process–

Chemical energy $\xrightarrow{\text{Combustion}}$ heat energy
 $\xrightarrow{\text{machine}}$ mechanical energy $\xrightarrow{\text{Generator}}$ electrical energy.

35. Seiton under 5S, reduces all these, except..... ?

- (a) Productivity
- (b) Excess motion
- (c) Human frustration
- (d) Time wasted in searching

NCVT NIMI Mechanic Diesel 2019

DRDO Fitter 2016

Ans. (a) : Seiton under 5S, reduces all these except productivity.

5S is systematic approach to organize the work area, that uses the 5 Japanese words : Seirri, Seiton, Seiso, Seiketsu and Shitsuke.

36. What phase of 5S is concerned with colour coding of tools?

- (a) Sort
- (b) Set in Order
- (c) Shine
- (d) Standardize

NCVT NIMI Mechanic Diesel 2019

Ans. (d) : Standardize of 5S is concerned with colour coding of tools.

Seiketsu (Standardize)–

- (i) Maintain high standards of cleaning or house keeping.
- (ii) Maintain everything in order.

37. The tool used to show movement of product is?

- (a) Histogram
- (b) Control Chart
- (c) Process Flow Chart
- (d) Scatter Diagram

NCVT NIMI Mechanic Diesel 2019

DRDO Turner 2011

Ans. (c) : The tool used to show movement of product is process flow chart.

38. Isolate the fire from the supply of oxygen by blanketing is called :

- (a) Starving
- (b) Smothering
- (c) Cooling
- (d) Extinguishing

KPSC Jr. Inst. Mechanic Diesel 26.09.2018

Ans. (b) : Isolate the fire from the supply of oxygen by blanketing is called smothering.

39. What is the effect of air borne dust in workshop?

- (a) Diarrhoea
- (b) Dehydration
- (c) Throat infection
- (d) Rise in blood pressure

NSQF Mechanic Diesel 2020

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (c) : The effect of air borne dust is throat infection in workshop.

40. If an accident occur while working?

- (a) Stand with public at accident place
- (b) Run away from the accident spot
- (c) Inform your superior regarding an accident
- (d) Run away from accident site

HPSSC Mechanic Diesel (Instructor) 2018

DRDO Machinist 2016

Ans. (c) : If a accident occur while working then immediately inform your superior regarding on accident.

41. Fire on electric wire can be controlled by?

- (a) Put water on it
- (b) C.T.C. Fire Extinguisher
- (c) Sand
- (d) Foam fire extinguisher

HPSSC Mechanic Diesel (Instructor) 2018

Ans. (b) : Fire on electric wire can be controlled by C.T.C. fire extinguisher.

A cylinder made of brass is filled with a liquid substance of carbon tetrachloride and bromo chloride fluoro methane (BCF).

42. Which type of signs are shown in following Fig.



- (a) Mandatory signs (b) Warning signs
(c) Information signs (d) Prohibition signs

RRB ALP Bangalore 25.01.2004

DRDO Motor Mechanic 2016

Ans. (d) : Prohibition signs÷ prohibition signs indicate an action or behavior that is not permitted in the workplace. The signs are shown as a red circle with a red slash over a black icon of the action. The test is black on a white background.



43. Which type of signs are shown in following Fig.



- (a) Mandatory signs (b) Warning signs
(c) Information signs (d) Prohibition signs

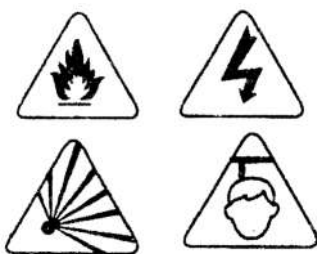
RRB ALP Bangalore 25.01.2004

Ans. (b) : Warning Signs:-

■ These signs are used to warn the road users at sufficient distance in advance about the impending road condition.

■ Warning signs are also known as cautionary signs.

■ Shape → Triangle



44. Which type of signs are shown in following Fig.?



- (a) Mandatory signs (b) Warning signs
(c) Information signs (d) Prohibition signs

RRB ALP Bangalore 08.07.2007

DRDO Mechanic Diesel 2016

Ans. (a) : Mandatory Signs-

■ The Regulatory or mandatory signs are used to inform the road user of certain laws and regulations to provide safety and Free flow to traffic

■ Shape -circular



45. Which type of signs are shown in following Fig.?



Fig 1.4

- (a) Mandatory signs (b) Warning signs
(c) Information signs (d) Prohibition signs

RRB ALP Bangalore 15.07.2012

Ans. (c) : Information signs-

■ Informatory signs are provided to guide the road user about the routes, destination, and to provide information that makes travel easier safe- and pleasant

■ Shape- Rectangle

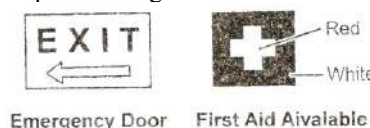


Fig 1.4

46. Identify the sign shown in following Fig.

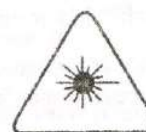


Fig 1.5

- (a) Toxic Hazard (b) Risk of fire
(c) Over Head Load (d) Risk of Laser Beam

RRB ALP Bhopal 06.06.2010

Indian Ordnance Factory Fitter 10.09.2017

Ans. (d) : laser beam safety- Laser beam safety is the safe design, use and implementation of laser to minimize the risk of laser accident, especially those involving eye injuries.

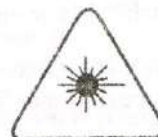


Fig 1.5

47. Identify the signs shown in following Fig. 1.6

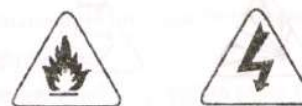


Fig 1.6

- (a) 1. Risk of fire and
2. Risk of Electric shock
- (b) 1. Over Head Load and
2. Risk of Laser Beam
- (c) 1. Over Head Load and
2. Risk of Electric shock
- (d) 1. Risk of Leaser Beam and
2. Risk of Fire

RRB ALP Bhubaneswar 14.06.2009

Ans. (a) : The sign shown in the figure 1.6 is (1) Risk of fire and (2) Risk of Electric shock

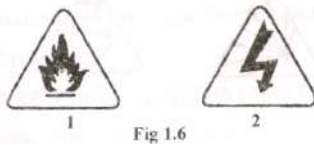


Fig 1.6

48. Identify the signs shown in following Fig. 1.7

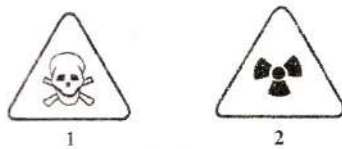


Fig 1.7

- (a) 1. Risk of fire and
2. Risk of electric shock
- (b) 1. Over Head Load and
2. Risk of leaser beam
- (c) 1. Toxic Hazard and
2. Risk of ionizing radiation
- (d) 1. Risk of laser beam and
2. Risk of fire

RRB ALP Bhubaneswar 15.07.2012

Indian Ordnance Factory 2016

Ans. (c) : The signs shown in following Fig.1.7 is
(1) Risk of laser beam
(2) Risk of fire.

49. For Fragile Roof which of the following sign is used



- (a) A
- (b) B
- (c) C
- (d) D

RRB ALP Bilaspur 15.07.2012

Ans. (b) : For fragile Roof, Danger Fragile roof signs is used.



Danger Fragile roof.

50. For Smoking is Prohibited which of the following sign is used



- (a) A
- (b) B
- (c) C
- (d) D

RRB ALP Chandigarh 14.09.2008

Indian Ordnance Factory (Itarsi) 08.05.2016

Ans. (d) : For Smoking prohibited, No Smoking sign is used.



51. Identify the sign shown in following



- (a) Toxic Hazard
- (b) Risk of fire
- (c) Wear Hand Protection
- (d) Risk of Laser Beam

RRB ALP Chandigarh 15.07.2012

Ans. (c) : The sign shown in the following fig-1.10 is wear hand protection.



52. Like a wheel from starting to present in Industrial revolution development which of the following is included?

- (a) Wheel
- (b) Automisation
- (c) Computerisation
- (d) All (a), (b), (c)

RRB ALP Chandigarh 25.05.2003

Indian Ordnance Factory 2015

Ans. (d) : Like a wheel from starting to present in industrial revolution development the following are included-

- Wheel
- Atomization
- Computerization

53. Who can operate a machines properly?

- (a) Skilled human labour
- (b) Skilled Engineer
- (c) Both (a) & (b)
- (d) None of above

RRB ALP Chennai 06.06.2010

Ans. (c) : Both skilled human labour and skilled engineer can operate a machine properly

54. Uncontrolled or sad result of any incident is called:

- (a) Accident
- (b) Incident
- (c) Both (a) & (b)
- (d) None of above

RRB ALP Chennai 27.10.2002

Ans. (a) : Uncontrolled or sad result of any incident is called Accident.

55. In a human nature what is a specific nature?

- (a) Curiosity
- (b) Hard work
- (c) Not know
- (d) None of above

RRB ALP Gorakhpur 08.10.2006

Indian Ordnance Factory 2014

Ans. (a) : In a human nature curiosity is a specific nature.

■ Curiosity means desire of knowledge.

56. If a patient does not respond to mouth to mouth resuscitation treat, a first-aid should immediately

- (a) Seek medical help
- (b) Check for broken limbs
- (c) Keep the body warm with blankets
- (d) Check pupils of eyes and pulse

RRB ALP Gorakhpur 11.10.2009

Ans. (a) : If a patient does not respond to mouth to mouth resuscitation treat, a first- aider should immediately seek medical help.

57. What is a result of improper information :

- (a) Dry
- (b) Accident
- (c) Not know
- (d) None of above

RRB ALP Gorakhpur 12.10.2003

Ans. (b) : Accident is a result of improper information- or

■ uncontrolled or said result of any incident is called accident.

58. For prevent from Carbonasious fire we can use:

- (a) Water
- (b) Sand
- (c) Dirt
- (d) All of above

RRB ALP Gorakhpur 14.04.2002

Indian Ordnance Factory 2013

Ans. (d) : We can used water sand and Dirt for prevent from carbonaceous fire.

■ The reason for carbon dioxide being used in fire extinguishers is because of its capability of replacing oxygen from the fire.

59. Process included in basic life support, which of the following is included :

- (a) Clean airway
- (b) Re-start Breathing
- (c) Restart-heart beat
- (d) All of above

RRB ALP Gorakhpur 21.10.2001

Ans. (d) : Basic life support (BLS) includes recognition of signs of sudden cardiac arrest heart attack, stroke, and foreign body airway abstraction, and the performance of cardiopulmonary resuscitation (CPR) with an automated external defibrillator.


60. Which of the following incident is not a accident?

- (a) Hammer dropped out from hand, stuck to another person
- (b) Fingers are cuts by suddenly breaking of hacksaw blade
- (c) Cut the fingers for making money from Insurance Company
- (d) Hand bone are broken by Slip on floor due to Oil on it


RRB ALP Guwahati 22.01.2006


Ans. (c) : Cut the fingers for making money from insurance company is not a accident.

61. For First Aid which of the following symbol is used.

- 

(A)



(B)
- 

(C)

(D) None of above
- (a) A

(b) B

(c) C

(d) D

RRB ALP Jammu-Kashmir 06.06.2010

Indian Ordnance Factory 2012

Ans. (c) :First aid sign- A white cross an a green background is the internationally accepted symbol for first aid.

First aid is a priority where medical intervention is needed.



62. From the following which is not a reason for accident?

- (a) Not Interest in work
- (b) Very attentive
- (c) Very Curious
- (d) Indiscipline

RRB ALP Kolkata 02.11.2008

Ans. (b) : Very attentive is not a reason for accident.

63. The type of occupational health hazard which involves "toxic" is:

- (a) Physical hazard
- (b) Chemical hazard
- (c) Biological hazard
- (d) Mechanical hazard

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (b) : Chemical hazard- chemical hazards are a subtypes of occupational hazards that involves a wide variety of chemicals exposure to chemicals in the workplace can cause acute or long-term detriment at health effects.

64. What type of gloves is used to avoid cuts and abrasion during material handing ?

- (a) Rubber gloves
- (b) Leather gloves
- (c) Cotton gloves
- (d) Polythene thin gloves

**RRB ALP Kolkata 06.02.2005
SAIL Bokaro Steel Plant 2016**

Ans. (b) : Leather gloves is used to avoid cuts and abrasion during material handling .

65. Which of these is a biological hazard ?

- (a) Smoking
- (b) Sickness
- (c) Infection
- (d) Poor discipline

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (c) : Biological or Biohazard:- A biohazard is a biological substances that posses a threat to the health of living organisms, primarily humans. This could include a sample of a microorganisms virus, or toxin that can adversely effect human health.

66. What does the following sign indicate?



- (a) Risk of fire
- (b) Laser beam
- (c) Toxic hazard
- (d) Risk of electric shock

RRB ALP Kolkata 16.07.2006

Ans. (d) : Risk of electric shock



67. A person coming in contact with live electric wire should be removed from live supply using a :

- (a) Piece of dry timber
- (b) Piece of wet timber
- (c) Metallic rod
- (d) Scaffold rod

RRB ALP Kolkata 2014

SAIL Durgapur Steel Plant 05/09/2014

Ans. (a) : A person coming in contact with live electric wire should be removed form live supply using a piece of dry timber.

68. Which fire extinguisher is used for flammable liquid fires ?

- (a) Halon extinguisher
- (b) Dry powder extinguisher
- (c) CTC extinguisher
- (d) Water extinguisher

RRB ALP Kolkata 29.09.2002

Ans. (b) : Dry powder extinguisher is used for flammable liquid fires.

Dry powder extinguisher:- A dry powder fire extinguisher choice since it can be used an almost all fire types. that being said, it is not recommended to use a dry powder fire extinguisher in an enclosed space.

69. Which of these is a toxic in an automobile workshop ?

- (a) Old bearings
- (b) Paper wrappers
- (c) Used lubricants
- (d) Old washers, bolts and nuts

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (c) : Lubricants used is a toxic in an automobile workshop.

70. A person faints due to suffocation, the first aid to be given is:

- (a) Give him a warm drink
- (b) Sprinkle cold water on his face
- (c) Place him in a well-ventilated location
- (d) Give him artificial respiration

RRB ALP Malda 16.07.2006

VIZAAG Steel Fitter 2015

Ans. (c) : A person faints due to suffocation the first aid to be give is place him in a well- ventilated location

71. What does the following mandatory sing indicate ?



- (a) Save water
- (b) Wash hands
- (c) Canteen zone
- (d) Drinking water

RRB ALP Mumbai 03.06.2001

Ans. (b) : Hand washing mandatory signs indicate.



72. Which equipment is used in vehicle service station to lift a vehicle for water wash ?

- (a) Hoist
- (b) Crane
- (c) Stand
- (d) Screw jack

RRB ALP Mumbai 05.06.2005

Ans. (a) : Hoist equipment is used in vehicle service station to lift a vehicle for water wash.

Lift- This is used to lift a vehicle from the ground level. It is also called hoist . It is used when there is not enough space in a workshop to dig a hole. It runs on electricity. It works on the principle of self. locking screw. mainly three lifts are used in an automotive wok shop.

73. Which equipment is used to lift and support a vehicle before work underneath it can be safely undertaken?

- (a) Stand
- (b) Sling chain
- (c) Lifting crane
- (d) Hydraulic jack

RRB ALP Mumbai 14.06.2009

NTPC Fitter 2014

Ans. (a) : Stand is a equipment, it is used to lift and support a vehicle before work underneath it can be safely undertaken.

74. Which oil is harmful to the environment ?

- (a) Engine oil (b) Hydraulic oil
(c) Seeds/nuts oil (d) Used engine oil

RRB ALP Mumbai 15.07.2012

Ans. (d) : Used engine oil is harmful to the environment.

75. What can cause fire while refueling hot engine?

- (a) Vapours (b) Paper
(c) Cloth (d) Leather

RRB ALP Mumbai 16.07.2006

Ans. (a) : Vapours can cause fire while refueling hot engine.

76. Which gas is harmful to human health ?

- (a) Nitrogen (b) Water vapour
(c) Carbon dioxide (d) Carbon monoxide

NCVT Mechanic Diesel 01.11.2019 Shift-II

BHEL Hyderabad Fitter 2014

Ans. (d) : Carbon monoxide gas is harmful to human health.

77. Which type of fuel contains more carbon monoxide ?

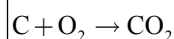
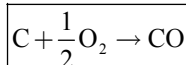
- (a) Solid fuel (b) Burnt fuel
(c) Liquid fuel (d) Un-burnt fuel

RRB ALP Mumbai 05.01.2003

Ans. (d) : Un -burnt type of fuel contains more carbon monoxide.

■ Carbon monoxide is produced by incomplete combustion of fuels.

■ The complete combustion of fuels will give carbon dioxide



78. Which automobile component produces dust ?

- (a) Axle (b) Piston
(c) Gearbox (d) Brake shoe

RRB ALP Muzaffarpur 15.02.2009

Ans. (d) : Brake shoe automobile component produces dust.

79. Which material can cause lung cancer?

- (a) Fibre (b) Wood
(c) Graphite (d) Asbestos

RRB ALP Patna 04.02.2007

COAL India Fitter 2013

Ans. (d) : Asbestos material can cause of lung cancer.

■ Exposure to certain hazardous chemicals poses of lung cancer risk. Working with materials such as asbestos, uranium, arsenic, cadmium, chromium, nickel and some petroleum products is especially dangerous.

80. What is ABC in first aid ?

- (a) Army, Branch, Calculate
(b) Aviation, Breathing, Cumin
(c) Away, Breathing, Calculation
(d) Airway, Breathing, Circulation

RRB ALP Patna 11.11.2001

Ans. (d) : ABC in first aid is-

A→Airway

B→ Breathing

C→ Circulation.

81. Which part of body bleeding profusely in considered serious and need professional attention?

- (a) Leg of the human body
(b) Knee of the human body
(c) Wrist of the human body
(d) Thigh of the human body

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (c) : Wrist of human body part of body bleeding profusely in considered serious and need professional attention.

82. How to treat burns and scalds?

- (a) Blow hot air on the injured part
(b) Blow cool air on the injured part
(c) Cover the injured part with cool water
(d) Cover the injured part with hot water

NCVT Mechanic Diesel 01.11.2019 Shift-II

CRPF Constable Tradesman 2016

Ans. (c) : Covered the injured part with cool water to treat burn and scalds.

83. Which device is best for use to control toxic waste ?

- (a) Wire brush (b) Cotton waste
(c) Air compressor (d) Vacuum cleaner

RRB ALP Patna 2014

Ans. (d) : Vacuum cleaner is a device which is best for use to control toxic waste.

