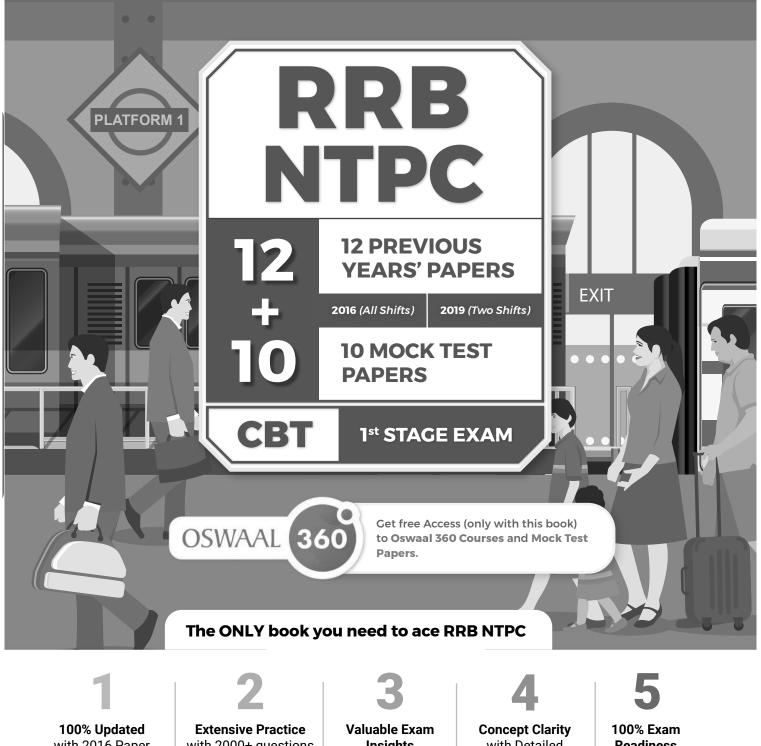
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3rd EDITION YEAR 2023

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RRB NTPC



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Preface

The Ministry of Indian Railways has been conducting Computer Based Tests (CBT) for numerous vacancies year after year. This year too, it is committed to hold the CBT for all the notified vacancies and has been actively assessing the ground situation imposed due to the ongoing pandemic. Hence, it now proposes to commence 1st stage Online Computer Based Tests from 15th December, 2019 and necessary action has been initiated in this regard.

This book is an endeavor of Oswaal Books to assist RRB NTPC aspirants prepare for and excel in this examination. It has been written to provide the aspirants well-conceptualized and structured practice material.

RRB NTPC Test Series 2023 intends to guide the students to solve questions with a higher degree of accuracy and within the stipulated time. It has been prepared by a team of expert academicians after thorough research and analysis of the RRB NTPC exam pattern, syllabus, and previous years' papers. The book aims to ease the learning methodology and facilitates last-minute revision, it gives a fair idea to the students about the structure of the question paper and the type of questions asked in the exam.

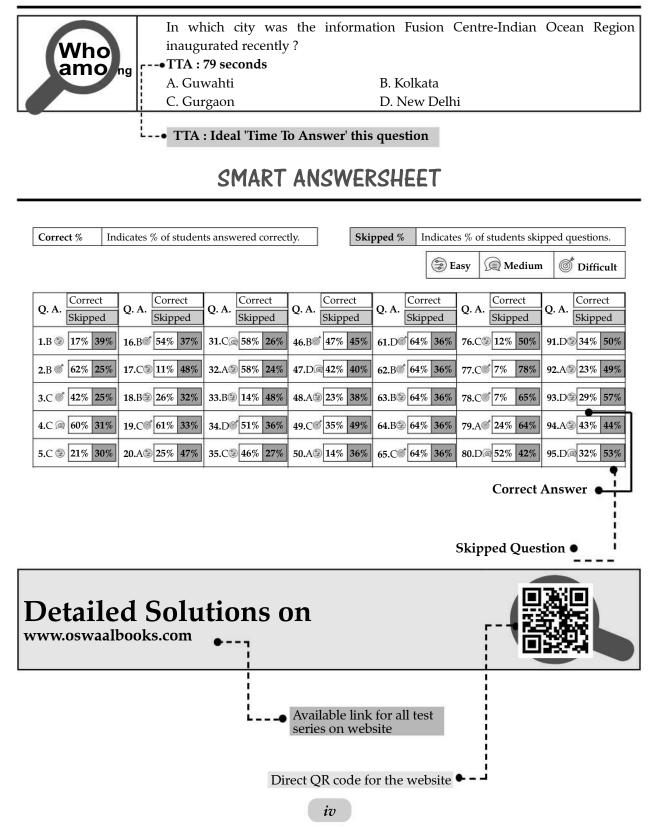
The volume begins with an overview of RRB NTPC exam, its notification, exam calendar, vacancies, pattern, and syllabus. The practice material has been bifurcated into two parts – previous year question papers and mock test papers - along with hints and solutions and the requisite tips and tricks. Students can analyze their performance and gauge their preparation with that of the toppers with a smart answer sheet provided in the book.