■ An oily floor should be cleaned by saw dust. bn

84. What comes under first aid ?

- (a) Treating a victim for a shock
(b) Completing the primary shock
(c) Assessing a victim's vital signs
(d) Immediate care and support to the injured person

RRB ALP Ranchi 04.09.2005

HAL Fitter 2015

Ans. (d) : First aid is the assistance given to any person suffering a sudden illness or injury, with care provided to preserve life, prevent and condition from worsening or to promote recovery.

85. What is biological hazard ?

- (a) Virus (b) Fatigue
(c) Alcoholism (d) Old age

RRB ALP Ranchi 08.07.2007

Ans. (a) : Virus is biological hazard.

Biological health hazards include viruses, parasites and moulds or fungi, they can pose a threat to human health when they are inhaled, eaten or come in contact with skin.

86. What is the first action if a colleague (victim) received a heavy electric shock ?

- (a) Pull the victim from the live conductor
(b) Pour water to avoid burning of victim
(c) Fetch the first aid box
(d) Switch off the current immediately

RRB ALP Ranchi 19.01.2003

Mazagon Dock Shipbuilders Ltd. 2013

Ans. (d) : Switch off the current immediately is the first action if a colleague(victim) received a heavy electric shock.
A loose connection or faulty wiring in the factory can cause fire or electric shocks. This reasons also invite accidents.

87. What does 'horseplay' refer to ?

- (a) Animals (b) Game of horses
(c) Fooling around (d) Throwing hay

RRB ALP Ranchi 2014

Ans. (c) : The horseplay refer to fooling around.

88. What three elements must be present to cause a fire ?

- (a) Fuel + Heat + Oxygen
(b) Oxygen + Fuel + Paper
(c) Heat + water + Oxygen
(d) Smoke + Fuel + Oxygen

RRB ALP Ranchi 21.09.2003

Ans. (a) : Fuel+ Heat+ oxygen, three elements must be present to cause a fire.

Fire in a workshop is caused due to the following reasons-

- (i) loose electric wires.
(ii) Heavy load on electric wires.
(iii) smoking in the workshop.
(iv) carelessness towards flammable substances.

89. What should not be used on burning liquids ?

- (a) CO₂ (b) Foam
(c) Sand (d) Water

RRB ALP Secunderabad 06.06.2010

MES Automobile Tradesman 2015

Ans. (d) : Water should not be used extinguisher on burning liquids.

Class 'B' type of fire:- Fire in a flammable fluid or combustible solid is classified as 'B' type of fire. CO₂, foam and dry powder is used to extinguish this type of fire. Don't use water to extinguish this type of fire.

90. Which type of fire extinguisher is not suitable for electric fire ?

- (a) CO₂ (b) CTC
(c) Foam (d) Dry powder

RRB ALP Secunderabad 11.11.2001

Ans. (c) : Foam type of fire extinguisher is not suitable for electric fire.

A fire caused due to metal or electricity is classified as 'D' type of fire. carbon dioxide (CO₂), dry power, CTC, extinguisher are used to extinguish this type of fire.

91. What is used to extinguish class 'B' fire ?

- (a) CO₂ (b) Argon
(c) Oxygen (d) Nitrogen

RRB ALP Secunderabad 29.06.2008

Ans. (a) : CO₂ is used to extinguish class 'B' fire.

Fire in a flammable fluid or combustible solid is classified as 'B' type of fire.

CO₂, foam and dry power is used to extinguish this type of fire.

92. Which type of fire extinguisher is suitable for extinguishing class 'A' fire ?

- (a) Halon (b) Dry powder
(c) Foam or water (d) Carbon dioxide

RRB ALP Siliguri 2014

ISRO Technician-B Carpenter 27.11.2016

Ans. (c) : Foam or water extinguisher is suitable for extinguishing class 'A' fire.

Class 'A' Type of fire:- Fire caught on wood, paper, clothes and hard metal is classified as 'A' types of fire.

To extinguish this type of fire, we first direct the water jet on the base of the fire and move it from side to side till the fire is extinguished.

93. Which fire extinguisher is suitable for extinguishing class 'C' fire?

- (a) Foam filled extinguisher
(b) Water filled extinguisher
(c) Dry powder fire extinguisher
(d) Carbon dioxide fire extinguisher

RRB ALP Trivandrum 20.06.2004

Ans. (c) : Dry powder fire extinguisher is used to class 'C' fire.

Fire in gas or a burning gas is classified as 'C' type of fire.

94. Stating "Don't spill the fuel on workplace can be said to be related to:"

- (a) General safety
(b) Personal safety
(c) Machine safety
(d) General and machine safety

RRB ALP Ahmadabad 2014

ISRO Technician-B Fitter 20.11.2016

Ans. (a) : **General safety-** this following precautions regarding general safety should be taken in a workshop

- (i) We should not smoke in the workshop.
(ii) Any heavy objects in the workshop should be picked up carefully.
(iii) Flammable substance should be kept at safe places in a workshop.
(iv) There should be no naked electric wire in a workshop.

95. What will you do if an electric shock victim is unable to release his grip from the conductor ?

- (a) Make sure the power is turned off
(b) Cover all burns with a dry loose dressing
(c) Place the victim on one side with head down
(d) Ask a bystander to help you to move the victim

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (a) : make sure the power is turned off if an electric shock victim is unable to release his grip from the conductor.

Separate the patient from any electrical contact using wood or rubber shoes. remove the plug from the socket. If an electrician is struck on the overhead line then immediately throw an iron chair over the wires. This causes short circuit in the wire and cuts off the supply.

96. Which type of energy conservation opportunity involves stopping of water leakage points ?

- (a) Minor energy conservation opportunities
(b) Major energy conservation opportunities

- (c) Medium energy conservation opportunities
- (d) Extra major energy conservation opportunities

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (a) : Minor Energy conservation opportunities type of energy conservation opportunity involves stopping of water leakage points.

These system are simple and easy to implement. they also required less cast. They are related to prevention of a leakage point not performing work with carelessness and lapses. They require less investment.

97. Which is medium energy conservation opportunity ?

- (a) Housekeeping
- (b) Stopping of water leakage
- (c) Renovation of old building
- (d) Replacement of existing household appliances

NCVT Mechanic Diesel 01.11.2019 Shift-II

ISRO Technician-B Grinder 27.11.2016

Ans. (d) : Replacement of existing household appliances is medium energy conservation opportunity. This system is very complex and takes a longer time for implementation. They involve high investment.

98. In case of an accident, the victim should immediately be:

- (a) Asked to take rest
- (b) Enquired about the accident
- (c) Attended to immediately
- (d) Left to himself without treatment

RRB ALP Ahmadabad 17.10.2004

Ans. (c) : In case of an accident, the victim should immediately be attended to and given first aid before a trained medical worker arrives.

If some one is injured, the first thing to do is:

- (i) First check that casualties are not in danger and if possible make the situation safe.
- (ii) If necessary, call 108 for an ambulance when it is safe to do so.
- (iii) Do basic first aid.

99. What should never be placed over a burn ?

- (a) Aloe
- (b) Water
- (c) Cocoa butter
- (d) Dry sterile dressing

RRB ALP Ajmer 05.06.2005

Ans. (c) : Cocoa butter never be placed over burn.

If a person is burnt:- Immediately put out the flames coming out of the patient's clothes do not apply pressure if any sores are developed on the patient's body. Apply burnol on the injuries. A burnt patient shouldn't be allowed to run here and there.

100. What does the cautionary sign given below indicate?



- (a) Guarded level crossing
- (b) Unguarded level crossing
- (c) School zone

- (d) Pedestrian crossing

RRB ALP Ajmer 10.10.2004

ISRO Technician-B Motor Mechanic 27.11.2016

Ans. (b) : Unguarded Railway crossing- This sign is used on the approaches of level crossings where there are no gates or other barriers.

101. What is the colour code of bin for disposal of plastic waste ?

- (a) Red
- (b) Blue
- (c) Black
- (d) Yellow

RRB ALP Ajmer 23.05.2004

Ans. (d) : Yellow colour code of bin for disposal of plastic waste. The yellow bin includes anatomical, chemical, solid waste, cotton swabs, linen, medicines are discarded into yellow colour.

102. What warning sign is shown below?



- (a) Explosion
- (b) Overhead load
- (c) Sudden drop
- (d) Noise

RRB ALP Allahabad 03.08.2008

Ans. (b) : overhead load symbol. general hazard signage used to clearly mark dangerous area in and around your building .

103. Which fire extinguisher is filled with carbon tetrachloride and bromochlorodifluoro methane (BCF) ?

- (a) Carbon dioxide extinguisher
- (b) Halon extinguisher
- (c) Foam extinguisher
- (d) Dry powder extinguisher

RRB ALP Allahabad 09.12.2007

ISRO Technician-B Plumber 27.11.2016

Ans. (b) : Halon/C.T.C. Fire Extinguisher:- This equipment is used to extinguish fire caused due to electricity. A cylinder made of brass is filled with a liquid substance of carbon tetrachloride & Bromochlorodifluoro methane (BCF). A force pump attached on the top of the cylinder is passed with the help of special type of handle. This forces the liquid substance out of the cylinder in the form of a foam with is used to extinguish of fire.

104. What is the colour code of bins for waste paper segregation ?

- (a) Red
- (b) Blue
- (c) Black
- (d) Green

RRB ALP Bangalore 25.01.2004

Ans. (b) : ■ Blue colour code of bins for waste paper segregation.

■Blue coloured bins are used for collecting materials that are recyclable.

■The recyclable materials include paper, news paper, magazines etc.

105. With reference to using a fire extinguisher, what does 'PASS' stand for ?

- (a) Pull, Aim, Squeeze, Sweep
- (b) Press, Aim, Start, Sweep

- (c) Pull, Air Squeeze, Spray
- (d) Pull, Aim, Squeeze, Spray

RRB ALP Bangalore 08.07.2007

Ans. (a) : To use fire extinguishers correctly, remember the P.A.S.S acronym:

- P = PULL the pin on the fire extinguisher.
- A = AIM the extinguisher nozzle at the base of the fire.
- S = SQUEEZE or press the handle.
- S = SWEEP from side to side until the fire appears to be out

106. There are usually certain colours used on safety signboards. Which one is for prohibition?

- (a) Red
- (b) Yellow
- (c) Green
- (d) Purple

RRB ALP Bangalore 15.07.2012

ISRO Technician-B Turner 22.11.2016

Ans. (a) : classification of sign in the road traffic:

- (i) Mandatory/ prohibitory sign.
- (ii) Warning sign.
- (iii) Information sign.

(i) Mandatory/ Prohibitory sign:-The regulatory or mandatory signs are used to inform the road users of certain laws and regulations to provide safety and free flow to traffic.

107. Which fire extinguisher (FE) is suitable for a live electric fire?

- (a) Soda acid FE
- (b) Water filled FE
- (c) Foam FE
- (d) C.T.C. FF

RRB ALP Bhopal 06.06.2010

Ans. (d) : C.T.C Fire Extinguisher:- This equipment is used to extinguish fire caused due to electricity. A cylinder made of brass is filled with a liquid substance of carbon tetrachloride and Bromochlorodi fluoro methane (BCF).

108. Besides a CO₂ fire extinguisher, which type of fire extinguisher can you use on electrical fires?

- (a) Foam
- (b) CTC extinguisher
- (c) Dry chemical extinguisher
- (d) Soda acid extinguisher

RRB ALP Bhubneswar 14.06.2009

DMRC (Maintainer) Fitter (Evening) 15.02.2017

Ans. (c) : The dry chemical extinguishers include sodium bicarbonate/ potassium bicarbonate (NaHCO₃/KHCO₃) and potassium chloride base agent.

Note- Carbon tetra clorid (CTC) also used for electric fire extinguisher.

109. Which fire-extinguisher should be used for extinguishing fire caught in petrol?

- (a) Foam fire-extinguisher
- (b) Carbon dioxide fire-extinguisher
- (c) Dry powder fire-extinguisher
- (d) All of these

RRB ALP Bhubneswar 15.07.2012

Ans. (d) : Fire- extinguisher should be used for extinguishing fire caught in petrol-

- (i) Foam fire extinguisher.
- (ii) Carbon dioxide fire extinguisher.
- (iii) Dry powder fire- extinguisher.

(i) Foam Fire extinguisher:- This may be of stored pressure or gas cartridge type. they are used to extinguish flammable liquid fire or a running grease fire. they should not be not be for extinguishing the fire in electrical device.

110. Which fire-extinguisher is used for extinguishing fire caught in electric cables?

- (a) Oil
- (b) Water
- (c) C.C.T. fire-extinguisher
- (d) Foam

RRB ALP Bilaspur 15.07.2012

Ans. (c) : C.T.C fire extinguisher is used for extinguishing fire caught in electric cables.

- This is suitable for electrical fires caused by appliances, tools and other plugged in gear.
- They are more effectively in extinguishing small fires involving pouring liquids.

111. Which of the following is not an insulator?

- (a) Gold
- (b) Glass
- (c) Mica
- (d) Wood

RRB ALP Chandigarh 14.09.2008

DMRC (Maintainer) Fitter (Morning) 15.02.2017

Ans. (a) : ■ Gold is not an insulator.

■ Insulators are material that does not conduct electricity. Example - paper, plastic, rubber, glass, mica, wood, Ebonite,- air , Styrofoam, etc

112. What is the full form of I.T.I.?

- (a) Indian Tester Industry
- (b) Indian Telephone Institute
- (c) Industrial Training Institute
- (d) Industrial Technical Institute

NCVT 2015,16

Ans. (c) : The full form of I.T.I is Industrial Training Institute. The Directorate General of Employment and Training manages ITI. They are an agency of the ministry of skill Development and Entrepreneurship.

113. An industrial training institute provides.....to strengthen the economy of a nation.

- (a) engineer
- (b) clerk
- (c) mechanic
- (d) skilled mechanic

RRB ALP Chandigarh 15.07.2012

Ans. (d) : An industrial training institute provides skilled mechanic to strengthen the economy of a nation.

114. Which is the class C-fire?

- (a) Metal fire
- (b) Wood fire
- (c) Electrical fire
- (d) Flammable liquid fire

NCVT 2018

DMRC (Maintainer) Fitter 20.07.2014

Ans. (d) : : Flammable liquid fire is the class C- fire.

Class 'c' type of fire:- Fire in a gas or a burning gas is classified as 'C' type of fire. This type of fire should be extinguished carefully because there is always a danger of blast or sudden spreading of fire.

115. Which process comes under the periodical maintenance?

- (a) Brake failure
- (b) Engine seizure
- (c) Replace oil filter
- (d) Air lock in fuel system

NCVT 2018

Ans. (c) : Periodical maintenance works by calculating the period in which equipment failure is expected. To recap, the periodic maintenance service of your car consists of–

- Engine oil and oil filter change.
- Air filter and fuel filter cleaning and replacement if required.
- Inspection of engine cooling system and top up of coolant.

116. Which is the chemical hazard?

- (a) Noise (b) Vibration
(c) Smoking (d) Explosive

NCVT 2018

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (d) : Explosive is the chemical hazard.

Explosive:- These substance may get explode due source of ignition, temperature increase i.e. ammonium nitrite.

117. Which is the physical hazard?

- (a) Toxic (b) Noise
(c) Infection (d) Current leakage

NCVT 2018

DMRC (Maintainer) Fitter 24.12.2006

Ans. (c) : The main factors and conditions associated with physical hazards include:

- (i) Illumination
- (ii) Electricity
- (iii) Heat and cold stress
- (iv) Radiation (Ionizing of non Ionizing)
- (v) Noise
- (vi) Vibration

118. Which one of the following leads to brake down maintenance?

- (a) Fan belt cut
(b) Wheel alignment
(c) Engine oil change
(d) Adjust wall clearance

NCVT 2018

Ans. (c) : Breakdown maintenance:-

- This is called corrective maintenance or emergency maintenance .
- A machine is permitted to run without much attention till it breaks down.

119. What shouldn't be used to extinguish a burning liquid?

- (a) CO₂ (b) Water
(c) Dry powder (d) Foam

NCVT 2015

Ans. (b) : Water shouldn't be used to extinguish a burning liquid.

- Water cannot be used as a fire extinguisher to put out burning oils such as gasoline, diesel, and so on.
- Because oil is lighter than water, it floats over it and continues to burn.

120. The capacity to work is known as.....

- (a) strength (b) energy
(c) frequency (d) resistance

NCVT 2016

BMRC Maintainer Fitter 2016

Ans. (b) : The capacity to do work is known as energy.

- Work and energy has the same unit. The unit in SI system is joule while that in CGS system is erg.

121. The amount of oxygen in the environment is approx.....

- (a) 8.75% (b) 12.85%
(c) 16.85% (d) 20.95%

NCVT 2016

Ans. (d) : The amount of oxygen in the environment is approx 20.95% Air is a mixture of gases. It contains 78-79% nitrogen, 21% oxygen, 0.93% organ , 0.03% Carbon dioxide, and traces of hydrogen, helium, and other "noble" gases.

122. Which of the following method should be used for giving artificial respiration to a person?

- (a) Schafer's method (b) Water
(c) Both (a) and (b) (d) None of these

NCVT 2016

Ans. (a) : Schafer's method should be used for giving artificial respiration to a person.

123. The working efficiency of diesel fuel is specified by.....

- (a) cetane number (b) octane number
(c) both (a) and (b) (d) none of these

NCVT 2016

LMRC (Maintainer) Fitter 16.03.2016

Ans. (a) : The working efficiency of diesel fuel is specified by cetane number.

- The cetane number (cetane rating) is an indicator of the combustion of diesel fuel and the compression needed for ignition.

- Cetane number is the range of 41-50

124. What is used for power transmission in a power steering?

- (a) Liquid substance (b) Grease
(c) Compressed air (d) Atmospheric air

NCVT 2016

Ans. (a) : Liquid substance is used for power transmission in a power steering.

- Power steering reduces driver fatigue.

- In power steering, the oil output is directly proportional to steer speed.

125. Which of the following component has the simplest structure?

- (a) Oxygen (b) Carbon
(c) Nitrogen (d) Hydrogen

NCVT 2016

Noida Metro Maintainer Fitter 2017

Ans. (d) : A molecule is the simplest structural unit of a substance that still keeps the properties of the substance, like a molecule of water.

126. A worker suffering from an electric shock should be–

- (a) given an alcoholic drink
(b) given a cold drink
(c) asked to walk
(d) keep in warm and cold condition

NCVT 2017

Ans. (d) : Worker suffering from an electric shock should be kept in warm and cold condition. An electrical shock may cause burns, or it may leave no visible mark on the skin. In either case an electrical current passing through the body can cause internal damage, cardiac arrest or other injuries. Under certain circumstances, even a small amount of electricity can be total.

127. Which type of precautions are necessary to prevent to fire accident?

- (a) Keep a sand filled bucket near workshop
- (b) Appropriate fire extinguishers near workshop
- (c) CO₂ gas should be available near workshop
- (d) All of these

NCVT 2017

Ans. (d) : Precautions are necessary to prevent to fire accident-

- (i) Keep a sand filled bucket near workshop.
- (ii) Appropriate fire extinguishers near workshop.
- (iii) CO₂ gas should be available near workshop.

128. Identify the warning sign given in the figure.



- (a) Danger of fire
- (b) Lethal danger
- (c) Weak roof
- (d) Faulty Lift

NCVT 2016

DRDO Fitter 2016

Ans. (b) : The warning sign given in the figure is the lethal danger or hazard symbol.

129. Use a.....to protect your face from the sparks produced during welding, grinding.

- (a) apron
- (b) hand shield
- (c) nose mask
- (d) goggles

NCVT 2015

Ans. (b) : Use a hand shield to protect your face from the sparks produced during welding, grinding.

130. What is the correct first aid in a workshop to stop blood loss?

- (a) Wait for the blood to clot
- (b) Apply straight pressure on the injury using a clean cloth
- (c) Apply grease on the injury to stop blood loss
- (d) Quickly take the patient to the nearest hospital

NCVT 2016

Ans. (b) : Apply straight pressure on the injury using a clean cloth is first aid in a workshop to stop blood loss.

131. The process of replacing a conventional light bulb with a Compact Fluorescent Lamp (which uses only 1/4 of energy for the same output) is called-

- (a) modernization
- (b) energy conservation
- (c) up-gradation
- (d) standardization

NCVT 2016

DRDO Turner 2011

Ans. (b) : The process of replacing a conventional light bulb with a compact fluorescent lamp is called energy conservation.

132. Which gas should be removed for preventing fire?

- (a) Oxygen
- (b) Nitrogen
- (c) CO₂
- (d) Argon

NCVT 2016

Ans. (a) : Oxygen gas should be removed for preventing fire.

133. What is the given symbol classified as?



- (a) Prohibition sign
- (b) Mandatory sign
- (c) Warning sign
- (d) Information sign

NCVT 2016

Ans. (b) : Mandatory sign:- The regulatory or mandatory signs are used to inform the road users of certain laws and regulations to provide safety and free flow to traffic.

134. Blood loss from which part of the body is considered very serious and requires help from an expert?

- (a) Wrist
- (b) Knee
- (c) Leg
- (d) Buttock

NCVT 2016

DRDO Machinist 2016

Ans. (a) : Blood loss from wrist part of the body is considered very serious and requires help from an expert.

135. The following is used while grinding-

- (a) Safety helmet
- (b) goggles
- (c) leg guard
- (d) loose clothes

NCVT 2015

Ans. (b) : While grinding, the goggles are primary protectors intended to shield the eye against liquid or chemical splash, irritating mists, vapour and fumes.

136. Any flammable, eruptive, poisonous, damaging or radioactive substance is classified as-

- (a) physical danger
- (b) chemical danger
- (c) biological danger
- (d) mechanical danger

NCVT 2015

Ans. (b) : Any flammable eruptive poisonous, damaging or radioactive substance is classified as chemical danger.

137. The objectives of a industrial safety are-

- (a) to reduce cost of production
- (b) to increase production
- (c) to have better human relation in industry
- (d) all of these

NCVT 2017

DRDO Motor Mechanic 2016

Ans. (d) : The Objective of a industrial safety are

- (i) To reduce cost of production.
- (ii) To increase production.
- (iii) To have better human relation in industry.

138. The weight carrying capacity of a vehicle is determined by–

- (a) motor act (b) motor vehicles act
(c) both (a) and (b) (d) none of these

NCVT 2016

Ans. (b) : The weight carrying capacity of a vehicle is determined by motor vehicles act.

An act to consolidate and amend the law relating to motor vehicles.

139. A _____ is used in a self circuit to protect the wiring from catching fire.

- (a) earth point (b) fuse
(c) solenoid switch (d) jumper

RRB ALP Chandigarh 25.05.2003

Ans. (c) : A solenoid switch is used in a self circuit to protect the wiring from catching fire.

140. The first aid for snake bite is _____

- (a) Pour water on the wound
(b) Applying antiseptic to the wound
(c) Tying cloth on the wound and cutting the wound to let the blood come out
(d) Rubbing the wound

RRB ALP Chennai 06.06.2010

DRDO Mechanic Diesel 2016

Ans : (c) Tying cloth on the wound and cutting the wound to let the blood come out.

141. If a patient does not perform mouth-to-mouth breathing first aid should be done as follows–

- (a) Seek medical help immediately
(b) Watch for broken bones
(c) Keep the body warm with blankets
(d) Check the pulse and eye sight

RRB ALP Chennai 27.10.2002

Ans : (a) If the patient does not perform mouth-to-mouth breathing, then first aid should be to seek medical help immediately.

142. Use for head protection _____

- (a) hard hats (b) helmets
(c) caps (d) (a) and (b) above

RRB ALP Gorakhpur 08.10.2006

Ans : (d) To protect the head, hard hat and helmet that covers the entire head and protects against head injury.

143. Wear to protect feet–

- (a) Hawai chappal (b) Canvas shoe
(c) Leather shoe (d) All of the above

RRB ALP Gorakhpur 11.10.2009

Indian Ordnance Factory Fitter 10.09.2017

Ans : (c) Leather shoe should be worn while working in the workshop to protect the feet. Due to which if protects from being pricked by the feet.

144. To protect the eyes use _____

- (a) Goggles (b) Glasses
(c) Face Shields (d) All of the above

RRB ALP Gorakhpur 12.10.2003

Ans : (d) Goggles, glasses and face shields should be worn while working in the workshop to protect the eyes.

145. For the protection of the body _____ is used.

- (a) Overalls (b) Gloves
(c) Apron (d) All of the above

RRB ALP Gorakhpur 14.04.2002

Ans : (d) Overalls and Gloves and apron should be worn for body protection.

146. While grinding always _____

- (a) Stand in front of the wheel
(b) Stand on the side of the wheel
(c) Wear goggles
(d) Both (a) and (c)

RRB ALP Gorakhpur 21.10.2001

Indian Ordnance Factory 2016

Ans : (b) Always stand on the side of the wheel while grinding with a grinder at work site as sparks coming out from the wheel can harm you and wear eye glasses.

147. An accident is–

- (a) Unplanned event
(b) Uncontrollable event
(c) Undesirable event
(d) All of the above

RRB ALP Guwahati 22.01.2006

Ans : (d) An accident occurs due to the following reasons–

- (i) Unplanned event
(ii) Uncontrollable event
(iii) Undesirable event

148. Expenses arising out of any the following accidents are not–

- (a) Expenses due to damage to machinery, tools, materials and property
(b) Expenses due to loss of time of injured persons
(c) Expenses due to compensation and medical aid
(d) Expenses due to increase in production

RRB ALP Jammu-Kashmir 06.06.2010

Ans : (d) The expenditure that is incurred on the increase in production is not the expenditure incurred due to any accident. The following are that expenses due to the accident.

- (i) Expenses due to damage to m.

149. Safe way of working is–

- (a) An effective and correct way of doing things
(b) An old way of doing things
(c) A way to handle work quickly
(d) A simple way of doing work

RRB ALP Kolkata 02.11.2008

Indian Ordnance Factory (Itarsi) 08.05.2016

Ans : (a) An effective and correct way of working is a safe way of working. Before actually starting a, job, one must learn the right way of doing it.

150. Good way to avoid accident is–

- (a) Working the old way
(b) To act in one's own way
(c) To follow the safety rules related to job machine and place of work
(d) Use of safety equipment

RRB ALP Kolkata 06.02.2005

Ans : (c) To follow the safety rules related to machine.
• It is a good way to avoid accident at place of work.

151. In case of an accident, the victim should be immediately–

- (a) Asked to rest
- (b) Should inquire about the accident
- (c) Should provide help
- (d) Should be left lying down without treatment

RRB ALP Kolkata 16.07.2006

Ans : (c) In the event of an accident, immediate help should be provided to the victim. First of all first aid should be done. After giving first aid, he should be treated in a nearby hospital.

152. Are found in fire

- (a) Fuel, light and oxygen
- (b) Fuel, heat and oxygen
- (c) Fuel, heat and nitrogen
- (d) Fuel, light and nitrogen

RSMSSB Jr. Inst. Mechanic Diesel 23.12.2019

Indian Ordnance Factory 2015

Ans : (b) Fuel– Any substance, liquid, solid or gas will burn if given oxygen and high enough temperature.

Heat– Every full will begin to burn at a certain temperature. Solids and liquid given off vapour when heated and it is this vapour which ignites. Some liquids give off vapour even at normal room temperature say 15°C, ex- petrol.

Oxygen– Usually it exists in sufficient quantity in the air to keep a fire burning.

153. In case of arc welding, to protect your eyes, you should use

- (a) Dark glass screen
- (b) Sunglasses
- (c) Mask
- (d) Clean glass

RRB ALP Kolkata 2014

Ans : (a) Dark colored glass screen should be used to protect your eyes in case of arc welding.

154. Should be used while grinding–

- (a) Dark colored glass screen
- (b) Mask
- (c) Safety glasses
- (d) Sun glasses

RRB ALP Kolkata 29.09.2002

Ans : (c) One must always use safety goggles or face shield while working on a grinder. Also, one should never wear loose clothing around this machine, while in operation.

155. If the handle is a loose fit with a hammer, then

- (a) The hammer will fly off and an accident may occur
- (b) He will bear the blow
- (c) Saving will be easier in it
- (d) He will give more leverage

RRB ALP Malda 16.07.2006

Indian Ordnance Factory 2014

Ans : (a) If the handle is loosely fitted with a hammer then the hammer will come out and accident, can happen. To avoid accident, before using any equipment, it should be started working after checking it thoroughly.

156. Emission norms are the levels of pollutants allowed by a vehicle

Emissions from petrol engines are measured by–

- (a) Gas detector
- (b) Gas analyzer
- (c) Gas meter
- (d) Gas igniter

RRB ALP Mumbai 03.06.2001

Ans : (b) Emission norms are the levels of pollutants allowed by a vehicle. Emission from petrol engines are measured by a gas analyser.

157. Emission norms are the levels of pollutants allowed by a vehicle. Emission from diesel engines are measured by–

- (a) Gas detector
- (b) Gas analyzer
- (c) Gas meter
- (d) Igniter

RRB ALP Mumbai 05.06.2005

Ans : (a) Emission norms are the levels of pollutants allowed by a vehicle. Emission from diesel engines are measured by gas detector. Gas detect is a device for measuring emissions. It acts as a safety system for the part in which it is applied.

158. What is the meaning of 'ULP'?

- (a) Unlined petrol
- (b) Unloaded petrol
- (c) Unleaded petrol
- (d) unlabeled petrol

RRB ALP Mumbai 14.06.2009

Indian Ordnance Factory 2013

Ans : (c) ULP stands for Unleaded petrol. To reduce knocking in petrol engine, lead is mixed in petrol, the petrol in which lead is not mixed is called unlead

159. Chain slings are used for _____

- (a) Light load
- (b) Heavy load
- (c) Medium load
- (d) Non of the above

RRB ALP Mumbai 15.07.2012

Ans : (b) Chain slings are used for heavy load and bulky load on a regular or repetitive basis.

160. Towing slings are used for _____

- (a) Light load (where the chain can damage the loads)
- (b) Heavy load
- (c) Both of the above
- (d) None of the above

RRB ALP Mumbai 16.07.2006

Indian Ordnance Factory 2012

Ans : (a) Towing slings are used for lighter loads where the chain can spoil the loads.

161. Which of the following cranes is used to lift and transport loads?

- (a) Overhead crane
- (b) Traveling crane
- (c) Pillar jib crane
- (d) Gantry crane

RRB ALP Mumbai 05.01.2003

Ans : (a) Over head crane is used to lift and transport the load one place to another place. Over head crane are installed under the roofs in factories, these cranes move above the ends.

162. Which of the following is a four wheeled vehicle used for carrying goods?

- (a) Single-girder crane
- (b) Traveling wall crane

- (c) Pillar jib crane
- (d) Industrial fork-lift

RRB ALP Muzaffarpur 15.02.2009

Ans : (d) A four wheeled vehicle used for carrying goods is known as industrial fork lift.

- 163. S.W.L. means _____**
- (a) Safe working load
 - (b) Standard working load
 - (c) Side working load
 - (d) Stable working load

RRB ALP Patna 04.02.2007

SAIL Bokaro Steel Plant 2016

Ans : (a) S.W.L. = Safe Working Load

- 164. Due to which of the following set of properties chains are made from wrought iron?**
- (a) Tensile, extensibility, hardness
 - (b) Hardness, toughness, ductility
 - (c) Malleability, ductility, toughness
 - (d) Hardness, touchiness, brittleness

RRB ALP Patna 11.11.2001

Ans : (c) Malleability– Malleability is the property by virtue of which a material may be hammered or rolled into thin sheets without a rupture. This property generally increases with the increase of temperature.

- 165. Fire extinguisher should be used to extinguish the fire of oily substance–**
- (a) C.T.C
 - (b) Foam type
 - (c) Water
 - (d) None of these

RRB ALP Patna 2014

Ans : (b) A fire caused by oily substances is called on oil fire. A foam tryer extinguisher is used to extinguish it. This is called class 'B' fire. Others also use CO₂ for this.

- 166. A moving machine should never be stopped by _____**
- (a) Hand
 - (b) Switch
 - (c) (a) and (b)
 - (d) None of these

RRB ALP Ranchi 04.09.2005

SAIL Durgapur Steel Plant 05/09/2014

Ans : (a) A moving machine should never be stopped by hand otherwise injury or major accident may occur. Chips released during machining should not be removed by hand, otherwise the chips may enter the hands.

- 167. Not operating a machine that does not belong to it–**
- (a) Water
 - (b) Fire
 - (c) Air
 - (d) Knowledge

RRB ALP Ranchi 08.07.2007

Ans : (d) Some precautions should be taken while working on the machine, otherwise injury or any other major accident may occur, such as the machine which is not known should not be touched.

- 168. There should be proper arrangement on the machine while working at night–**
- (a) Water
 - (b) Oil
 - (c) Light
 - (d) Fire

RRB ALP Ranchi 19.01.2003

Ans : (c) While working at night, there should be proper arrangement of light on the machine so that all things are clearly visible.

169. Chemicals are used in foam type fire extinguisher–

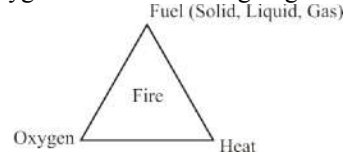
- (a) Na₂CO₃ + AlSO₄
- (b) H₂O
- (c) H₂SO₄
- (d) Al₂SO₄I₃

RRB ALP Ranchi 2014

VIZAAG Steel Fitter 2015

Ans : (a) Na₂CO₃ + AlSO₄ chemicals are used in foam type fire extinguisher.

Fire– The chemical reaction of fuel in the presence of oxygen is called fire. So three things are necessary for fire, fuel, oxygen and heat before going.



Foam type chemical are used to extinguish fires involving oily substances.

170. The cut chips of the machine should be removed from _____

- (a) Hand
- (b) Feet
- (c) Gloves
- (d) Brush

RRB ALP Ranchi 21.09.2003

Ans : (d) During machining the cut chips should be removed from the brush.

171. If these is a fire in the workshop, immediately stop it–

- (a) Water
- (b) Fire
- (c) Switch
- (d) None of these

RRB ALP Secunderabad 06.06.2010

NTPC Fitter 2014

Ans : (c) If there is a fire in the workshop, the main switch should be switched off immediately, then according to the type of fire, proper fire extinguisher should be used so that the fire can be controlled completely.

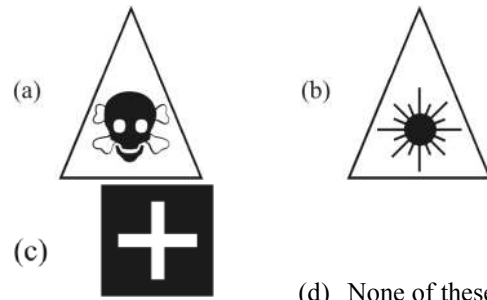
172. The ability to avoid electric shock depends on the age of the person and its physical condition–

- (a) Age
- (b) Ability
- (c) (a) and (b) both
- (d) None of these

RRB ALP Secunderabad 11.11.2001






Ans : (b) The ability to avoid electric shock depend on the age of the person and his physical ability.

173. Which signal is used for danger from poison?



(d) None of these

RRB ALP Secunderabad 29.06.2008

Ans : (a) Warning signs are displayed by making black pictures on a yellow background of a triangular shape.	
Warning	Symbol
	Poison danger
	Danger of electric shock poison danger
	General warning risk of danger
	Laser beam
	First Aid Available

174. Who can properly operate the machines?

- (a) Skilled human labor (b) Skilled engineer
(c) Both (a) and (b) (d) None of these

**RRB ALP Siliguri 2014
BHEL Hyderabad Fitter 2014**

Ans : (c) Proper operation of machines can be done by skilled human labor and skilled engineers.

175. Which of the following is a means of protection against carbonaceous fire?

- (a) Water (b) Sand
(c) Soil (d) All of these

RRB ALP Trivandrum 20.06.2004

Ans : (d) A fire which is kindled by wood or charcoal. It is called carbonaceous fire. To extinguish it, water, sand or soil is used. A part from this, soda acid extinguisher is also used to extinguish it. This called class 'A' fire.

176. What can be the result of a machine in the absence of complete information?

- (a) Refined (b) Accident
(c) Don't known (d) None of these

RRB ALP Ahamadabad 2014

Ans : (b) Whenever we talk about complete safety, it includes our own safety as well as the safety of machines and the safety of work area. Misuse of a machine or a tool leads to an accident.

177. Which of the following is the process involved in basic life spot?

- (a) Clearing the airways
(b) Restarting the breath
(c) Restarting the heart
(d) All of these

**RRB ALP Ahamadabad 17.10.2004
COAL India Fitter 2013**

Ans : (d) In common parlance, life spot is called first aid to save life. There are three actions in the basic life spot, which are denoted by the three letters A, B, C.

A → Airways
B → Breathing
C → Circulation

178. Which of the following is not the case of the accident?

- (a) Mushroom Head Cheese
(b) Wide Mouth Spanner
(c) Worn Vernier Calipers
(d) Tightening of saw blade

RRB ALP Ajmer 05.06.2005

Ans : (c) Worn vernier calipers are not the cause of the accident. Mushroom (flat head) chisels, wide open spanners, over tightening saw blades etc. can cause accidents.

179. Which of the following is not contained in a handbook?

- (a) Basic information
(b) Directional description
(c) Common defect
(d) Factory act

RRB ALP Ajmer 10.10.2004

CRPF Constable Tradesman 2016

Ans : (d) Basic information directional description and common faults are given in factory handbook and factory law is not given.