Immense efforts have been undertaken to maintain lucidity of the structure and uniquity of content. We hope that this book will help you at every step as you move closer to your career goal. We wish you all great success ahead!

> All the Best ! Team Oswaal Books

How to use this Book

NAVIGATION



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RRB NTPC Official Advertisement-2023

Railway Recruitment Board, Non-Technical Popular Categories 2023 or RRB NTPC 2023 is a popular recruitment exam conducted by the ministry of railways. Through this exam, the candidates are shortlisted for the graduate and undergraduate posts in the Indian Railways. To select the applicants, the ministry will conduct two computer-based tests (CBT) followed by the skill/ medical tests. Candidates who want to apply for the RRB NTPC 2023 exam have to fill an online application form before the last date. All the necessary details regarding the RRB NTPC 2023 exam are provided in the post below.

RRB NTPC 2023 Overview

Exam Name	RRB NTPC 2023
Full Form	Railway Recruitment Boards Non-Technical Popular Categories
	Exam 2023
Mode of Application	Online
Mode of exam	Online
Official Website	https://www.rrbcdg.gov.in/

RRB NTPC 2023 Main Highlights

- The following Railway Recruitment Boards (RRBs) will select the candidates on the basis of this exam RRB Ahmedabad, Ajmer, Allahabad, Bangalore, Bhopal, Bhubaneshwar, Bilaspur, Chandigarh, Chennai, Gorakhpur, Guwahati, Jammu-Srinagar, Kolkata, Malda, Mumbai, Muzaffarpur, Patna, Ranchi, Secunderabad, Siliguri, Thiruvananthapuram.
- Eligibility criteria of RRB NTPC 2023 vary for different posts. Candidates are requested to check it carefully before submitting the form.
- After the 1st stage of computer-based test, RRBs will shortlist candidates 20 times the number of available vacancies.
- While filling the application form, candidates have to provide the preference for the posts available.
- Selected candidates have to execute surety and indemnity bond (if applicable) at the time of joining the railways.

Exam Calendar

Main Events	Tentative Dates
Publication of official notification	Last week of February 2023
Starting of online application form submission	1 st week of March 2023
Last date to register on online portal	Last week of March 2023
Last date to submit application fee	1 st week of April 2023
Final submission of the application form	2 nd week of April 2023
Admit Card Availability	May 2023
Date of computer-based test (1st stage)	June 2023 to September 2023

RRB NTPC Vacancies Summarised

The available posts are divided among the undergraduate and graduate candidates as given below: **For undergraduate candidates (12th pass)**

- Junior Clerk cum Typist
 - Accounts Clerk cum Typist
 - Junior Time Keeper
 - Trains Clerk
 - Commercial cum Ticket Clerk

For graduate candidates

- Traffic Assistant
- Goods Guard
- Senior Commercial cum Ticket Clerk
- Senior Clerk cum Typist
- Junior Account Assistant cum Typist
- Senior Time Keeper
- Commercial Apprentice
- Station Master

RRB NTPC 2023 Eligibility Criteria

As you can see, the posts are divided under two categories i.e. undergraduate and graduate candidates. The RRB NTPC eligibility criteria 2023 are different for undergraduate and graduate posts as illustrated below. Read basic eligibility for different posts:

For Undergraduate Post

- The age of a candidate must be between 18 to 30 years as on 1st July 2023.
- Applicant must have cleared the class 12th or equivalent exam from a recognized board.

For Graduate post

- The age of the candidates should be between 18 to 33 years as on 1st July 2023.
- The applicants should possess a bachelor's degree or equivalent from a recognized university.

Important Points regarding eligibility criteria

- Please note that the candidates waiting for the result of the prescribed educational qualification need not apply.
- SC/ST candidates will get a relaxation of 5 years in upper age limit.
- The relaxation in upper age limit for OBC candidates is 3 years.
- There will be some additional requirements for a few posts as well. For example Candidates looking for junior accounts assistant cum typist post should have typing proficiency in English/ Hindi.
- Candidates with following nationalities only can apply
 - A citizen of India,
 - a subject of Bhutan,
 - subjects of Nepal,
 - a Tibetan refugee who came to India before 1st January 1962 with an intention to permanently settling here
 - An Indian origin person migrated to India from Burma, Sri Lanka, Pakistan, Vietnam and East African countries of Uganda, Kenya, Zambia, the united republic of Tanzania, Malawi, Ethiopia and Zaire.

RRB NTPC 2023 Application Form

The RRB NTPC Application Form 2023 for all the posts will be available online through the official website of the respective RRB in which the candidate is looking to apply.

- 1. To initiate the RRB NTPC 2023 application procedure, the candidates have to register by providing basic details such as name, date of birth, father's name, 10th class roll number, etc.
- 2. After registration, the candidates have to verify their email id and phone number using OTP.
- 3. Then, aspirants can proceed to fill out the rest of the details in the application form.
- 4. Make sure to enter the details as accurately as possible. Otherwise, the form may get rejected.
- 5. Candidates also need to choose the language in which they want to attempt the exam. The available languages are Assamese, Bengali, Gujarati, Hindi, Kannada, Konkani, Malayalam, Marathi, Manipuri, Punjabi, Telugu, Tamil and Urdu.

- 6. Additionally, the aspirants also need to provide their bank account details in the application form so that they can get the refund of an application fee.
- 7. Applicants also need to upload the scanned images of their photograph and signature in a proper format. The colored photograph must be taken on or after 1st January 2023.
- 8. SC/ ST candidates who will opt to avail free rail travel need to upload the scanned image of their SC/ ST certificate.
- 9. Candidates may save the confirmation page or take its printout for the future requirement.

Application Fee

The application fee varies for the candidates of different categories as given below:

- Male candidates of General/ OBC candidates: Rs. 500/- (Rs. 400/- to be refunded after appearing for 1st stage CBT)
- Female/ PwBD/ Transgender/ SC/ ST/ Ex-Servicemen/ Economically Backward Classes: 250/-(Fee will be refunded after appearing for 1st stage CBT)

Mode of Payment

- Online: Using credit card/ debit card/ Internet banking or UPI
- **Offline:** By submitting SBI challan at any branch of SBI or depositing post office challan at any branch of the computerized post office.

Exam Pattern

Read important information about exam pattern below:

1st Stage Computer-Based Test

- Mode of Exam: Online
- Duration of Exam: 90 minutes
- Number of Questions: 100
- Type of Questions: Objective type MCQ
- Maximum Marks: 100
- Marking Pattern: 1 mark will be given for a correct answer
- Negative Marking: 1/3 marks will be deducted for every incorrect answer.

Subjects and distribution of questions

Subjects	Number of Questions	Maximum Marks	
General Awareness	40	40	
Mathematics	30	30	
General Intelligence and Reasoning	30	30	
Total	100 Questions	100 Marks	

2nd Stage Computer Based Test

- Examination Mode: Online
- Duration of Exam: 90 minutes
- Total Number of Questions: 120
- Type of Questions: Objective type multiple choice questions
- Maximum marks: 120
- Marking Scheme: Each question will carry 1 marks
- Negative Marking: 1/3 marks will be deducted in case a wrong answer

Subjects	Number of Questions	Maximum Marks
General Awareness	50	50
Mathematics	35	35
General Intelligence and Reason-	35	35
ing		
Total	120 Questions	120 Marks

RRB NTPC Syllabus

Given below are the subject-wise important topics for the RRB NTPC 2023 examination. Go through the detailed overview of syllabus here-

Mathematics: Number System, Decimals, Fractions, HCF, LCM, Time and Distance, Elementary Algebra, Simple and Compound Interest, Ratio and proportion, Profit and Loss, Geometry and Trigonometry, Elementary Statistics, etc.

General Intelligence and Reasoning: Analogies, Completion of Number and Alphabetical Series, Coding and Decoding, Reasoning, Syllogism, Jumbling, Venn Diagrams, Puzzle, Data Sufficiency, Mathematical Operations, Similarities and Differences, Relationships, etc.

General Awareness: Current Events of National and International Importance, Games and Sports, Art and Culture of India, Indian Literature, Monuments and Places of India, General Science and Life Science (up to 10th CBSE), Indian Polity and Governance- constitution and political system, General Scientific and Technological Developments including Space and Nuclear Program of India, etc.

RRB NTPC Admit Card

- The RRB NTPC Admit Card 2023 will get released on the official website about 10 days prior to the date of exam.
- SMS and email will also be sent to the candidates informing about the releasing of an admit card.
- Please note that the call letter or admit card will not be sent by post.
- Details about the examination venue and date will present on the admit card.
- Candidates should read the instructions given on the backside of an admit card very carefully.
- Aspirants also required to carry one photo identity proof along with the admit card.
- Candidates also need to bring one photograph (same as uploaded in the application form) at the examination center.

Tips and Tricks for Mathematics

Nature of Questions	Chapters	Weightage	Topics	Tij	ps
1. Soaring	Simplifi- cation	4-5	Questions on BOD- MAS Rule, Fractions, Approximate Value, Surds and Indices etc.		
2. East to				Square Root (2 digits)	Fractions
Solve 3. Less time consuming				35 ² (break the number into digits)	$\frac{2}{5} + \frac{3}{4}$ multiply the denomi- nator of the 1 st fraction with the numerator of the second and viseversa
				$= 3 <> 5^2$	$\frac{2\times 4}{5\times 4} + \frac{3\times 5}{5\times 4}$
				$n \times (n + 1)$ [here, n=1 st digit] & square of 2 nd digit	
				$= 3 \times (3+1) \& 5 \times 5$	$\frac{8+15}{20}$
				$= 12 & \& 25 \\ = 1225$	23/20 or 2.3/2
4. More accuracy possible	Interest	1-2	Problems on Sim- ple and Compound Interest, and Install- ments	$SI = \frac{PRT}{100}$ Difference b/w CI & S	SI (2 years) = $\frac{PR^2}{100^2}$
				Difference b/w CI & $\frac{PR^2(300 + R)}{100^3}$	
	Percentage	2-3	Calculation-orient- ed basic Percentage Problems	$(x^*z)'(y^*a)$ If the three ratios, <i>x</i> : <i>y</i> , <i>y</i> : <i>z</i> , <i>z</i> : <i>a</i> is know we can find x: a by the multiplying these three ratios $x/a = x/y * y/z * z/a$	
	Ratio and Proportion	1-2	Problems on Simple/ Compound Ratios and Direct/Indirect Proportions		
	Average	2-3	Problems on Average Weight/Height/Marks etc.		