180. Match the columns–

List-I	List-II
Type of fire	Fuel
A. Class A fire	1. Gas and liquefied gas
B. Class B fire	2. Wood
C. Class C fire	3. Metals
D. Class D fire	4. Flammable liquids
(a) A–2, B–4, C–1, D–3	
(b) A–1, B–2, C–3, D–4	
(c) A–3, B–4, C–1, D–2	
(d) A–3, B–4, C–2, D–1	

RRB ALP Ajmer 23.05.2004

Type of Fire	Fuel
Class A fire	Wood
Class B fire	Flammable
Class C fire	Gas and liquefied gas
Class D fire	Metals

181. Range of current that produces a cardiac condition that causes instant death–

- (a) 10-20 milli ampere
(b) 50-100 milli ampere
(c) 100-110 milli ampere
(d) 20-50 milli ampere

RRB ALP Allahabad 03.08.2008

HAL Fitter 2015

Ans : (a) The threshold of electric current which produces the cardiac condition which causes immediate death is 10-20 milli amperes.

182. Which machine is not a dangerous machine as per the factories Act 1948, part 23?

- (a) Circular saw
(b) Milling machines used in metallurgical trades
(c) Power presses other than hydraulic press
(d) Grinding machines

RRB ALP Allahabad 09.12.2007

Ans : (d) Grinding machines is not a dangerous machine as per the factories Act 1948, part 23.

183. Cast iron specified as per Indian standard specifications, 'FG 200' means :

- (a) 2 Carbon content
- (b) While cast iron whose B.H.N. No. 200
- (c) Gray cast iron having highest compressive strength 200 N/mm²
- (d) Gray cast iron having minimum tensile strength of 200 N/mm²

RRB ALP Bangalore 25.01.2004

Ans : (d) Specified cast as per Indian standard specifications. Iron FG 200 refers to gray cast iron with a minimum tensile strength of 200 N/mm².

184. Types of extinguishers for class A fire–

- (a) Water filled extinguisher
- (b) Foam or dry power or CO₂
- (c) Specific powder
- (d) Halon, carbon dioxide, dry powder and evaporated liquid (CTC)

RRB ALP Bangalore 08.07.2007

Mazagon Dock Shipbuilders Ltd. 2013

Ans : (a) Extinguishers for class A fires include water filled extinguishers.

185. Which signboard should be used as a safety standard while doing electrical work?

- (a) Extremely hot-do not come in contact
- (b) Extremely dangerous
- (c) Strictly prohibited area
- (d) Hot-do not touch

RRB ALP Bangalore 15.07.2012

Ans : (b) While doing electrical work use extreme danger signboard as a safety standard.

186. The heat released is measured with the help of–

- (a) Energy meter
- (b) Thermometer
- (c) Calori meter
- (d) Anemo meter

RRB ALP Bhopal 06.06.2010

Ans : (c)

Energy meter – Electrical energy measurement
Thermometer – Temperature measurement
Calorimeter – Heat energy value air
Anemometer – Velocity measurement

187. In class A fire, the cause of fire is ____

- (a) Wood
- (b) Oil
- (c) Transformer
- (d) Chemical

RRB ALP Bhubneswar 14.06.2009

Ans : (a) Class-A Fire the cause of fire is wood, the following are–

Class	Reason
A Class	Wood, Paper, Leaves
B Class	Flammable, liquids are oil, petrol, diesel etc.
C Class	Propane, methane etc.
D Class	Magnesium, Titanium metal flame and electrical fire

188. As defined in the factories act, 1948 a week is a period of 7 days commencing from the midnight of–

- (a) Sunday
- (b) Monday
- (c) Saturday
- (d) Friday

RRB ALP Bhubneswar 15.07.2012

MES Automobile Tradesman 2015

Ans : (b) According to the interpretation of the week described in the factories Act 1948, it is a period of 7 days which starts from midnight of Monday.

189. Which of the following is helpful in preventing accidents?

- (a) Automatic safety guard
- (b) Interlock safety guard
- (c) Trip safety guard
- (d) All of the above

RRB ALP Bilaspur 15.07.2012

Ans : (d) The following measures were taken for safety in industrial units.

- (i) Automatic safety guard
- (ii) Interlocks safety guard
- (iii) Trip safety guard

190. Which of the following are the causes of industrial hazards and accidents?

- (a) Noise and vibration
- (b) Poor light and poor air circulation
- (c) Heat and humidity
- (d) All of the above

RRB ALP Chandigarh 14.09.2008

Ans : (d) Industrial hazards and accidents are caused by–

- (i) Noise and vibration
- (ii) Poor light and poor air circulation
- (iii) Heat and humidity

191. The Indian boilers Act, 1923 applies to–

- (a) All boilers
- (b) Boiler of capacity more than 100 liters
- (c) Boiler of capacity more than 1000 liters
- (d) All of the above

RRB ALP Chandigarh 15.07.2012

ISRO Technician-B Carpenter 27.11.2016

Ans : (b) The Indian boiler Act applies to boilers of capacity above 100 liters.

192. Which of the following device is used to encourage security?

- (a) Imposing heavy fines
- (b) Writing slogans
- (c) Stop work
- (d) All of the above

RRB ALP Chandigarh 25.05.2003

Ans : (b) Write propagation (slogans) device is used to encourage security.

193. Which of the following is true if an efficient process makes a product environmentally safe?

- (a) It is not profitable unless the cost of recycled material is low
- (b) It will be called light construction
- (c) Still it can be profitable
- (d) It is easier in a repetitive process than in a product focused process

RRB ALP Chennai 06.06.2010

Ans : (c) If a product is made environmentally safe through an efficient process, it can be profitable.

194. In which of the following classes is fire placed?

- (a) Two (b) One
- (c) Four (d) Three

RRB ALP Chennai 27.10.2002

Ans : (c) There are four qualities of fire which are A, B, C and D. 'A' class fire includes carbonaceous 'B' class oily 'C' class gaseous and 'D' class electrical fire.

195. Class 'B' consists of fire from _____

- (a) Gas (b) Electricity
- (c) Liquid (d) Wood or paper etc

RRB ALP Gorakhpur 08.10.2006

ISRO Technician-B Fitter 20.11.2016

Ans : (c) Oily substances (fires) come in class 'B' which are as follows; gasoline, kerosene, point thinner and propane etc. To extinguish class 'B' fires, extinguish flammable liquids by removing oxygen from the fire, thus preventing dangerous parts from reaching the ignition point.

196. Class 'D' consists of fire from _____

- (a) Electricity (b) Wood and paper
- (c) Gas (d) Liquids

RRB ALP Gorakhpur 11.10.2009

Ans : (a) Class 'D' is an electrical fire such as come under appliances, switches, electrical boxes or power tools etc. To extinguish this fire C.T.C. uses fire extinguisher.

197. Electrical fire can be extinguished by–

- (a) Water
- (b) Dry powder extinguisher
- (c) Soda acid extinguisher
- (d) C.T.C. fire extinguisher

RRB ALP Gorakhpur 12.10.2003

Ans : (d) C.T.C. fire extinguisher– Carbon tetrachloride and Bromochloro die floro methane are filed in this fire. It is used to extinguish electrical fires. Because its chemicals are electrical bad conductors. This gas is also harmful.

198. A gas fire can be extinguished by–

- (a) Dry powder fire extinguisher
- (b) C.T.C. fire extinguish
- (c) Water
- (d) All three of the above

RRB ALP Gorakhpur 14.04.2002

ISRO Technician-B Grinder 27.11.2016

Ans : (a) If fits with dry powder. These are also store pressure type or gas cartridge type. It is similar to water filled, the only difference is the nozzle. Their use is 'C' class fire means to extinguish the fire caused by gases.



Dry Powder Extinguishers

199. CO₂ is used to extinguish _____ type of fire–

- (a) Class 'A' (b) Class 'C'
- (c) Class 'D' (d) Class 'B'

RRB ALP Gorakhpur 21.10.2001

Ans : (c) Dry chemical extinguisher is used on electric fire. Usually plunger type. In this, sodium bicarbonate powder is extracted by carbon dioxide (CO₂) or nitrogen gas. This fire comes under 'D' category.

200. Foam extinguisher is used to extinguish the fire of _____

- (a) Class 'B' (b) Class 'D'
- (c) Class 'A' (d) Class 'C'

RRB ALP Guwahati 22.01.2006

Ans : (a) Foam Extinguisher– This type of extinguisher is used to extinguish oil fire. This fire comes in class 'B'. It contains soda bi carbonate solution n the outer C connector and aluminum sulphate in the inner connector. There is a solution of on its body, a brown colored hand of about 100 mm size is made.

201. Soda Acid Extinguisher is used to extinguish _____ type of fire–

- (a) Class 'D' (b) Class 'C'
- (c) Class 'B' (d) Class 'A'

RRB ALP Jammu-Kashmir 06.06.2010

ISRO Technician-B Motor Mechanic 27.11.2016

Ans : (d) Soda Acid Extinguisher– It is used to extinguish carbonaceous fire. In this comes class 'A' fire.

202. What should be done in case of fire int he workshop?

- (a) Watch quietly
- (b) Try to get out immediately
- (c) Switch off the electric main immediately
- (d) Inform the fire brigade immediately

RRB ALP Kolkata 02.11.2008

Ans : (c) In case of fire in the workshop, the mains draw should be stopped immediately. After that the fire brigade should be informed about the experiment immediately after coming out.

203. If there is darkness at the place of work due to power failure, then _____ should be done–

- (a) Do not create panic
- (b) Arrange alternative lighting
- (c) Use stairs to escape
- (d) All of the above

RRB ALP Kolkata 06.02.2005

Ans : (d) If there is a power failure at the work place and it becomes dark, then there should be no panic, alternative lighting should be arranged and then one should go out.

204. While using hammer, keep an eye on _____

- (a) On chisel head (b) On hammer
- (c) On job (d) None of the above

RRB ALP Kolkata 16.07.2006

ISRO Technician-B Plumber 27.11.2016

Ans : (c) Keep an eye on the job while using the hammer. Only then you can do the right thing on eye on the chisel head will result in cutting elsewhere on the job which will spoil the job. Hammers are usually made from high carbon steel.

205. For respiratory protection use _____

- (a) Exhaust Fan (b) Ceiling Fan
- (c) Artificial respirators (d) None of these

RRB ALP Kolkata 2014

Ans : (c) Artificial respiration should be used for respiratory protection.

206. Which of the following is not cause of accident?

- (a) Inattention to danger
- (b) Negligence
- (c) Regard for safety
- (d) Wrong use of equipment

RRB ALP Kolkata 29.09.2002

Ans : (c) Inattention to danger causes accident in workshop. Negligence and misuse of equipment can happen but when safety is respected, accidents are not the cause.

207. Where are dry chemical fire extinguishers used?

- (a) Electric fire
- (b) Oil fire
- (c) Wood fire
- (d) None of these

RRB ALP Malda 16.07.2006

ISRO Technician-B Turner 22.11.2016

Ans : (a) Dry chemical fire extinguishers are used for electrical fires. In this, sodium bicarbonate powder is thrown on fire with carbon dioxide or nitrogen gas.

208. On which fires is soda acid fire extinguisher used?

- (a) Wood fire
- (b) Petrol fire
- (c) Electric fire
- (d) None of these

RRB ALP Mumbai 03.06.2001

Ans : (a) Soda Acid Extinguisher– Soda acid fire extinguisher is used to extinguish carbonaceous fire (such as fire caused by wood, cloth and other solid flammable materials). Fire caused by electricity should not be extinguished by it, because the chemicals released by it are good conductors of electricity.

209. Match the columns–

Displayed in color	Mark
A. Red	1. Warning
B. Yellow	2. Prescriptive
C. Blue	3. Prohibitive
D. Green	4. Rescue from emergency
(a) A–3, B–1, C–2, D–4	
(b) A–1, B–2, C–4, D–3	
(c) A–2, B–3, C–4, D–1	
(d) A–1, B–2, C–3, D–4	

RRB ALP Mumbai 05.06.2005

DMRC (Maintainer) Fitter (Evening) 15.02.2017

Ans : (a) Displayed in color	Mark
Red	Prohibitive
Yellow	Warning
Blue	Prescriptive
Green	Rescue from emergency

210. Describe the processes of the attached objects shown in the figure–



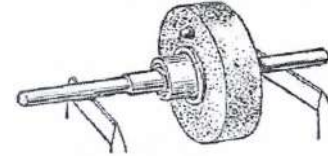
- (a) The diameter of a cylindrical object is being measured

- (b) The vertical inclination of the object being measured
- (c) The height between the surfaces of two objects is being measured
- (d) The flatness of the object is being measured

RRB ALP Mumbai 14.06.2009

Ans : (a) The diameter of a cylindrical object is being measured by a micrometer.

211. Identify the process shown in the figure–

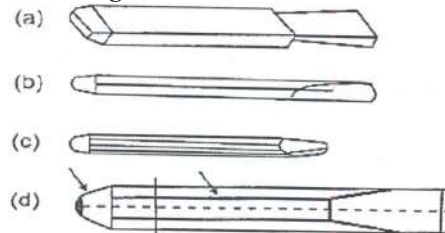


- (a) Wheel grinding
- (b) Wheel balancing
- (c) Crank grinding
- (d) Tape grinding

RRB ALP Mumbai 15.07.2012

Ans : (b) Wheel balancing in the figure is shown. by grinding wheel.

212. Identify the correct sequence of chisels shown in the figure–



- (a) (a) Wedge (b) Cross cut (c) Flat (d) Half round
- (b) (a) Wedge (b) Flat (c) Cross cut (d) Half round
- (c) (a) Wedge (b) Half round (c) Cross cut (d) Flat
- (d) (a) Cross cut (b) Wedge (c) Flat (d) Half round

RRB ALP Mumbai 16.07.2006

DMRC (Maintainer) Fitter (Morning) 15.02.2017

Ans : (c) The correct order of chisels is–

- (a) Wedge (b) Half round (c) Cross cut (d) Flat

213. Which of the following notation is used to denote a regulator unit ?

- (a) 3
- (b) 0.003
- (c) 0.3
- (d) 3.0

RRB ALP Mumbai 05.01.2003

Ans : (c) 0.3 Notation is used to denote a regulator unit.

214. The welding symbol for fillet weld is?

- (a)
- (b)
- (c)
- (d)

RRB ALP Muzaffarpur 15.02.2009

Ans : (a) Welding basic symbols and sectional representation symbols of nailing are as follows.

Form of Weld	Sectional Representation	Symbol
Fillet		
Square Butt		
Single-V Butt		
Double-V Butt		
Single-U Butt		
Double-U Butt		

215. In which category does the symbol shown in the figure belong?



- (a) Information sign (b) Warning Sign
(c) Prohibition Sign (d) Mandatory Sign

RRB ALP Patna 04.02.2007
DMRC (Maintainer) Fitter 20.07.2014

Ans : (c) It is advised not to do any wrong work by these type of signs, due to which accidents are less in factories. The shape of the symbols is circular, so that the outer roundness of the circle is in red color and the shape made inside is in black colour. There is a cross mark on it.



Prohibition Signs

216. The symbol shown in the figure belongs to the class ____



Risk of Fire

- (a) Mandatory Sign (b) Warning Sign
(c) Information Sign (d) Prohibition Sign

RRB ALP Patna 11.11.2001

Ans : (b) These are called warning signs. Their shape is triangular whose background is yellow and the symbol and border are in black. These are used for different types of warning. These are the following, below which their use or purpose is also written.



Warning Signs

217. In which category does the symbol shown in the figure belong–



- (a) Mandatory Sign
(b) Information Sign
(c) Prohibition Sign
(d) Warning Sign

RRB ALP Patna 2014
DMRC (Maintainer) Fitter 24.12.2006

Ans : (a) Seeing such signs, we are reminded of the safety related work, that is, they remind as about the safety to be adopted before or after the work. Like wearing glasses to protect the eyes. Wear shoes to protect the feet etc.



Mandatory Signs

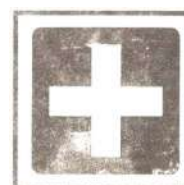
218. The symbol shown in the picture belongs to the following categories–



- (a) Prohibition Sign (b) Warning Sign
(c) Mandatory Sign (d) Information Sign

RRB ALP Ranchi 04.09.2005
BMRC Maintainer Fitter 2016

Ans : (d) Information related to safety is given by these types of signs. Their shape is square. Their background is green and the symbol is in white colour. The picture gives information about first aid.



02.

HANDS AND POWER TOOLS

1. What type of chisel is used to square up materials at a corner?

- (a) Diamond pointed chisel
- (b) Flat chisel
- (c) Cross cut chisel
- (d) Half round nose chisel

**RRB ALP Mechanic Diesel 23/01/2019 Shift-II
LMRC (Maintainer) Fitter 16.03.2016**

Ans. (a) : Diamond pointed chisel is used for levelling materials at corner.

- **Flat chisel** is used to remove materials from large flat surfaces and for removing extra metals from a weld joint and slope through chipping.
- **Cross cut chisel** is used for cutting keyways and slots.
- **Half round nose chisel** is used for cutting curved slots.

2. Identify the instrument of given figure :



- (a) Ratchet spanner
- (b) Scale
- (c) Screw driver
- (d) Torque wrench

RRB ALP Mechanic Diesel 23/01/2019 Shift-II

Ans. (a) : Ratchet spanner is used to tighten and loosen nuts and bolts. It is preferred where space for full rotation is limited because it is not needed to be removed from the nut and realigned in between turns.

3. Which type of file is used for internal curved surfaces?

- (a) Round file
- (b) Semi round file
- (c) Triangular file
- (d) Square file

RRB ALP Mechanic Diesel 23/01/2019 Shift-II

Ans. (b) : Half round file is used for filing internal curved surfaces.

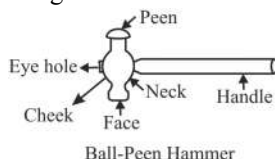
- Its bottom part is flat & upper part is semicircular.
- It is used for enlarging internal curved surfaces and holes.
- Round file is used for enlarging circular holes.

4. Which part of the ball-peen hammer is used for shaping and forming work?

- (a) Peen
- (b) Face
- (c) Cheek
- (d) Wedge

**RRB ALP Mechanic Diesel 23/01/2019 Shift-I
Noida Metro Maintainer Fitter 2017**

Ans. (a) : Ball-peen hammer is a type of peening hammer used in metalworking. It has two heads. One flat and other peen rounded peen head is used for shaping and forming work.



Ball-Peen Hammer

5. A torque wrench is used to :

- (a) tighten bolts and nuts
- (b) tighten wires
- (c) tighten brakes
- (d) adjust bolts and nuts

RRB ALP Mechanic Diesel 23/01/2019 Shift-I

Ans. (a) : A torque wrench is a tool used to apply a specific torque to a fastener such as a nut, bolt and brakes. It is used where the tightness of screws and bolts is crucial.