	Problems on Ages	1-2	Basic Problems on Ages	In most cases, assume present age as 'x', i.e., the base year works just fine. Past will be, $(x - 5)$ years and future can be denoted as $(x + 5)$.
1.Scoring	Speed Time and Distance	1-2	Problems on Average/ Relative speeds, Boat, Trains etc	B km/hr to m/s= $(B \times 5/18)$ m/s B m/s to km/h= $(B \times 18/5)$ km/s
2.Easy if proper steps are followed	Algebra	1-2	Basic Linear Equa- tions in one or two variables	3x - 4y = 13 (i) 5x + 2y = -13 (ii) $x = \frac{(-4)(-13) - (2)(13)}{(-4)(5) - (2)(3)} = \frac{26}{-26} = -1$
3. More time Con- suming	Profit and Loss	2-3	Problems on Profit/ Loss, Dishonest/ Successive dealings, Partnership etc.	To find <i>y</i> put the value in one equation If $P\% = CP = ? \& SP = 144$ Split 144 (difference should be 10) 144 = 18 × 8 (difference 10) Now if $P\% = CP$ put zero after smaller value And if L% = CP put zero after greater val- ue Now answer will be 80
	Number Series	2-3	Moderate to difficult problems on Com- pleting the series, Finding Missing/ Wrong Term	Integers – 1,3,5,9 Rational ¹ / ₂ , ³ / ₄ , 1.75,3.25 Arithmetic $x_n = x_1 + (n-1) d$ 3,8,13,18 Square $x_n = n^2 - 2,4,16,32$ Fibonacci — $F_0=0, F_1=1,$ $F_n = F_{n-1} + F_{n-2}$. 0,1,1,2,3,5,8,13,21, 34,
		1-2	Problems on Plane Figures such as Square, Rectangle, Circles etc.	Perimeter = sum of all side Rect. = $l+b+l+b$, Squ = $s+s+s+s$, Tri. = $a+b+c$ Area = multiplication of adjacent sides Rect. = $l \times b$, Squ = $s \times s$, Tri. = $(b \times h)/2$
1.Tricky 2. Less accuracy possible	Time and Work	1-2	Problems on Work efficiency, Wages and Pipes etc.	A= 10 & B= 20 days (to complete the same job.) A+B =? days (to complete the same job.) A's efficiency = $100/10 = 10\%$ per day B's efficiency = $100/20 = 5\%$ per day A+B = $100/15 = 6.66$ days
-	Mixture problems	1-2	To Make A Mixture from Two Or More Entities/Mixtures	Allegation = $\frac{\text{Quantity of Cheaper}}{\text{Quantity of Dearer}}$ = $\frac{\text{CP of Dearer} - \text{Mean price}}{\text{Mean price} - \text{CP of Cheapter}}$

Tips and Tricks for Reasoning

Name of Questions	Chapters		Comments	Tips	
1.Scoring 2.Easy to Solve		0-2	Number, Letter and Meaningful Words based questions. GK based questions can also be asked.	Learn Alphabet's position E-J-O-T-Y = 5-10-15-20-25 C-M-W = 3-13-23 T=20 By shape you can remember H=8, F=6, X=24, V=21	
3.Less Time	Analogy	0-2	Number, General Knowledge, Meaning and Letter based questions	Turn the analogies into sentences. Read the analogy problems as sentences, even if they aren't written that way	
Consuming	Series	1-3	Mainly questions on Alphabet & Numbers series	Add, subtract, multiply, divide, square, cube Mix pattern; - $N \times (1+0)$, $N \times (1+.5)$, $N \times (1.5+1)$, $N \times (2.5+1.5) \dots$	
4.High Accuracy possible	Coding Decoding	Coding and Decoding by letter shifting, and Coding letters of a Word. Coding by letter B=25 Z=1)		Opposite position of letters (A=26, B=25 Z=1) Opposite of each letter (A=Z, B=Y,	
	Blood Relations	0-2	Mostly Family Tree problems. General Blood Relation problems are also possible.	In solving mixed Blood Relations questions, make sure, that the question is represented in diagrammatical format	
	Clock and	0-2	Mostly based on	To find What was the day on week :	
	Calendar		calendar	1600-1700-1800-1900-2000-16991799189919992099	
			6 4 2 0 6		
				Jan OctFeb Mar NovApr JulMay MayJun LAug DecSep Dec	
				Sun=0.7, Mon=1, Tue=2, Wed=3, Thurs=4, Fri=5,	

			 Add the day digits to last two digits of the year Divide last two digits of the year by four and add it to the result in step 1
			 Add Month Code and Year Codes to the result obtained in step 3 Divide the result of step 4 by seven Obtain the remainder and match with the day codes
Ordering & Ranking	0-2	May be asked	Find the total no. of people if the ranks of one person is given from both sides (left & right) Total number of people = $R_1 + R_2 - 1$
Directions & Distances	0-2	Simple problems that can be solved by just drawing all the information on paper. May be asked	DIRECTION Left + Left = Down, Left + Right = Up Right + Left = Up, Right + Right = Down Up + Left = Left, Up + Right = Right Down + Left = Right, Down + Right = Left
Arranging Words in Meaningful Order	0-2	It can be a meaning- ful order of doing a certain task or following a certain rule	Sequence of stages/ series of events/ Increasing or decreasing value/ size/inten- sity/According to dictionary/ Objects/things from 'part' to 'whole'
Word for- mation	0-2	From the given word find whether the given options can be formed or not	You should have strong vocabulary knowl- edge to judge the right spelling of a word
Missing Number	0-2	Find the missing number from the given matrix or diagram	Observe & look for familiar pattern in the Questions The Second step is finding out the pattern There is no need to memorize any pattern You need is to understand the Concept and decipher the pattern

Venn	0-2	Problems based on	If there are only two elements
Diagram		Venn Diagram	$n (\mathbf{A} \cup \mathbf{B}) = n (\mathbf{A}) + n (\mathbf{B}) - n (\mathbf{A} \cap \mathbf{B})$
			If there are three elements
			$n (\mathbf{A} \cup \mathbf{B} \cup \mathbf{C})$
			$= n(A) + n(B) + n(C) - n(A \cap B) - n(B \cap C) -$
			$n(\mathbf{C} \cap \mathbf{A}) + n(\mathbf{A} \cap \mathbf{B} \cap \mathbf{C})$
Puzzle	0-2	Number based puz-	Collect information; Arrange information
		zles like 7 × 5 × 6 ×	Identify information; Approach step-by-
		$5 = 6575$, then 8×7	step
		$\times 4 \times 6 = ?$	
		Or Count number of trees in row type questions Or Find the correct equations type questions	
Non-Verbal Reasoning	0-3	Questions like Com- pleting the pattern, Figure-based Analo- gy/Classification/Se- ries or Cube-based questions may be asked.	Accuracy; Draw out the questions Practice; Attention to detail

RRB - NTPC SOLVED PAPER (2019)

28th Dec 2020 (Shift-1)

Instructions

- The test contains 100 objective type questions.
- All questions are compulsory.
- Complete the test within 90 minutes.
- All questions contain four alternatives, in which only one is correct.
- Which two banks were merged with Bank of Baroda with effect from 1st April 2019?
 - (1) Syndicate Bank and UCO Bank
 - (2) Union Bank of India and Andhra Bank
 - (3) Vijaya Bank and Dena Bank
 - (4) Allahabad Bank and Canara Bank
- 2. Two buses start from opposite points towards each other on a main road, 185 km apart. The first bus runs for 35 km and takes a right turn and runs for 17 km. It then turns left and runs for another 42 km and takes the direction back to reach the main road, in the meantime, due to a minor breakdown, the other bus has run only 36 km along the main road. What would the distance between the two buses be at this point?
 - (1) 85 km (2) 80 km
 - (3) 75 km (4) 72 km
- **3.** Pattachitra style of painting is one of the oldest and most popular art forms of which of the following states?
 - (1) Andhra Pradesh (2) Rajasthan
 - (3) Odisha (4) Bihar
- 4. Which of the following states is NOT a member of 'Seven Sisters' states of North-East India?
 - (1) Tripura (2) Sikkim
 - (3) Meghalaya (4) Mizoram
- **5.** Where is the headquarters of the International Court of Justice located?
 - (1) The Hague (2) Paris
 - (3) Washington D.C. (4) New York
- **6.** Four number-pairs have been given, out of which three are alike in some manner and one is different. Select the odd one.
 - **(1)** 12 96 **(2)** 13 104
 - **(3)** 15 120 **(4)** 16 118

- 7. Mukesh was facing the south. He walked 5 km straight and from there he turned at a 90° angle to his right and walked 5 km. Then he turned at a 45° angle to his left and walked 3 km. Where will he be from his actual position?
 - (1) North-west direction
 - (2) South-west direction
 - (3) South direction
 - (4) South-east direction
- 8. What is Sukanya Samriddhi Yojana?
 - (1) A small deposit scheme for the girl child.
 - (2) A scheme to provide bicycles for girls studying in the 10th class.
 - (3) A scheme to provide skills that give employability to women.
 - (4) A scheme to develop self-defence skills in girls.
- **9.** Four words have been given, out of which three are alike in some manner and one is different. Select the odd one.
 - (1) Chalk (2) Book
 - (3) Pen (4) Marker
- **10.** Select the letter cluster that can replace the question mark (?) in the following series. BZA, DYC, FXE, HWG, ?