So A torque wrench is used to tighten bolts and nut.

6. Which of the following devices is used to give the specified torque value for bolt and nuts?

- (a) Box spanner
- (b) Ring spanner
- (c) Torque wrench
- (d) Pipe wrench

RRB ALP Mechanic Diesel 21/01/2019 Shift-I

Ans. (c) : A torque wrench is used to give the specified torque value for bolt and nuts. It is usually in the form of a socket wrench with special internal mechanisms.

- It is used where the tightness of screws and bolts is crucial.

7. What steel is a file made from?

- (a) High chromium steel
- (b) Forged steel
- (c) High carbon steel
- (d) Mild steel

**Cochin Shipyard T.A. Mechanic Diesel 12.1.2020
DRDO Fitter 2016**

Ans. (c) : Steel files are made from high carbon steel.

- Filing is the process of removing small amount of material from the surface of any of job or machine using a file.

8. This V-block is used for giving support to long shaft at Marking table.

- (a) Single level Single Groove V-Block
- (b) Single level Double Groove V-Block
- (c) Paired V-Block
- (d) Magnetic V-Block

RSMSSB Jr. Inst. Mechanic Diesel 23.12.2019

Ans. (c) : Pair-V-Block— Paired-V-block exists in a pair of same size. These are identified by a number or letter assigned by manufacturer.

- This type of 'V' block is used to support a long shaft on a marking table.

9. Combination pliers are not used for

- (a) Cutting
- (b) Twisting
- (c) Hammering
- (d) Grapping

RSMSSB Jr. Inst. Mechanic Diesel 23.12.2019

Ans. (c) : Combination pliers are not used for hammering.

- It is used for cutting, twisting and grapping.

10. Circlip plier is also known as

- (a) snap ring plier (b) retaining ring plier
- (c) (a) and (b) (d) None of these

RSMSSB Jr. Inst. Mechanic Diesel 23.12.2019
DRDO Turner 2011

Ans. (c) : Circlip plier is also known as snap ring plier and retaining ring plier.

- Circlip pliers is used in assembly work for fitting or removing circlips.
- This pliers is mainly of two types
 - (i) Internal circlip pliers
 - (ii) External circlip pliers.

11. Which plier is used to hold the component in a small or narrow place?

- (a) Combination plier (b) Side Cutting plier
- (c) Long Nose plier (d) Multigrip plier

RSMSSB Jr. Inst. Mechanic Diesel 23.12.2019

Ans. (c) : Long nose pliers is used for holding the wire in narrow places which are difficult to reach.

- It is used for bending and cutting thin wires.

12. The manually operated jack is called a _____.

- (a) Hydraulic jack (b) Screw jack
- (c) Pneumatic jack (d) None of the above

MP ITI T.O. Mechanic Diesel 08.11.2016

Ans. (b) : Manually operated jack is called screw jack.

- It is commonly used to lift moderately and heavy weights.

13. Name the tool used to take out leftovers of a gasket between two assembled parts .

- (a) Scraper (b) Chisel
- (c) Knife (d) Hacksaw

MP ITI T.O. Mechanic Diesel 08.11.2016
DRDO Machinist 2016

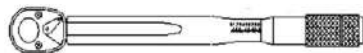
Ans. (a) : Scraper is used on a job after machining for scraping off any leftover hard spots.

- These tools are made of tool steel or alloy steel and their cutting edge is hardened and tempered.

Types of scraper–

- (i) Flat scraper
- (ii) Triangular scraper
- (iii) Hook scraper
- (iv) Half round scraper
- (v) Double handle scraper.

14. What is the name of the tool?

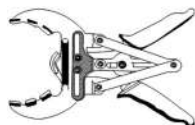


- (a) Dial type torque wrench
- (b) Scale type torque wrench
- (c) Ratchet type torque wrench
- (d) Torsion type torque wrench

NCVT NIMI Mechanic Diesel 2021

Ans. (b) : Name of the tool in given figure is scale type torque wrench.

15. What is the name of the tool?



- (a) Torque wrench
- (b) Piston ring compressor
- (c) Piston ring expander
- (d) Circlip player

NCVT NIMI Mechanic Diesel 2021
DRDO Motor Mechanic 2016

Ans. (c) : Given tool is piston ring expander.

- It is used to enable fast installation or removal of piston rings.

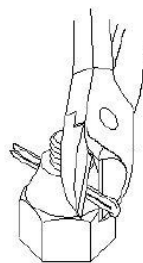
16. What are tools are used to remove the drills and sockets from the machine spindle?

- (a) Screw driver and hammer
- (b) Punch and hammer
- (c) Drift and hammer
- (d) Drift and hammer

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (d) : Drift and hammer are used to remove the drills and sockets from the machine spindle.

17. What is the name of the plier?

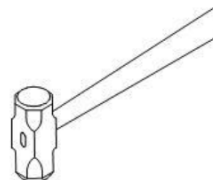


- (a) Side cutting plier (b) Nose plier
- (c) Circlip plier (d) end cutting

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (a) : Side cutting plier– This plier is use for cutting fine wires and for pulling the wire from narrow places.

18. What is the use of lump hammer ?



- (a) Strike the metal (b) Punch the metal
- (c) Spread the metal (d) Light demolition work

NCVT Mechanic Diesel 01.11.2019 Shift-II
DRDO Mechanic Diesel 2016

Ans. (d) :

- Lump hammer is used for light demolition work.
- It is commonly used in domestic work.
- This is also called a club hammer.

19. The tool which is used to remove gear, bearing, wheels and pulleys from their attaching components is _____?

- (a) Screw driver (b) Monkey plier
- (c) Pullers (d) Hammer

NCVT NIMI Mechanic Diesel 2019

Ans. (c) : The tool which is used to remove gear, bearing, wheels and pulleys from their attaching components is pullers.

- This is made of mild steel.

20. The first priority when working with a hand tool is?
- Don't make any mistakes
 - Watch the other people around
 - Always thinking about safety
 - None of these

NCVT NIMI Mechanic Diesel 2019

Ans. (a) : The first priority when working with a hand tool is don't make any mistake.

- Inspect all power and other hand tools thoroughly before each use.

21. Which instrument can be used to check radial clearance?

- Dial indicator
- Deviation gauge
- Feeler gauge
- Wire gauge

NCVT NIMI Mechanic Diesel 2019

RSMSSB Jr. Inst. Mechanic Diesel 23.12.2019

Ans. (c) : Feeler gauge used to check radial clearance.

22. A rough file is used :

- on non irregular jobs
- to reduce the metal rapidly
- on wood
- if smooth file is not suitable

KPSC Inst. Mechanic Diesel 17.01.2017

Indian Ordnance Factory Fitter 10.09.2017

Ans. (b) : A rough file is used to reduce the metal rapidly.

- It is mostly used for trimming the rough edges of soft metal casting.

23. Bench vice is normally made of :

- Cast iron
- Cast steel
- Mild steel
- High speed steel

KPSC Inst. Mechanic Diesel 17.01.2017

Ans. (a) : Bench vice is normally made of cast iron.

- It is also known as engineer vice.

24. The process of making leak proof joint after riveting is called :

- Brazing
- Soldering
- Folding
- Caulking and Fullering

KPSC Jr. Inst. Mechanic Diesel 26.09.2018

Ans. (d) : The process of making leak proof joint after riveting is called caulking and fullering.

25. When a nut is tightened by placing a washer below it, the bolt will be subjected to?

- Tensile stress
- Compressive stress
- Shear stress
- None of these

ISRO Tech-B Mechanic Diesel 27.11.2016

Indian Ordnance Factory 2016

Ans. (a) : When a nut is tightened by placing a washer below it the bolt will be subjected to tensile stress.

26. The edges made by bending is called?

- Slit
- Notch
- Hem
- None of these

HPSSC Mechanic Diesel (Instructor) 2018

Ans. (c) : The edge made by bending is called hem (hemming).

- This is method of bending and crushing the edge of a work, mainly for securing product strength and for safety measures.

27. File raised from middle is called?

- Breadth
- Convexity
- Taper
- All of these

HPSSC Mechanic Diesel (Instructor) 2018

Ans. (b) : File raised from middle is called convexity.

- This elevated part is called the convexity of file.

28. End of spanner set make an angle of ____ with axis.

- 20°
- 15°
- 30°
- 6°

HPSSC Mechanic Diesel (Instructor) 2018

Indian Ordnance Factory (Itarsi) 08.05.2016

Ans. (b) : End of spanner set make an angle of 15° with axis.

- Spanner is used for opening and tightening any type of nut and bolt.
- A spanner set has 6, 9, 12 or 36 spanners.
- It is made of high tensile steel or alloy steel.

29. Leg vice body is made of ?

- Mild Steel
- Cast Iron
- Wrought Iron
- High Carbon Steel

HPSSC Mechanic Diesel (Instructor) 2018

Ans. (c) : Leg vice body is made of wrought iron.

- Vice is a work holding device.
- Size of the vice is selected according to the width of its jaw.

30. Number of notches in ring spanner may be ?

- 10
- 14
- 8
- 12

HPSSC Mechanic Diesel (Instructor) 2018

Ans. (d) : Number of notches in ring spanner may be 12.

- Spanner is made of high tensile steel or alloy steel.

31. Which punch is used for making witness marks?

- 60 degree punch
- 30 degree punch
- Center punch
- 90 degree punch

HPSSC Mechanic Diesel (Instructor) 2018

Indian Ordnance Factory 2015

Ans. (a) : 60 degree punch is used for making witness marks.

- Punches are made up of high carbon steel, hardened and ground.

32. Scriber are made of .

- Cast Iron
- Mild Steel
- High Carbon Steel
- Stainless Steel

HPSSC Mechanic Diesel (Instructor) 2018

Ans. (c) : Scriber are made of high carbon steel.

- In layout work it is necessary to determine the dimensions before filing or turning of the job.

33. Name the type of jig in which a base plate is not available.

- plate jig
- box jig
- trunnion jig
- latch jig

HPSSC Mechanic Diesel (Instructor) 2018

Ans. (a) : Base plate is not available in plate jig.

- The plate jig is employed to drill holes on large parts, maintaining accurate spacing with each other.

34. The face plate is made of.

- (a) Carbon Steel (b) Tool Steel
(c) Wrought Iron (d) Cast Iron

**HPSSC Mechanic Diesel (Instructor) 2018
Indian Ordnance Factory 2014**

Ans. (d) : The face plate is made of cast iron.

- It has rectangular and 'T' shaped slots on its face to hold the job.
- The work piece to be machined is clamped in the appropriate position on the face of the face plate with the help of bolts.

35. Marking of job is done by keep it on surface plate, that time we take reference surface:

- (a) Top surface of a job
(b) Marking surface plate
(c) Axis of job
(d) Drawing of a job

RRB ALP Ranchi 08.07.2007

Ans. (b) : Marking of job is done by keep it on surface it on surface plate, that time we take reference surface from surface plate.

The surface plate is machined to fine limits and is used for testing the flatness of work piece. surface plate is made of cost iron.

36. Slots are made in angle plate. Purpose of making it :

- (a) By lifting by hook
(b) For lighten a weight of a plate
(c) Centring a job
(d) For giving space to clamping bolts

RRB ALP Ranchi 19.01.2003

Ans. (d) : Purpose of slots for giving space to clamping bolts in angle plate. Angle plate is cost iron plate having two races machined to make them absolutely at right angles to each other. Holes and slots are provided on both faces so that it may be clamped on a faceplate and hold work price on the other face by bolt and clamps

37. Two pins fixed in Universal Marking Block called.

- (a) Guide pin (b) Adjusting pin
(c) Fine Adjusting pin (d) Snug pin

**RRB ALP Ranchi 2014
Indian Ordnance Factory 2013**

Ans. (a) : Two pins fixed in Universal marking block is called as guide pin.

Guide pins are cylindrical rod used in assembly to align components. The mechanical fastener may help ensure stability limit contact damage. and maintain precise positioning

38. For making divider pointed which method is used?

- (a) Grinding (b) Oil stone
(c) Filing (d) Chieseling

RRB ALP Ranchi 21.09.2003

Ans. (b) : Oil stone method is used for marking divider pointed.

a stone with a fine grain lubricated with oil and used for sharpening cutting tool.

Oil stones are made from one of three materials Novaculite, Aluminum oxide, Silicon Carbide

39. Which type of tool is shown in following Fig. 2.1



Fig 2.1

- (a) Angle plate (b) Adjustable angle plate
(c) Scriber (d) Surface plate

RRB ALP Secunderabad 06.06.2010

Ans. (b) : Adjustable angle plate is shown in Fig.

In adjustable angle plate is used for change the angle between the two plate as per our requirements.

40. Which type of tool is shown in following Fig. 2.2

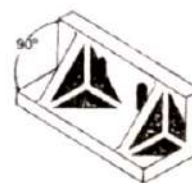


Fig 2.2

- (a) Surface plate
(b) Adjustable angle plate
(c) Scriber
(d) Fixed angle plate

**RRB ALP Secunderabad 11.11.2001
Indian Ordnance Factory 2012**

Ans. (d) : Fixed angle plate is shown in Fig.

Angle plates have two plane surfaces, machined perfectly flat and right angles. Generally it is made of grained cast iron or steel.

These angle plates are invaluable for accurate work in tool room, right angle machining & grinding.

41. In the following fig. 2.3 'V' Block is shown. In which the angle of 'V' slot is 90° and the other angle of 'V' slot is

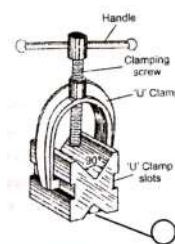


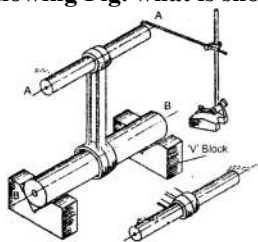
Fig 2.3

- (a) 180° (b) 20°
(c) 127° (d) 120°

RRB ALP Secunderabad 29.06.2008

Ans. (d) : In the Fig. 2.3 'V' Block is shown. In which the angle of 'V' slot is 90° and the other angle of 'V' slot is 120°.

42. In the following Fig. what is showing?

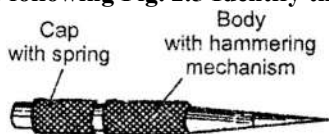


- (a) Use of punch
- (b) Use of Universal Marking Block
- (c) Scriber
- (d) Use of Scale

RRB ALP Siliguri 2014

Ans. (b) : Showing is the Fig, the use of universal marking Block.

43. In the following Fig. 2.5 Identify the tool.



- (a) Drift punch
- (b) Automatic punch
- (c) Bell punch
- (d) Pin punch

RRB ALP Trivandrum 20.06.2004
SAIL Bokaro Steel Plant 2016

Ans. (b) : In the Fig. Automatic punch is shown. Three Common types of punches center punch, prick punch, pin punch and drift punch.

44. What is a used of straight peen hammer ?

- (a) By it channel groove are made
- (b) By it depth are made
- (c) A sheet is flattened by it
- (d) Straighten angles

RRB ALP Ahamadabad 2014

Ans. (c) : Straight peen hammer is used in flatten sheet. Straight peen hammer is similar to cross peen hammer. but its peen is in line with the hammer handle. It is used for swaging riveting in restricted places and Streching.

45. For clamping one or more small parts, what can be used?

- (a) Vice clamp
- (b) Clamp
- (c) Bench vice
- (d) None of above

RRB ALP Ahamadabad 17.10.2004

Ans. (b) : Clamp is used for holding one or more small parts.

It is made of steel bar of T-section, with malleable iron fitting and a steel screw used for holding small works.

Special Vices

- (1) Tool makers clamp
- (2) Hydraulic Vice
- (3) Pneumatic Vice
- (4) 'C' Clamp

46. Which of the following is used by watch maker?

- (a) Machine vice
- (b) Pipe vice
- (c) Pin vice
- (d) Hand vice

RRB ALP Ajmer 05.06.2005

SAIL Durgapur Steel Plant 05/09/2014

Ans. (c) : Pin vice is used by watch maker.

Pin vice is used for holding a job with a small diameter. A handle to hold the vice is attached on one of its end, and a small collect chuck is attached on other end. the set (of three) of jaws fitted in the chuck are operated by turning the handle.

47. What is used for pullout nails?

- (a) Slip joint plier
- (b) Pincer
- (c) Long nose plier
- (d) Vice grip plier

RRB ALP Ajmer 10.10.2004

Ans. (b) : Pincer is used for pullout nails.

Pincer pliers is also called a nipper .It is mainly used for removing a nail or pin etc. from wood.

■ Long nose pliers is similar to a flat nose pliers, but its jaws are longer. it is used for bending and cutting thin wires. It is used for holding the wire in narrow places which are difficult to teeth

48. Commonly following plier is used-

- (a) Slip Joint Plier
- (b) Combination Plier
- (c) Long Nose Plier
- (d) Gas Plier

RRB ALP Ajmer 23.05.2004

Ans. (b) : Combination plier is Commonly used. It has a jaw which is flat from the front and tapered at the sides. A cut is made inside its jaw for easily holding wire. It is used for cutting, bending and making joint in a wire.

49. Which type of Plier are shown in following Fig.



Fig

- (a) Gas Plier
- (b) Slip joint plier
- (c) side cutting plier
- (d) Vice grip plier

RRB ALP Allahabad 03.08.2008

VIZAAG Steel Fitter 2015

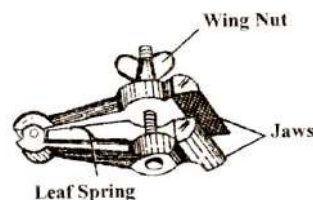
Ans. (b) : Slip joint plier is shown in Fig.

It is used as a Combination plier. It is used for holding objects with a large diameter.

■ Side cutting is used for cutting fine wires and for pulling the wire from narrow place.

■ Round Nose pliers is circular . It is used for giving a loop shape to wires

50. Which type of Vice are shown in following Fig



- (a) Bench Vice
- (b) Pin Vice
- (c) Machine Vice
- (d) Hand Vice

RRB ALP Allahabad 09.12.2007

Ans. (d) : Hand vice are shown in Fig.

Hand vice is used for holding small objects such as, screw, rivet, keys, small drill etc. these objects cannot be comfortably hold by bench or other big vice.