(1)	JUH	(2)	JVH
(3)	KVI	(4)	JVI

- **11.** Who said, "Freedom is my birth right and I shall have it"?
 - (1) Bhagat Singh
 - (2) Bal Gangadhar Tilak
 - (3) Gopal Krishna Gokhale
 - (4) Chandra Shekhar Azad

12.	Out of Harish's month	nly salary of ₹45,000, $\frac{1}{3}$ of	
	the expenditure are on education and $\frac{2}{6}$ of the		
	expenditure are on food and other necessities. The rest of the salary goes towards his savings. The		
	amount of savings is: (1) 3 22 500	(a) 3 12,000	
	 (1) ₹22,500 (2) ₹15,000 	(2) ₹12,000	
	(3) ₹15,000	(4) ₹11,250	
13.	In which city was the 2020 held?	Khelo India Youth Games,	
	(1) Guwahati	(2) Kolkata	
	(3) Chennai	(4) Bangalore	
14.	What is 'UBUNTU'?		
	(1) Malware	(2) Operating system	
	(3) External hard drive	e (4) Web Browser	
15.	In which of the follow	ving continents is the Gobi	
	desert located?		
	(1) Europe	(2) North America	
	(3) Asia	(4) Africa	
16.	Which part of the comp		
	(1) CPU		
	(3) Hard Disc	(4) ROM	
17.		mpleted a project with an	
		his project Shweta worked worked for 30 days. If their	
		ration of 5 : 6, then Shweta's	
	share is:		
	(1) ₹16,000	(2) ₹12,000	
	(3) ₹18,000	 (2) ₹12,000 (4) ₹10,000 	
10	1	$\sin 15^\circ$ $\cos 65^\circ$ $\sqrt{2}$ $\cos 0$	
18.	If $\frac{1}{\sin^2 65^\circ + \cos^2 65^\circ}$ +	$\frac{\sin 15^{\circ}}{\cos 75^{\circ}} + \frac{\cos 65^{\circ}}{\sin 25^{\circ}} = \sqrt{3} \tan \theta \prime$	
	then the value of θ is:		
	(1) 45°	(2) 60°	
	(3) 90°	(4) 30°	
19.	Where is the Sabarimal		
	(1) Kerala	(2) Andhra Pradesh	
20	(3) Odisha	(4) Maharashtra	
20.	and Leh?	g passes connects Srinagar	
	(1) Nathu La	(2) Bara La	
	(3) Jelep La	(4) Zoji La	
21.		Idanukulam Nuclear Power	
	Station located?		
	(1) Tamil Nadu	(2) Rajasthan	
	(3) Karnataka	(4) Gujarat	

- 22. A group of friends are sitting in an arrangement with one each at the corner of an octagon. All
- are facing the centre. Medha is sitting diagonally opposite Radha. Medha is on Seema's left. Raman is next to Seema and opposite to Govind. Govind is on Chandra's right. Shanti is not an Medha's right but is opposite to Shashi. Who is opposite to Chandra?
 - (1) Seema (2) Radha
 - (3) Shanti (4) Raman

- 23. Which of the following is in the list of Maharatna Central Public Sector Enterprises? (1) Central Coal fields Limited (2) Cochin Shipyard (3) India Tourism Development Corporation (4) Coal India Limited 24. Which of the following units is used for measuring the amount of a substance? (1) Tesla (2) Joule (3) Lux (4) Mole **25.** The unit digit in $4 \times 38 \times 764 \times 1256$ is: (1) 5 (2) 4 (3) 6 (4) 8 26. The ratio of ladies to gents numbers in a club is 3 : 2. Recently, 300 ladies joined the club and the ratio became 5:2. The number of lady members now in the club is: (1) 1200 (2) 900
 - **(3)** 600 **(4)** 750
- 27. Between which two cities does India's first semi high-speed train 'Vande Bharat Express' run?(1) Puri and Howrah Junction
 - (1) Abmodobad and Mumbri Cor
 - (2) Ahmedabad and Mumbai Central(3) New Delhi and Varanasi Junction
 - (4) Hazrat Nizamudding and Jhansi Junction
- **28.** The value of $\frac{6}{5}$ of $\left(\frac{1}{3} + \frac{2}{4}\right) \frac{5}{6}$ of $\left(\frac{3}{10} + \frac{12}{20}\right) \frac{1}{6}$ is:

(1) $\frac{1}{12}$	(2) $\frac{1}{3}$
(3) $\frac{3}{4}$	(4) $\frac{5}{6}$

29. The ratio of two positive numbers is 3 : 7 and their LCM is 231. The smaller number is:

(1) 55	(2) 33
(3) 44	(4) 77

- **30.** In which year was the Second battle of Panipat fought between Akbar and Hemu?
 - **(1)** 1556 **(2)** 1576
 - **(3)** 1536 **(4)** 1526
- **31.** Who was the founder of the Prarthana Samaj?
 - (1) Swami Dayanand Saraswati
 - (2) Raja Ram Mohan Roy
 - (3) Atmaram Pandurang
 - (4) Swami Vivekananda
- **32.** The cost price of an article is 75% of the marked price. If a discount of 15% is allowed, then the profit or loss percentage is:
 - (1) 12.44% loss (2) 15% profit
 - (3) 15.55% loss (4) 13.33% profit
- 33. Who is the author of 'Rajatarangini' ?
 - (1) Jayadeva (2) Kalidasa
 - (3) Kalhana (4) Chand Bardai
- 34. The simple interest on an amount of ₹3400 for 4 years is ₹680. The rate of interest is:

(1) 8%	(2) 4%
(3) 5%	(4) 6%

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Paper 2019 (Held on : 28th December 2020 Shift 01)

_			
£7		:	Solved Pa
35.	Select the option that is the same way as the sec term.		
	Lawyer : court :: beauti	cian•?	
	(1) house	(2) ship	
	(3) class	(4) parlour	
36.	Though which of the sound NOT travel?		ms can
	(1) Vacuum	(2) Milk	
	(3) Air	(4) Steel	
37.	Which Indian state h coastline?	has the longest m	ainland
	(1) Gujarat	(2) Maharashtra	
	(3) Odisha	(4) Kerala	
38.	What is the maximum	strength of the men	nbers of
	the Lok Sabha?		
	(1) 543	(2) 547	
	(3) 549	(4) 552	
39.	Which of the followin virus?	g diseases is cause	ed by a
	(1) Cholera	(2) Typhoid	
	(3) Chicken Pox	(4) Tuberculosis	
40.	The adjacent angles of a	a rhombus are in the	ratio of
	3 : 6. The smaller angle	of the rhombus is:	
	(1) 120°	(2) 40°	
	(3) 80°	(4) 60°	
41.	In order to qualify in a secure 50% of the overa consisting of two paper in the first paper of 2	ll marks. In the examers, a student secur	nination ed 40%
	In the mst paper of 2	oo marks. wiiniiniu	n what

percentage of marks should be secured in the second paper of 150 marks in order to qualify in the examination?

(1) 64%	(2) 60%

- (3) 68% (4) 65%
- 42. In the following question, select the related words from the given alternatives.

Writer : Pen :: Tailor : ?

- (1) Scalpel (2) Axe
- (3) Needle (4) Saw
- 43. Select the number from among the given options that can replace the question mark (?) in the following table.

-			
	5	4	3
	6	5	4
	7	6	5
	384	245	?
(1) 269		(2) 2	249
(3) 144		(4) 2	244

- 44. The term 'Sericulture' is related to which of the following?
 - (2) Fish farming (1) Silk farming
 - (3) Bird farming (4) Bee farming

- 45. Name the theme declared by United Nations for World Environment Day, 2020.
 - (1) Beat Plastic Pollution
 - (2) Biodiversity
 - (3) Connecting People to Nature
 - (4) Water pollution
- 46. Which of the following is a multi-barrel rocket system developed by DRDO?
 - (1) Dhanush (2) Trishul
 - (3) Pinaka (4) Prithvi
- 47. Which of the following monuments is NOT located in Delhi?
 - (1) Humayun's Tomb (2) India Gate
 - (3) Buland Darwaza (4) Alai Darwaza
- 48. From among the given options, select the word which CANNOT be formed using the letters of the given word. LAUGHTER
 - (1) GRUNT (2) GATE (4) RATE (3) HATE
- 49. Mahatma Gandhi started the famous 'Salt March' from Sabarmati to Dandi. In which district of Gujarat is Dandi?
 - (1) Surat (2) Navsari
 - (4) Kutch (3) Porbandar
- **50.** In the domain of computers and the internet, what is the full form of URL?
 - (1) Universal Resource Locator
 - (2) Uniform Resource Locator
 - (3) Unique Resource Location
 - (4) Unique Revoked Location
- 51. Select the option that is related to the third letter cluster in the same way as the second letter cluster is related to the first letter cluster.
 - RAMO : SCPS :: VXMJ : ?
 - (2) WQPN (1) WZPN
 - (3) WQZN (4) WPZN
- **52.** If $a^3 b^3 = 625$, $a^2 b^2 = 25$ and a + b = 5 then the value of $a^2 + ab + b^2$ is:
 - (1) 125 (2) 5
 - (3) 25 (4) 150
- 53. Who among the following was the youngest President of India?
 - (1) Shri Neelam Sanjiva Reddy
 - (2) Dr. Rajendra Prasad
 - (3) Dr. S. Radhakrishnan
 - (4) Dr. Zakir Hussain
- 54. The sum of two numbers is 60 and their HCF and LCM are 12 and 72 respectively. The sum of the reciprocol of the two number is:

(1)	$\frac{5}{12}$	(2)	$\frac{1}{5}$
(3)	$\frac{5}{72}$	(4)	$\frac{5}{6}$

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55. The greatest number that will divide 155, 260, 315 and leave the remainders 5, 10 and 15 respectively is: (1) 75 (2) 50