51. The eyehole of a hammer is made oval and tapering towards the centre so as to:

- (a) Reduce its weight
- (b) make it easy to manufacture
- (c) Reduce effort while using it
- (d) Wedge the handle

RRB ALP Bangalore 25.01.2004
NTPC Fitter 2014

Ans. (d) : The eyehole of a hammer is made oval and tapering towards the centre so as to wedge the handle. Hammer is used for giving different shapes to a sheet. Hammers are made of cast steel

52. What is the name of the tool shown in figure given below

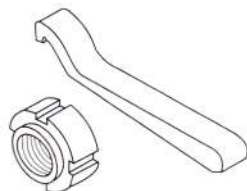


- (a) Face wrench
- (b) Hook wrench
- (c) Pin wrench
- (d) Face pin wrench

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (a) : Face wrench is shown in the fig. Wrench is like a spanner, but this tool is adjustable. The distance between their jaws can be decreased or increased. They are used for tightening and opening the nuts and bolts.

53. What is the name of the tool shown in figure given below ?



- (a) Face wrench
- (b) Hook wrench
- (c) Pin wrench
- (d) Face pin wrench

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (b) : Hook wrench is shown in fig. Hook wrenches are used to tighten loosen or hold machinery components that are round but also notched or multifaceted, such as lock nuts and pipe fittings.

54. The tool used to flatten the metal around a punched hole is.....

- (a) Ball peen hammer
- (b) Riveting hammer
- (c) Setting hammer
- (d) Sledge hammer

RRB ALP Bangalore 08.07.2007
BHEL Hyderabad Fitter 2014

Ans. (a) : Ball Peen hammer is used to flatten the metal around a punched hole.

Ball peen hammer:- The peen of this hammer is spherical like a ball and its face is flat. Generally, this hammer is used for standard work in the workshop. It is used in marking chipping riveting etc.

55. What tool should be preferred when cylinder head bolts are to be tightened ?

- (a) Open ended spanner
- (b) Torque spanner
- (c) Ring spanner
- (d) Adjustable spanner

RRB ALP Bangalore 15.07.2012

Ans. (b) : Torque spanner should be preferred when cylinder head bolts are to be tightened.

Spanner is used for opening and tightened any type of nut and bolt.

Type of spanner-

(1) Single ended spanner	(2) Double ended spanner
(3) Ring Spanner	(4) Socket spanner
(5) Box spanner	(6) Magneto spanner
(7) Adjustable spanner	(8) Spark plug spanner
(9) T- spanner	(10) Combination spanner
(11) Allen key	

56. Why is slight convexity given on the face of a hammer ?

- (a) To make striking effective
- (b) To avoid digging of the edge
- (c) To allow even loading on striking
- (d) To prevent damage to work surface

RRB ALP Bhopal 06.06.2010

Ans. (b) : Slight convexity is given on the face of a hammer because to avoid digging of the edge.

57. Where will be the weight of a hammer stamped?

- (a) Face
- (b) Peen
- (c) Cheek
- (d) Eye hole

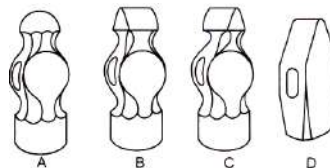
RRB ALP Bhubneswar 14.06.2009
COAL India Fitter 2013

Ans. (c) : The weight of a hammer will be stamped on cheek.

Hammer is manufactured by medium carbon steel, forging steel, cast steel etc. It has four main parts- Surface, peen, cheek eye

Cheek parts holds the tool together and also receives the most stress.

58. In the figure given below, identify cross peen hammer.



- (a) Hammer A
- (b) Hammer B
- (c) Hammer C
- (d) Hammer D

RRB ALP Bhubneswar 15.07.2012

Ans. (c) : In the figure given below, cross peen hammer is shown in Fig. C.

■ **Cross peen hammer:-** The face of this hammer is as flat as that of a ball pin hammer but peen is shaped like an inverted 'V'

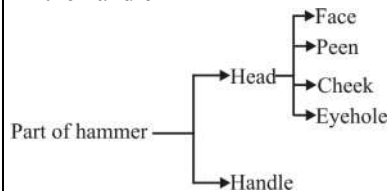
- The axis of this peen is go to the handle
- The weight ranges from 0.125 to 1.5 kg

59. What is the purpose of the eye hole in a hammer ?

- (a) To strike the job (b) To fix the handle
(c) To reduce weight (d) To stamp the details

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (b) : The purpose of the eye hole in a hammer is fix the handle



Head- It is made of drop forged carbon steel. It must be capable of absorbing shock

Face- Main Component of the hammer by which job is struck.

Peen :- The other side of side the face is called peen.

Check:- The middle part of the hammer.

Eyehole:- It is provided for fixing the handle.

60. What is the purpose of using mallets?

- (a) To do riveting operation
(b) To strike on soft metal
(c) To strike on hard metal
(d) To spread metal to all sides

NCVT Mechanic Diesel 01.11.2019 Shift-II

CRPF Constable Tradesman 2016

Ans. (b) : Mallet is used to light strike on sheet metal for bending and winding.

It is made of hard wood or hard rubber.

It is used in Carpentry work.

61. Which screwdriver is used in limited space ?

- (a) Cross-recess screwdriver
(b) Ratchet screwdriver
(c) Stubby screwdriver
(d) Offset screwdriver

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (c) : Stubby screwdriver is used in limited space. Screw driver is used for opening and tightening those screw that are fixed in the machine elements.

It has three main parts-

(1) Handle (2) Shank (3) Blade

62. The peen of a cross peen hammer is:

- (a) Angular to the handle
(b) Straight to the handle
(c) Cross to the handle
(d) Bent towards the handle

RRB ALP Bilaspur 15.07.2012

Ans. (c) : The peen a cross peen hammer is cross to the handle.

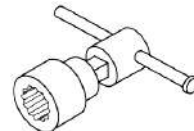
■ This hammer is used for propagating metal in one direction along the line of strike

■ The hammer face is flat and peen is built into the cross of the handle.

■ It is mostly used for making grooves in sheet job and for impacting on inner bend of sheet job while folding it.

■ This weight is 0.125 to 1.5 kg

63. What is the name of the spanner shown in figure given below?



- (a) Open spanner (b) Tubular spanner
(c) Socket spanner (d) Ring spanner

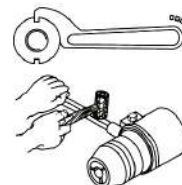
RRB ALP Chandigarh 14.09.2008

HAL Fitter 2015

Ans. (c) : Socket spanner is shown in figure.

A Square hole is cut on one side of the block for attaching the tommy bar, and side slots are cut on the other side similar to ring spanner. They are used in places where we cannot use ring spanner.

64. What is the name of the spanner shown in figure given below ?

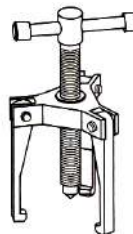


- (a) Socket spanner (b) Tubular spanner
(c) Hook spanner (d) Adjustable spanner

RRB ALP Chandigarh 15.07.2012

Ans. (c) : Hook Spanner is shown in fig.

65. What is the name of the tool shown in figure given below?



- (a) Jack (b) Puller
(c) Wrench (d) Extractor

RRB ALP Chandigarh 25.05.2003

Ans. (b) : Gear puller tool is shown in fig

These are used for removing the gear from the shaft these are available in different designs. The gear is removed by inserting the gear puller in the shaft or hole. It has two or three jaws. These jaws are adjustable.

66. What is the working medium of pneumatic tools?

- (a) Oil (b) Air
(c) Water (d) Kerosene

RRB ALP Chennai 06.06.2010

Mazagon Dock Shipbuilders Ltd. 2013

Ans. (b) : Air is the working medium of pneumatic tools. pneumatic tools are the tools used in an automobile workshop in works related to compressed air such as filling air in tyre, removing sand, dust etc.

The following Pneumatic tools are mainly used in a workshop

■ Air Impact wrench.

■ Air Ratchet

■ Air chisel

67. What is the name of the screw driver shown in figure given below?



- (a) Recess screwdriver (b) Ratchet screwdriver
(c) Stubby screwdriver (d) Offset screwdriver

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (b) : Ratchet screwdriver is given figure. It is used for turning the screw in narrow places where it is difficult to reach. Less effort is required for turning this screw driver. This screw driver can tighten screws more quickly compared to other types.

68. Which type of hammer is used for smoothing and finishing a surface after it has been roughed out to the required shape ?

- (a) Stretching hammer
(b) Planishing hammer
(c) Cross peen hammer
(d) Engineer's ball peen hammer

RRB ALP Chennai 27.10.2002

Ans. (b) : Planishing hammer is used for smoothing and finishing a surface after it has been roughed out to the required shape.

69. What is the weight of hammer used for marking purposes?

- (a) 200 grams (b) 250 grams
(c) 300 grams (d) 450 grams

RRB ALP Gorakhpur 08.10.2006

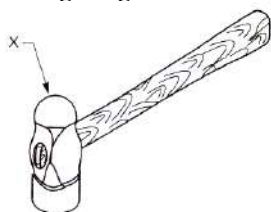
MES Automobile Tradesman 2015

Ans. (b) : 250 grams weight of hammer used for marking purposes.

Ball peen hammer is used in marking, chipping, riveting etc.

Straight peen hammer is also used in making tube and channels in jobs made out of sheet metal. As per Indian Standard, that varies from 0.125 kg to 1.50 kg.

70. What is the name of the part of the hammer marked 'X' in figure given below?



- (a) Face (b) Peen
(c) Cheek (d) Eye hole

NCVT Mechanic Diesel 01.11.2019 Shift-II

Ans. (b) : Peen is the part of the hammer marked 'X' in figure.

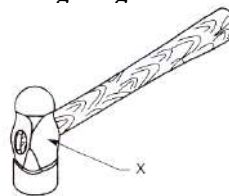
Major parts of hammer—

There are two major parts of a hammer— head and handle.

Head—It has three parts—

1. Face slightly protruding part for striking.
2. Peen
3. Cheek.

71. What is the name of the part of the hammer marked 'X' in figure given below?



- (a) Cheek (b) Wedge
(c) Face (d) Eye hole

NCVT Mechanic Diesel 01.11.2019 Shift-II

ISRO Technician-B Carpenter 27.11.2016

Ans. (a) : Cheek is the part of the hammer marked 'X' in figure given.

Parts of hammer—

1. Head, 2. Handle.

Parts of head—

1. Face, 2. Peen,
3. Cheek—The softer part in the middle of a hammer head

72. Phillips screw driver is used when—

- (a) More finished work is required
(b) Less finished work is required
(c) Rough work is required
(d) Any type of work is required

RRB ALP Gorakhpur 11.10.2009

Ans. (a) : Phillips screw driver is required for more finish work.

The shape of the tip of this screw driver is cross shaped. The tip has four flats ends and their heads are tapered at 53°. These four ends are available in different sizes.

73. Screws and bolts which are broken below the surface, are removed by—

- (a) Hammer and chisel
(b) Screw driver
(c) Pliers
(d) Screw driver extractors

RRB ALP Gorakhpur 12.10.2003

Ans. (d) : Screws and bolts which are broken below the surface, are removed by screw driver extractors.

74. Best spanner for automobile work is—

- (a) Open ended type (b) Combination type
(c) Ring type (d) Socket type

RRB ALP Gorakhpur 14.04.2002

ISRO Technician-B Fitter 20.11.2016

Ans. (d) : Best spanner for automobile work socket type.

Spanner is used for opening and tightening any type of nut and bolt. It is made of high tensile steel or alloy steel.

Type of spanner—

1. Single ended spanner
2. Double ended spanner
3. Ring spanner
4. Socket spanner

5. Box spanner
6. Magneto spanner
7. Adjustable spanner
8. Spark plug spanner
9. T- spanner
10. Combination spanner
11. Allen key.

75. For tightening the cylinder head bolts, we should prefer to use–

- (a) Open ended spanner
- (b) Torque wrench
- (c) Ring spanner
- (d) Adjustable spanner

RRB ALP Gorakhpur 21.10.2001

Ans. (b) : For tightening the cylinder head bolts, we should prefer to use torque wrench.

A torque wrench is a tool used to control and apply a specific torque to a fastener such as a bolt or a nut. It is a fundamental element in general mechanics, fire changing operation.

76. Two way pliers is necessary to operate a–

- (a) Castle nut
- (b) Wring nut
- (c) Locking nut
- (d) Circlip

RRB ALP Guwahati 22.01.2006

Ans. (d) : Two way pliers is necessary to operate a circlip.

Circlip plier is used in assembly work for sitting or removing circlips. This pliers is mainly of two types–

1. Internal circlip pliers
2. External circlip pliers.

77. Which of the following stakes provides a double ended support?

- (a) Hatchet stake
- (b) Halfmoon stake
- (c) Creasing stake
- (d) Horse stake

RRB ALP Jammu-Kashmir 06.06.2010

ISRO Technician-B Grinder 27.11.2016

Ans. (d) : Horse stakes provides a double ended support. In this stake, both ends are long one end is bent in one direction and at both the edges square holes are made.

78. A mallet is made of.....

- (a) lead
- (b) brass
- (c) hard wood
- (d) cast iron

RRB ALP Kolkata 02.11.2008

Ans. (c) : A mallet is made of hard wood. It is used where light forces are required. It is a wooden-headed hammer of the round or rectangular cross-section.

79. A bent snip is used for–

- (a) removing burr
- (b) making holes on the sheet
- (c) bending the sheet
- (d) cutting the sheet along curved lines

RRB ALP Kolkata 06.02.2005

Ans. (c) : A bent snip is used for bending the sheet. The cutting blade of a bent snip is made in a semi-circular shape. This type of snip is used for cutting curves in the sheet.

- These are used for cutting the sheet in cylindrical or conical shape.

80. Which of the following notch is used when a job is made with a band of 90°?

- (a) square notch
- (b) V notch
- (c) Wired notch
- (d) Slot notch

NCVT 2016

ISRO Technician-B Motor Mechanic 27.11.2016

Ans. (b) : V notch is used when a job is made with a band of 90°.

- It is made by cutting both side at 45° from bending line.
- Notch is following types- square notch, straight notch, V-notch etc.

81. The measure of an angle plate is given by.....

- (a) length
- (b) size number
- (c) length × width × thickness
- (d) diameter

NCVT 2016

Ans. (c) : The measure of an angle plate is given by length × width × thickness.

- Angle plates are suitable for supporting work piece during layout work.
- They are comparatively small in size.
- Slots are provided to clamp the workpiece.
- Arms of solid angle plate are made at an angle of 90°.
- Swivel base angle plate can be set at any angle easily.

82. Which notch is used while making a rectangular box?

- (a) 'C' notch
- (b) Square notch
- (c) Slant notch
- (d) Wire notch

RRB ALP Kolkata 16.07.2006

Ans. (b) : Square notch is used while making a rectangular box.

- Slant notch is cut at an angle of 45° to the corner of the sheet. It is used when a single hem meets at a right angle.
- In 'V' notch both the sides are cut at a 45° angle to the edge of the sheet.

83. A surface plate is made of.....

- (a) marble
- (b) red stone
- (c) granite
- (d) quartz

NCVT 2015

ISRO Technician-B Plumber 27.11.2016

Ans. (c) : A surface plate is made of granite.

- Surface plate is used to test the flatness of other surface or to provide a truly flat datum surface in marking off.
- Surface plate is available in many sizes, but generally 50 × 50 cm² and 100 × 100 cm² surface plate sizes are used.
- It is available in the thickness of 2.5 cm to 7.5 cm.

84. Identify the cleaning tool.



- (a) Wire brush (b) Wire wheel
(c) Hollow carbon brush (d) Bristle head

NCVT 2015

Ans. (c) : Hollow carbon brush is shown in figure.

• The bristles are made of iron wire. While cleaning a weld joint, the brush should not be pressed too hard against the joint as this can damage the joint. Brush should always be used in one direction.

85. What is the reason for a hoist to slowly move downwards?

- (a) Air pressure leak due to seal breakage
(b) Power cuts and loss of air pressure
(c) Water pressure decrease due to seal leak
(d) Vehicle pressure decrease due to seal leak

RRB ALP Kolkata 2014

Ans. (a) : The reason for a hoist to slowly move downwards is air pressure leak due to seal breakage.

86. To tighten or loosen the pipe fitting and on cylindrical items which one is used?

- (a) Spanner (b) Pipe wrench
(c) Chain wrench (d) None of these

NCVT 2017

ISRO Technician-B Turner 22.11.2016

Ans. (b) : To tighten or loosen the pipe fitting and on cylindrical items which pipe wrench is used.

Teeth are cut on its jaw which help in holding the pipe properly. The distance between its jaw is adjusted according to the diameter of the pipe with the help of adjusting nut.

87. Pliers are used in hard to reach places and also known as duck bill pliers is called—

- (a) spanner (b) slip nose pliers
(c) chain wrench (d) none of these

NCVT 2017

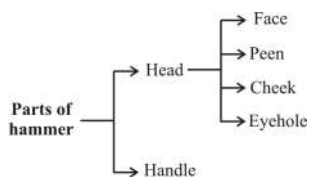
Ans. (b) : Pliers are used in hard to reach places and also known as duck bill pliers is called slip nose pliers.

88. Which is the striking portion of the engineer's hammer?

- (a) Face (b) Cheek
(c) Handle (d) Eye hole

NCVT 2018

Ans. (a) : Face is the striking portion of the engineer's hammer—

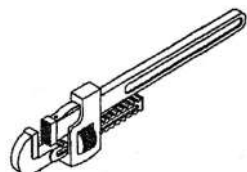


Head - It is made of drop forged carbon steel.

Peen - The other side of the face is called peen.

Cheek - The middle part of the hammer.

89. What is the name of the wrench?



- (a) Torque wrench
(b) Tension wrench
(c) Stillson pipe wrench
(d) Foot print pipe wrench

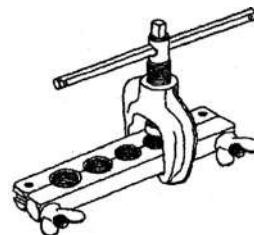
NCVT 2018

DMRC (Maintainer) Fitter (Evening) 15.02.2017

Ans. (c) : Stillson pipe wrench is shown in the figure.

The adjustable pipe or Stillson wrench is used to hold or turn pipes or circular bars. This wrench has serrated jaws, one of which is pivot on the handle to create a strong gripping action on the work.

90. What is the name of the tool? NCVT 2018



- (a) Drilling tool (b) Flaring tool
(c) Cutting tool (d) Gripping tool

Ans. (d) : Gripping tool is shown in the figure.

This tool is used for flaring a copper, brass or aluminium tube. This tool is mainly used for making flare joints. Holes of many shapes are made on this tool. According to the diameter, pipe is inserted in the holes provided on the tool. The pipe is fixed to the nut at the side of the tool.

91. Where are circlips used?

- (a) In light engineering works
(b) To permanently lock a light work
(c) To hold a component in a shaft of a bore
(d) To stop vibration

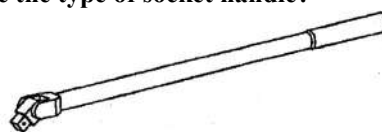
NCVT 2016

Ans. (c) : Circlips are used to hold a component in a shaft of a bore.

This pliers is mainly of two types—

1. Internal circlip pliers
2. External circlip pliers

92. Name the type of socket handle?



- (a) Sliding handle (b) Spinner handle
(c) Ratchet handle (d) Flexible handle

NCVT 2018

DMRC (Maintainer) Fitter (Morning) 15.02.2017

Ans. (d) : Socket handle is flexible handle shown in the figure.

93. Which wrench is used to tighten the specified tightness?

- (a) Pipe wrench (b) Stud wrench
(c) Allen wrench (d) Torque wrench

NCVT 2018

Ans. (d) : Torque wrench is used to tighten the specified tightness. It has an indicator that displays the amount of torque being applied on the torque wrench. The extent of tightening each nut or bolt is mentioned in the workshop manual. Thus, the nut and bolt is only tightened to the extent of requirement. The possibility of the nut and bolt slipping or breaking is greatly reduced using this wrench. It is also called tension wrench.

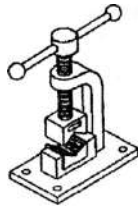
94. Which hammer is used for riveting?

- (a) Mallet hammer (b) Plastic hammer
(c) Rubber hammer (d) Ball peen hammer

NCVT 2018

Ans. (d) : Ball peen hammer is used for riveting. The peen of this hammer is spherical like a ball and its face is flat. Generally, this hammer is used for standard work in the workshop. It is used in marking, chipping, riveting etc.

95. Name the vice.



- (a) Pin vice (b) Pipe vice
(c) Hand vice (d) Quick releasing vice

NCVT 2018

DMRC (Maintainer) Fitter 20.07.2014

Ans. (b) : Pipe vice is shown in the figure. Pipe vice is used for holding a round section, such as tube and pipe. The jaw of a pipe vice moves vertically because its screw moves vertically.

96. Which part of a ball peen hammer is harder?

- (a) Face (b) Frame
(c) Cheek (d) Eyehole

RRB ALP Kolkata 29.09.2002

Ans. (b) : Ball peen hammer is used for forming a rivet head by spreading the shank of the rivet.

- The peen of this hammer is hemispherical in shape.
- Both peen and face of this hammer are hardened and tempered.

97. How is the size of a hammer measured?

- (a) Length of the hammer (b) Weight
(c) Shape (d) None of these

NCVT 2017

Ans. (b) : The weight of the hammer is marked on the cheek part of the hammer. Hammer are often made of high carbon steel and the face of peen are hardened and tempered.

- Hammers are classified on the basis of weight.

98. Allen wrench is used for—

- (a) turning pipe and for holding devices
(b) holding round staff in a limited places
(c) removing socket head screw
(d) removing watch parts

NCVT 2015

DMRC (Maintainer) Fitter 24.12.2006

Ans. (c) : Allen wrench is used for removing socket head screw.

99. Which of the following is used for tightening the head bolt of a cylinder?

- (a) Open ended spanner
(b) Torque wrench
(c) Ring spanner
(d) Adjustable spanner

NCVT 2017

Ans. (b) : Torque wrench is used for tightening the head bolt of a cylinder.

100. Which tool is used for removing and applying stud from cylinder blocks?

- (a) Stud wrench (b) Stud remover
(c) Pipe wrench (d) Socket extension bar

NCVT 2015

Ans. (a) : Stud wrench is used for removing and applying stud from cylinder blocks.

101. Why is a brass hammer used while fitting a valve guide in a cylinder block?

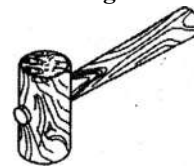
- (a) Brass hammers are light
(b) They do not leave marks on the surface of the parts
(c) Brass hammers are more effective
(d) An old hammer has a good resale value

NCVT 2016

BMRC Maintainer Fitter 2016

Ans. (b) : Brass hammers is used while fitting a valve guide in a cylinder block because they do not leave marks on the surface of the parts.

102. Identify the following hammer.

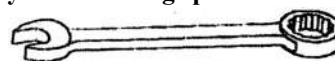


- (a) Lead hammer (b) Plastic hammer
(c) Brass hammer (d) Rubber hammer

NCVT 2016

Ans. (d) : Rubber hammer is shown in the figure. Rubber hammer are known as mallets. They are used in light work, such as metal sheet and wood etc.

103. Identify the following spanner.



- (a) Ring spanner
(b) Open ended spanner
(c) Ring and open-end spanner
(d) Socket spanner

NCVT 2016

Ans. (c) : Ring and open-end spanner is shown in the figure.

It is also known as combination spanner. It is available in different shapes and sizes. Its closed end is used for loosening a jammed nut, and its open end can easily open the nut.

104. Identify the socket spanner.



- (a) 12 point deep socket spanner
- (b) 6 point deep socket spanner
- (c) 12 point deep socket spanner
- (d) 6 point deep socket spanner

NCVT 2016

LMRC (Maintainer) Fitter 16.03.2016

Ans. (a) : 12 point deep socket spanner is shown in the figure.

They are used for opening nuts and bolts in those places where it is impossible to reach.

105. Which tool is used for laying out large circles?

- (a) Trammel
- (b) Divider
- (c) Jenny caliper
- (d) Scriber

RRB ALP Malda 16.07.2006

Ans : (a) Trammel— Trammel is a type of tool in which the points of the trammel are attached to a bar according to the length of the job. Trammel is used to draw circles and circles section of large radius. Circles and circle section of larger radius cannot be drawn with the help of dividers.

106. 'V' block is used to hold round bars, there is a 'V' groove on it whose angle is—

- (a) 30°
- (b) 60°
- (c) 90°
- (d) 120°

RRB ALP Mumbai 03.06.2001

Ans : (c) V-Block— • V-Block are precision metal working jigs typically used to hold round metal rods or pipes for performing drilling or milling operations.

• The consist of rectangular steel or cast iron block with a 90° channel rotated 45° from the sides, forming a V-shaped channel in the top.

107. The angle of scriber's point is—

- (a) 30°
- (b) 60°
- (c) 5° to 10°
- (d) 12° to 15°

RRB ALP Mumbai 05.06.2005

Noida Metro Maintainer Fitter 2017

Ans : (d) Scriber— Scriber is a pointed tool made of hard steel. It is used for drawing lines while marking on metal job, the conical point of the scriber is usually 12 to 15°.

108. The angle of the point of the center punch is—

- (a) 30°
- (b) 60°
- (c) 90°
- (d) 120°

RRB ALP Mumbai 14.06.2009

Ans : (c) • After drawing marking line on a job by scriber different kind of punches are used to make these markings permanent.

• A punch is a hard metal rod with a shaped tip at one end and a blunt butt end at the outer, which is usually

struck by a hammer to form an impression of the tip on a workpiece.

Punch	Angle
Center punch	90°
Dot punch	60°
Prick punch	30°

109. During marking the reference surface is provided by which of the following?

- (a) Job drawing
- (b) Workpiece
- (c) Surface of marking table
- (d) Surface gauge

RRB ALP Mumbai 15.07.2012

Ans : (c) • A marking table (marking of table) is used as a reference surface for marking on work-piece.

• Marking tables are of rigid construction with accurately finished top surface. The edges are also finished at right angle to the top surface.

110. Which of the following is the divider used for—

- (a) Draw of circles
- (b) Draw of arcs
- (c) Transferring and stepping of distances
- (d) All of the above

RRB ALP Mumbai 16.07.2006

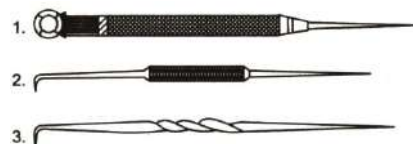
DRDO Fitter 2016

Ans : (d) Divider is an instrument, it is used for marking circle sector and other geometrical structures.

Dividers are used the following—

1. Measuring distance between two points.
2. Direct transfer of measurement from steel rule.

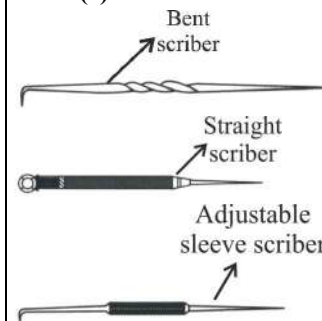
111. What is the name of the scriber marked '2' shown in the picture?



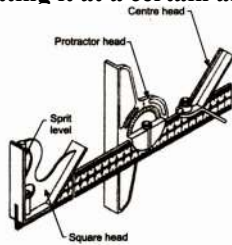
- (a) Straight scriber
- (b) Bent scriber
- (c) Adjustable sleeve scriber
- (d) Child head scriber

RRB ALP Mumbai 05.01.2003

Ans : (c)



112. Which head of the combination set is used by setting it at a certain angle?



- (a) Square head (b) Protractor head
(c) Center head (d) Rule

RRB ALP Muzaffarpur 15.02.2009

Ans : (b) The protractor head can be used for measuring and checking angle between surfaces, edges and markings. Markings angles from an edge. Directly transferring angles like a bevel gauge (sliding T gauge) to minimize measurement errors and inaccuracies.

- The combination set is used by setting the protractor head in a certain angle.

113. Generally the length of the handle of a vice is–

- (a) 1.5 times the nominal size of the vice
(b) 2.5 times the nominal size of the vice
(c) 3.5 times the nominal size of the vice
(d) 4.5 times the nominal size of the vice

RRB ALP Patna 04.02.2007

DRDO Turner 2011

Ans : (a) The length of the handle of a vice is 1.5 times the nominal size of the vice. Available in a variety of sizes to hold tasks of various size on shapes the squeal base is used to set the vice in any position.

114. A bench vice for normal work, how much does is the height fitted?

- (a) 80 cm (b) 90 cm
(c) 106 cm (d) 125 cm

RRB ALP Patna 11.11.2001

Ans : (c) A bench vice is a mechanical apparatus used to secure an object that is to be worked on it features two parallel jaw as part of the design.

- The device is widely used in the mechanical and wood working industries among others.
- For general purpose, a bench vice is fixed at a height of 106 cm from floor.

115. Vice clamps are used for to–

- (a) prevent the finished surfaces of the job
(b) hold the job firmly
(c) prevent the grove cut by the vice
(d) prevent damage to the file

RRB ALP Patna 2014

Ans : (a) Vice clamps are used to hold a finished work using soft jaws (vice clamps) made of aluminium over the regular jaws this will protect the work surface from damage.

116. Which of the following type of hammer is used to shape the head of a rivet by

- (a) Ball pin hammer (b) Cross pin hammer
(c) Straight pin hammer (d) Soft hammer

RRB ALP Ranchi 04.09.2005

DRDO Machinist 2016

Ans : (a) Ball pin hammer is used to make the shape of the head by expanding the shank of the rivet.

The weight of the ball pin hammer ranges from 55 grams to 1400 grams. The ball pin hammer consists of a case, pin eye hole and a handle is attached.

117. Which of the following tools is best for quickly loosening and tightening nuts and bolts?

- (a) Air impact wrench (b) Air ratchet
(c) Ring spanner (d) Socket spanner

RRB ALP Ranchi 08.07.2007

Ans : (b) Air ratchets are suitable for tightening or loosening small nut and bolts, even in tight spaces. The main application of impact wrenches is to tighten or loosen the lug nuts of cars.

118. Which of the following is used when a fastener has to provide a precise amount of torque?

- (a) Air ratchet (b) Ring spanner
(c) Torque ratchet (d) Monkey ratchet

RRB ALP Ranchi 19.01.2003

Ans : (c) Torque ratchet is a socket ratchet drive it is used to give the correct amount of torque to the fastener. The torque ratchet is used where the tightness of small machinery such as screws and bolts is very important.

119. It is a simple air tool used to remove dust and debris from tight places. What's this called?

- (a) Air spray gun (b) Air dispensing gun
(c) Air chisel gun (d) Air blow gun

RRB ALP Ranchi 2014

DRDO Motor Mechanic 2016

Ans : (d) Air blow gun is the simplest air tool to air duster. The air blow gun is operated by means of a lever. It is used for blowing dust and dirt from narrow place by means of air blow gun.

120. For car wash, there should be normal water pressure–

- (a) 50–60 bar (b) 70–80 bar
(c) 100–110 bar (d) 120–140 bar

RRB ALP Ranchi 21.09.2003

Ans : (c) Normal pressure of water for car wash should be 100 bar to 110 bar.

121. Which file will you use to prepare the final size of the work piece?

- (a) Bustard file (b) Double cut file
(c) Single file (d) Dead smooth file

RRB ALP Secunderabad 06.06.2010

Ans. (d) : The process of removing material in the form of powder from the surface of a workpiece by rubbing a tool with a rough surface is called filing on the tool used is called file.

Dead smooth file–28 to 35 teeth per cm in this file it happens A this file is used to smoothen the surface after rough filing it used for fine finishing.

122. Air chisel is used to separate metal objects by breaking or cutting them it is run–

- (a) Pneumatic (b) Hydraulically
(c) Magnetic attraction (d) Friction

RRB ALP Secunderabad 11.11.2001

DRDO Mechanic Diesel 2016

Ans. (a) : Air chisel is a pneumatic hand tool, it is used for breaking or cutting metal objects. It is operated by magnetic attraction. Air chisel works like a jack hammer.

123. The proper pitch of the blade for cutting solid brass rod is—

- (a) 1.0 mm (b) 1.8 mm
(c) 1.4 mm (d) 0.8 mm

RRB ALP Secunderabad 29.06.2008

Ans. (c) : Hacksaw frame is used along with a blade to cut metals of different section and is specified by the type and maximum length of the blade that can be fixed.

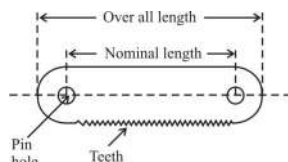
- The distance between the adjacent teeth is known as the pitch of the blade.
- The selection of the blade depends on the shape and hardness of the material to be cut.
- For self materials such as bronze, bar, soft steel, cast iron heavy angles etc. → 1.8 mm pitch blade
- For tool steel, high carbon, high speed steel etc. → 1.4 mm pitch blade
- For angle iron, brass tubing, copper, iron pipe etc. → 1 mm pitch blade
- For conduit and another thin tubing, sheet metal work etc. → 0.8 mm pitch blade

124. Hacksaw blade becomes loose frequently—

- (a) Due to drag of the blade
(b) Due to improper selection of blade pitch
(c) Wearing of wing nut rings
(d) Due to non-use of coolant

RRB ALP Siliguri 2014

Ans. (c) :



- The hacksaw blade frequently loosens due to wear of the wing nut lugs. The hacksaw blade is in the shape of a leaf with both ends cutting circular and is fitted into the hacksaw frame its teeth are cut in both or one side which are inclined in one direction.

125. Hacksaw blade for cutting thin tube suitable pitch is—

- (a) 1.0 mm (b) 0.8 mm
(c) 1.8 mm (d) 1.4 mm

RRB ALP Trivandrum 20.06.2004

Indian Ordnance Factory Fitter 10.09.2017

Ans. (b) : The most suitable pitch of the hacksaw blade for cutting thin section tubes is 0.8 mm.

- For conduit and another thin tubing sheet metal work etc. → 0.8 mm pitch blade.

126. What is the main function of drilling tools?

- (a) making circular holes in the job
(b) circular cutting
(c) removal of excess metal
(d) None of these

RRB ALP Ahamadabad 2014

Ans. (b) : Drilling tools are used to make circular holes in the work pieces, the process of making a circular hole by a drilling tool is called drilling. Drilling tool generally made of high speed steel.

127. Scrapers are made from which of the following metals?

- (a) High carbon steel (b) Tool steel
(c) Both (a) and (b) (d) None of these

RRB ALP Ahamadabad 17.10.2004

Ans. (c) : Scrapers—

- Scrapers are used to correct slight errors on all flat or curved surfaces.
- Scrapers are made up of high grad tool steel or special alloy steel and tungsten carbide tipped tools.

128. The following files cut hard metal faster—

- (a) Bustard file (b) Rasp file
(c) Curve file (d) Double cut file

RRB ALP Ajmer 05.06.2005

Indian Ordnance Factory 2016

Ans. (d) : Double Cut File—In these files, the lines of the teeth of the first cut are at 60° from the center line. By cutting these long teeth in the other direction with another cut diamond shaped teeth are cut this second cut is inclined from 75° to 80° to the center line.

- Due to having sharp teeth, this file cuts faster and more materials. But the surface obtained by this not smooth.

129. The length of the hacksaw blade is—

- (a) 1'' (b) 30 cm
(c) 40 mm (d) 35 mm

RRB ALP Ajmer 23.05.2004

Ans. (b) : A hacksaw blade made of either low alloy steel or high speed steel (HSS) and is available in standard length of 250 mm and 300 mm.

130. The process of beveling the end of a hole is called—

- (a) Counter boring (b) Reaming
(c) Counter sinking (d) Spot facing

RRB ALP Allahabad 03.08.2008

Ans. (c) : Counter sinking—

- It is also similar to counter boring except that the additional machining done on a hole is conical to accommodate the counter sunk machine screw head.
- Again the depth of counter sinking should be large enough to accommodate the screw head to fully flush with the surface.

Counter boring—Already existing holes in the components can be further machined by counter boring as shown in the figure.

131. Which file would you use to get it closer to finished size?

- (a) Bastard file (b) Rough file
(c) Dead smooth file (d) Single cut file

RRB ALP Allahabad 09.12.2007

Indian Ordnance Factory (Itarsi) 08.05.2016

Ans. (a) : Bastard file—Normally, a standard mill bastard file is used for draw filing. But where a considerable amount of stock has to be removed a flat or hand file will work faster. However, this roughing down leaves small ridges that will have to be smoothed by finishing with a single cut mill file.

132. On reaming a hole, its size was made but patches remained on its surface at many places. What could be the reason?

- (a) The metal is cut at a higher speed
- (b) Reamer was wrongly selected
- (c) Reaming allowance was less
- (d) Less amount of coolant was used

RRB ALP Bangalore 25.01.2004

Ans. (c) : On reaming a hole, its size was made but patches remained on its surface at many places because the reaming allowance is less.

133. The tap is broken in the hole while tapping the following are the methods to get it out, which one is not among these by—

- (a) tap extractor
- (b) nose pliers
- (c) pouring nitric acid
- (d) screwdriver

RRB ALP Bangalore 08.07.2007

Ans. (d) : Even after taking precautions, the taps often break in the hole, the following methods are used to remove it.

1. By nose pliers
2. By punch and hammer
3. Through tap extractor
4. Through nitric acid can be extracted by other methods.

134. Most likely to be chattering in filing in which method does it happen?

- (a) Straight filing
- (b) Cross filing
- (c) Draw filing
- (d) Curve filing

RRB ALP Bangalore 15.07.2012

Indian Ordnance Factory 2015

Ans. (a) : Straight filing—When filing is done by moving the parallel to the axis of the vice it is called straight filing in this method maximum metal is cut but chances of chattering are high. In this method filing is done from one end to the other.

135. The file is classified on the basis of cut below. Which is not a classification based on cut select it?

- (a) Single cut
- (b) Second cut
- (c) Wraps cut
- (d) Circular cut

RRB ALP Bhopal 06.06.2010

Ans. (b) : On the basis of cutting of teeth is of the following types—

- (1) Single Cut file
- (2) Double Cut file
- (3) Rasp Cut file
- (4) Circular cut file
- (5) Spiral Cut file

136. Which file is used for draw filing is?

- (a) Pillar file
- (b) Mill file
- (c) Wording file
- (d) Hand file

RRB ALP Bhubneswar 14.06.2009

Ans. (b) : Mill file is used for draw filing.

Draw filing—

- This method is used to remove file marks and for finishing operations.
- Here, the file is gripped as close to the work as possible between two hands.
- In this method a fine cut file with flat face should be used.

137. The flat part of the sand, in which the cutting teeth are made what is it called?

- (a) Point
- (b) Wheel
- (c) Face
- (d) None of these

RRB ALP Bhubneswar 15.07.2012

Indian Ordnance Factory 2014

Ans. (d) : Main part of file—

(i) Face—The flat part of the file in which the cutting teeth are made.

(ii) Tang—To fit the file in the handle, its end is made sharp, which is called tang.

(iii) Heel—The plane part without teeth between face and tang is called heel.

(iv) Point—The lower end of the file is called point.

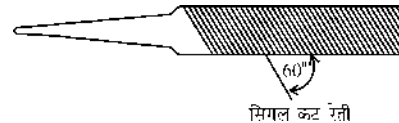
(v) Edge—The sides of the file are called edge.

138. Smooth special finish by filing an aluminium block which drilling file do you use will do—

- (a) Single cut
- (b) Double cut
- (c) Rasp cut
- (d) Circular cut

RRB ALP Bilaspur 15.07.2012

Ans. (a) :



Single Cut File—

- A single cut file has rows of teeth cut in one direction across its face.
- The teeth are at an angle of 60° to the centre line.
- It can cut chips as wide as the cut of the file.
- Files with this cut are useful for filing soft metals like brass, aluminium, bronze and copper.

139. Which of the following is the main part of the file?

- (a) Tang
- (b) Point
- (c) Both (a) and (b)
- (d) None of these

RRB ALP Chandigarh 14.09.2008

Ans. (c) : Main part of file—

1. Face—The flat part of the file in which the cutting teeth are made.

2. Tang—To fit the file in the handle, its end is made sharp which is called tang.

3. Point—The lower end of the file is called point.

4. Edge—The side of the file are called edge.

140. With the help of which of the following it is possible to remove the waste material in the form of fine particles from the plane or curved surface?

- (a) Tang (b) Hacksaw
(c) Chisel (d) File

**RRB ALP Chandigarh 15.07.2012
Indian Ordnance Factory 2013**

Ans. (d) : A file is a tool used to remove fine amounts material from a work piece. It is common in wood working, metal working and other similar trade and hobby tasks.

141. The following machines are used for drilling at places where electricity is not available–

- (a) Pillar drilling machine
(b) Bench drilling machine
(c) Ratchet head drilling machine
(d) Hand drilling machine

RRB ALP Chandigarh 25.05.2003

Ans. (c) : Ratchet head drilling machine)–This machine is operated by hand by the operator its design is very simple. The speed of this machine is slow but it is useful for special works, it is used for drilling at such places. Where there is no power equipment.

142. In a job in making a groove across with a chisel, the metal at the end of the grooves gets chipped of what would you do to prevent this?

- (a) Use less force in the end
(b) Finally chipping in the opposite direction
(c) Chipping using oil
(d) Chipping by reducing the inclination of the chisel

RRB ALP Chennai 06.06.2010

Ans. (b) : In a job in making a groove across with a chisel, the metal at the end of the grooves gets chipped to prevent this finally chipping in the opposite direction.

143. Oil grooves are cut in the bearing of the brass from the following which chisel would you choose?

- (a) Web chisel
(b) Cross cut chisel
(c) Flat chisel
(d) Half round nose chisel

**RRB ALP Chennai 27.10.2002
Indian Ordnance Factory 2012**

Ans. (d) : Half round nose chisel has a rounded edge. It is used for making oil grooves in a bearing cutting corner furries in this the forging angle is 30° and the cutting angle is from 35° to us in job in which the drill moves away from the center which drilling the metal left by it is also recovered.

144. Poor finishing when reaming a hole comes this could be due to–

- (a) Maximum cutting speed
(b) Reaming allowance not being appropriate
(c) No supply of cool out
(d) Choosing the wrong type of reamer

RRB ALP Gorakhpur 08.10.2006

Ans. (b) : Good finishing on reaming in a hole is due to improper reaming allowance. The process of sizing and finishing on already made hole is called reaming. The tool used in this process is called reamer. It is a finishing tool it is generally made of high carbon steel, high speed steel etc.

145. In the drilling process, chips are continuously being removed from the same flute of the drill. This could be due to–

- (a) point angle being too high
(b) clearance angle being unequal
(c) excessive lip angle
(d) cutting angle not suitable

RRB ALP Gorakhpur 11.10.2009

Ans. (c) : Chips are continuously removed from the same flute the drill in the drilling process, this is due to maximum lip angle.

Lip clearance angle–

- The clearance angle is to prevent the friction of tool being the cutting edge.
- This will help in the penetration of the cutting edges into the material.
- The optimum value of the lip clearance angle of twist drill for general purpose should be 8 to 12°.

146. Which machine reamer would you used to correct outside mis-alignment between the axis of the reamer and the axis of the hole in the work piece?

- (a) Floating blade reamer (b) Machine jig reamer
(c) Structural reamer (d) Chucking reamer

**RRB ALP Gorakhpur 12.10.2003
SAIL Bokaro Steel Plant 2016**

Ans. (a) : A floating blade reamer machine is used to correct the misalignment between the axis of the reamer and the axis of the hole in the work piece.

147. A hacksaw frame on which two or more standard length blades can be fitted is called–

- (a) Fixed frame
(b) Tube frame
(c) Adjustable hacksaw frame
(d) None of these

RRB ALP Gorakhpur 14.04.2002

Ans. (c) : Adjustable hacksaw frame is made in two pieces grooves are made on the side of the adjustable screw. The length of this frame can be adjusted. 200 to 300 mm in this frame blades of up to length can be used.

148. A special wedge (a) shaped tool for removing the taper shank drill from the spindle of a drill machine is used for call him–

- (a) Handle (b) Key
(c) Socket (d) Drift

RRB ALP Gorakhpur 21.10.2001

Ans. (d) : A special wedge (a) shaped tool is used to remove the taper shank drill from the spindle of the drill machine which is called drift. There are two types of drills depending on the shape of the shank.

1. Taper shank drill
2. Parallel shank drill

149. The lip clearance angle of the drill is low headed generally–

- (a) 12° to 15°
- (b) 8° to 12°
- (c) 6° to 8°
- (d) 4° to 6°

**RRB ALP Guwahati 22.01.2006
SAIL Durgapur Steel Plant 05/09/2014**

Ans. (b) :

- The clearance angle is to prevent the friction of the tool behind the cutting edge.
- This will help in the penetration of the cutting edges into the material.
- The optimum value of the lip clearance angle of twist drill for general purpose should be 8 to 12.

150. The width of round bar M 16×2.0 is to be cut by a die. Suitable size of round bar should be–

- (a) 15.5 mm
- (b) 15.8 mm
- (c) 15.9 mm
- (d) 16.0 mm

RRB ALP Jammu-Kashmir 06.06.2010

Ans. (b) : The width of round bar M 16×2.0 is to be cut by a die. Suitable size of round bar should be 15.8. Here 'm' stands for metric thread 16 mm and 2 mm is the pitch of the thread.

151. What is the cutting angle of the drill?

- (a) 124°
- (b) 121°
- (c) 118°
- (d) 59°

RRB ALP Kolkata 02.11.2008

Ans. (c) : Generally, the cutting angle of the drill is kept at 118° i.e. 59° on one side and 59° on the other side for normal work, but for some special work this angle can be more or less. The cutting angle of the drill is kept less than 118° for soft iron or for soft metal and more than 118° for hard metal.

152. Warding file is the following types–

- (a) Like a hand file but less is width
- (b) Like a flat file but less is width
- (c) Like a flat file but thinner in thickness
- (d) Like a flat file but in width and thickness less

RRB ALP Kolkata 06.02.2005

VIZAAG Steel Fitter 2015

Ans. (c) : Warding file is also similar to flat file but its thickness is slightly less and is same throughout the length. This file is 10-20 cm long. They are very fine teeth on its blade. Using this file for finishing or other light work. It is also used for making keys, cleaning the core of the slot etc.

153. What angle are the teeth cut on the face of a single cut file?

- (a) 90°
- (b) 75°
- (c) 45°
- (d) 60°

RRB ALP Kolkata 16.07.2006

Ans. (d) : The teeth of single cut file are made in straight line on the face. These lines are parallel to each other and the center of the face is at 60° . They are used for sharpening tools and for grinding hard metals.

154. The third (finisher) tap is used for tapping in blind holes because of the following reason–

- (a) To insert thread in the hole till the bottom
- (b) To easily cut thread in the hole
- (c) To make thread form good
- (d) To start cutting the thread

RRB ALP Kolkata 2014

Ans. (a) : Third (finisher) tap for tapping in blind hole the reason for using is insert the thread in the hole till the bottom. Finishing tap is also called plug tap or bottoming tap. Only one or two thread in front of it are in taper. Its use is needed only in closed holes after running the second tap.

155. A nut is to be made for a bolt of size M 10×1.5 . In nuts, the size of the hole to be made will be as follows–

- (a) 8.0 mm
- (b) 8.5 mm
- (c) 9.0 mm
- (d) 9.5 mm

RRB ALP Kolkata 29.09.2002

NTPC Fitter 2014

Ans. (b) : A nut is to be made for a bolt of size M 10×1.5 . The size of the hole to be made in the nut will be 8.5 mm.

156. It is not preferred to use pure water as a coolant while drilling because–

- (a) The cutting edge of the drill gets worn out
- (b) Increase the risk of rusting on the job
- (c) Insufficient cooling by water
- (d) More steam is produced

RRB ALP Malda 16.07.2006

Ans. (b) : Water (H_2O) is not used as a coolant while drilling because the oxygen present in water will react with metals to form metal oxides. Due to the metal will corrode. So, plain water is not used as a coolant.

157. In order to provide good finishing, the teeth and spacing in reamer are designed according to the following statement–

- (a) Odd number of teeth and spacing
- (b) Even number of teeth and spacing
- (c) Odd number of teeth and even number of spacing
- (d) Even number of teeth and odd number of spacing

RRB ALP Mumbai 03.06.2001

BHEL Hyderabad Fitter 2014

Ans. (d) : The reamer is designed with even number of teeth and odd number of spacing in order to provide good surface finish.

03.

SYSTEM OF MEASUREMENT

1. For measuring any sample by using micrometer, you will take :

- (a) 0.1 mm as least count
- (b) 0.02 mm as least count
- (c) 0.01 mm as least count
- (d) 0.2 mm as least count

**COAL India Fitter 2013
CRPF Constable Tradesman 2016**

Ans : (c) Micrometer is a micrometer instrument by which a job can be measured in 0.01 mm in metric system and 0.001 inch in British system.

- Micrometer is least count of 0.01 mm.

2. Most common gauge provided on dashboard of passenger car which shows the speed vehicle is known as :

- (a) Odometer
- (b) Speedometer
- (c) Thermometer
- (d) Tachometer

**HAL Fitter 2015
Mazagon Dock Shipbuilders Ltd. 2013**

Ans : (b) Most common gauge provided on dashboard of passenger car which shows the speed vehicle is known as speedometer.

- Speedometers are those devices which are used in motor vehicles to tell their speed in kilometer per hour or miles per hour.

3. Choose correct statement about micrometer :

- (a) Applied force is uniform and maximum
- (b) Barrel is moving part of frame
- (c) Reading errors increase due to satin cream finish
- (d) Plastic insulated grip is used in its frame

MES Automobile Tradesman 2015

Ans : (d) Micrometer is a precise linear measuring instrument based on end standard.

- Micrometers are available in various sizes and ranges and a suitable micrometer can be chosen depending upon the dimensions to be measured.
- Working mechanism of micrometer is based on the principle of screw and nut.

4. Given figure shows—



- (a) Telescopic gauge
- (b) Straight edge gauge
- (c) Thread pitch gauge
- (d) Feeler gauge

ISRO Technician-B Carpenter 27.11.2016

Ans : (c) A thread gauge also known as a screw gauge or pitch gauge is used to measure the pitch or lead of a screw thread.

- Thread pitch gauge are used as a reference tool in determining the pitch of a thread that is on a screw or in a tapered hole.

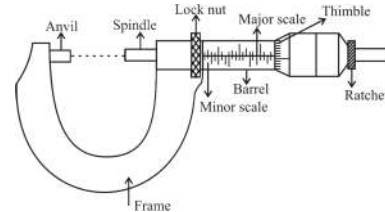
5. Lock nut which is provided in micrometer that:

- (a) Locks the micrometer when not in use
- (b) Controls speed of spindle
- (c) Measures accuracy or precision
- (d) Lock the reading after installing the job or work

RRB ALP Mechanic Diesel 23/01/2019 Shift-II

Ans. (d) : Micrometer—It is used for measuring external dimensions and the thickness.

- Lock nut is provided to lock the reading after installing job or work.
- It works on principle of screw and nut.
- Least count of micrometer = 0.01 mm



6. Crankshaft diameter is measured using a/an:

- (a) inside micrometer
- (b) feeler gauge
- (c) outside micrometer
- (d) bore dial gauge

**RRB ALP Mechanic Diesel 23/01/2019 Shift-I
ISRO Technician-B Fitter 20.11.2016**

Ans. (c) : Crank shaft diameter is measured using an outside micrometer.

Outside micrometer are used for measuring the thickness or outside diameter of small parts.

Least count of an outside micrometer is 0.01mm.

7. Which device is used to measure the inside dimensions of a component, such as the inside diameter of a hole or a tube?

- (a) Outside micrometer
- (b) Bore dial gauge
- (c) Inside micrometer
- (d) Dial gauge

RRB ALP Mechanic Diesel 23/01/2019 Shift-I

Ans. (c) : Inside micrometer is used to measure the larger internal dimension. Inside micrometer can measure the internal diameter of holes,

- Dial bore gauges are mostly used by machinists to measure the inner diameter of bores in motor engines a micrometer to set a dial bore gauge the accuracy of the measurement will be 0.002 inches or 0.0508 millimeters.

8. An inside micrometer can be used to measure:

- (a) outside diameter of ball bearings
- (b) the inside diameter of pipes

- (c) the outside diameter of pipes
- (d) the diameter of head surfaces

RRB ALP Mechanic Diesel 23/01/2019 Shift-I

Ans. (b) : Inside micrometers are used to measure inside dimensions like the inside diameter of a hole or pipes.

9. **Checking of twists & bend of connecting rods can be done by which one of the below mentioned equipment?**

- (a) Dial test indicator
- (b) Surface plate
- (c) Connecting rod alignment jig
- (d) Straight edge

RRB ALP Mechanic Diesel 23/01/2019 Shift-I
ISRO Technician-B Grinder 27.11.2016

Ans. (a) : Checking of twists and bend of connecting rods can be done by Dial test indicator.

10. **An outside micrometer is used to:**

- (a) measure outside diameter
- (b) measure inside diameter
- (c) measure length
- (d) measure depth

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Ans. (a) : Outside micrometers are used for measuring the thickness or outside diameter of small parts.

- An inside micrometer is used to measure the diameter of holes.
- Least count of micrometer is 0.01mm.

11. **The brake horse power of an engine is measured by which equipment?**

- (a) Dynamometer
- (b) Ammeter
- (c) Multimeter
- (d) Voltmeter

RRB ALP Mechanic Diesel 23/01/2019 Shift-III

Ans. (a) : The brake horse power of an engine is measured by dynamometer.

IHP (Indicated horse power)– Power developed inside internal combustion engine, no losses accounted.

BHP (Brake horse power)– Usable power of the engine crankshaft.

$$\text{IHP} = \text{BHP} + \text{FHP}$$

FHP → Friction horse power.

12. **Which one of the following instruments is also called as a milometer?**

- (a) Odometer
- (b) Speedometer
- (c) Tachometer
- (d) Rotameter

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ISRO Technician-B Motor Mechanic 27.11.2016

Ans. (a) : Mileometer records the number of miles that a bicycle or motor vehicle has travelled.

- Odometer is also called as a mileometer.

Speedometer– Measures the vehicle speed in km/hr.

Tachometer– Measures the engine speed in r.p.m. (crank shaft).

13. **Which of the following measuring instruments is used to measure the distance travelled by the vehicle?**

- (a) Speedometer
- (b) Odometer
- (c) Tachometer
- (d) Rotameter

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Ans. (b) : Odometer is used to measure the distance travelled by the vehicle (wheels).

Measuring instrument	Uses
Speedometer	It measures the current speed of a vehicle in km/hr.
Tachometer	It measures the speed of engine in rpm (crank shaft).
Rotameter	It measures the discharge of the flowing fluid in vertical pipe.

14. **A vernier depth gauge is used to measure the :**

- (a) external diameter
- (b) internal diameter
- (c) depth of a blind hole
- (d) pitch diameter

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Ans. (c) : A vernier depth gauge is used to measure the depth of a blind hole, height of the job.

- It's least count is 0.02 mm.
- Vernier caliper is used to measure the external diameter, internal diameter, width and depth of the job.

15. **A Feeler gauge is used to measure which of the following?**

- (a) Thickness
- (b) Small gaps & clearances
- (c) Diameter
- (d) Width

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ISRO Technician-B Plumber 27.11.2016

Ans. (b) : A feeler gauge is used to measure small gaps and clearance (i.e. spark plug gap etc.) between two mating parts.

- It consists of set of thin strips, made up of stainless steel or spring steel.
- Thickness, diameter, width etc. dimensions of the job are measured by the use of vernier caliper.

16. **What is the material of filler gauge?**

- (a) High speed steel
- (b) High carbon steel
- (c) Mild steel
- (d) Stainless steel

RRB ALP Mumbai 05.06.2005

Ans. (d) : Filler gauge made of stainless steel material, which is also tempered. It is used to measure gap between two meeting surfaces.

17. **Instrument used for measuring high temperature in furnace–**

- (a) Thermometer
- (b) Barometer
- (c) Calorimeter
- (d) Pyrometer

RRB ALP Mumbai 14.06.2009
ISRO Technician-B Turner 22.11.2016