(-)	10	(-)	
(3)	10	(4)	25

- 56. The value of $180 \div (2^3 + 3^2 + 1) + 37 20$ equal to: (1) 27 (2) 20
 - (3) 25 (4) 23
- 57. The angles of a triangle are $2x^{\circ}$, $(3x^{\circ} 8^{\circ})$ and $(5x^{\circ} 8^{\circ})$ 12°). The greatest angle of the triangle is: (1) 40° (2) 112°
 - (3) 118° (4) 88°
- 58. The simple interest on a sum of amount for 2 years at 10% per annum is ₹500. The compound interest on the same sum at the same rate for the same time is:
 - (1) ₹525 (2) ₹510
 - (3) ₹515 (4) ₹520
- 59. The smallest 5 digit number that leaves a remainder of 6 when divided by 7 is:
 - (2) 10007 (1) 10003
 - (3) 10002 (4) 10009
- 60. Who was honoured with the 55th Jnanpith Award for the year 2019?
 - (1) Chitra Mudgal
 - (2) Shobha Rao
 - (3) A Achuthan Namboothiri
 - (4) Krishna Sobti
- 61. In which year was The Environment (Protection) Act passed by the Parliament of India?
 - (1) 1990 (2) 1991

(3) 1986 (4) 1988

- 62. Which of the following countries is NOT a permanent member of United Nations Security Council?
 - (1) China (2) United Kingdom
 - (3) Japan (4) France
- 63. X and Y together can complete a piece of work in 12 days, Y and Z can do it 18 days and X and Z can complete the same work in 15 days. If X, Y and Z can together complete the work, approximately how many days will be required to complete the work?

(1)	12	(2)	18	
· >		(-)		

(3) 14 (4) 10

64. Select the option that is related to the third term in the same way as the second term is related to the first term.

Pediatrics : children :: neurology : ?

(1) heart	(2) eyes
-----------	-----------------

- (4) veins (3) brain
- 65. In general, the most appropriate average value in measuring central tendency is:
 - (1) mode (2) median
 - (3) range (4) mean
- 66. Which of the following shows a symbiotic relationship?

(1) Funaria	(2) Ulothrix
-------------	--------------

(3) Marsilea (4) Lichen

- 67. Which of the following countries is NOT a member of **BIMSTEC?**
 - (1) Maldives (2) India
 - (3) Bhutan (4) Nepal
- 68. The value of $\frac{\sqrt{54} \times \sqrt{125}}{\sqrt{54}}$ is:
 - - (2) 2.5 (1) 4
 - (3) $2\sqrt{5}$ (4) $4\sqrt{6}$
- **69.** The value of $5\sin 14^\circ \sec 76^\circ + 3\cot 15^\circ \times \cot 75^\circ +$ 2tan45° is:
 - (1) 0 (2) 10
 - (3) 1 (4) 8
- 70. Which of the following two countries of South America are land locked?
 - (1) Chile and Ecuador
 - (2) Brazil and Venezuela
 - (3) Guyana and Suriname
 - (4) Paraguay and Bolivia
- 71. A class of 50 girls and 70 boys sponsored a musical programme. If 40% of the girls and 50% of the boys attended, approximately what percentage of the class attended the programme?

(1)	42%	_	-	(2)	44%
(3)	46%			(4)	48%

- 72. If all the special characters are dropped from the below arrangement, which of the following will be the 10th to the right of X?
 - 3 X ! B 9 # F 4 5 * 1 K 2 \$ 8 R S % Z
 - (2) R (1) 8
 - (3) S (4) 2
- 73. Which Sikh guru established the Khalsa Panth? (1) Shri Guru Nanak ji
 - (2) Shri Guru Har Gobind ji
 - (3) Shri Guru Tegh Bahadur ji
 - (4) Shri Guru Gobind Singh ji
- 74. A cylinder has a height of 14 cm and the curved surface area is 528 cm². The volume of the cylinder is:
 - (2) 792 cm³ (1) 1244 cm³
 - (3) 1584 cm³ (4) 2538 cm³
- 75. A rope is divided into three different parts. The
 - first part is $\frac{1}{5}$ of the whole length, the second part is $\frac{3}{2}$ of the first. The third part is what fraction of

the rope? (1) (3)

- **76.** The value of $5\frac{2}{3} + 0.73 3.123$ is equal to: (1) 2.55 (2) 3.27
 - (3) 3.12 (4) 5.73
- 77. A train leaves station A towards station B at the speed of 50 km/hr. After half an hour, another train leaves station B towards station A at 150 km/hr. The distance between the stations is 725 km. The distance of the point from station A where the two trains are to meet is:

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Solved Paper 2019 (Held on : 28th December 2020 Shift 01)

E.		Solved I
	(1) 150 km	(2) 168 km
	(3) 200 km	(4) 250 km
78.	If the mass of a persor	n is 60 kg on the surface of
	earth then the same pe	erson's mass on the surface
	of the moon will be:	
	(1) 360 kg	(2) 60 kg
	(3) 10 kg	(4) 0 kg
	x 2 1 v	2
79.	If $\frac{-+-=1}{2}$ and $\frac{y}{2}$ +	$\frac{2}{z} = 1$, then the value of
		Z
	$\frac{z}{2} + \frac{2}{x}$ is:	
	2 x	
	(1) 0	(2) 1
	(3) -1	(4) 2
80.	Where is the Central I	Potato Research Institute of
	India located?	
		(2) Lucknow
		(4) Delhi
81.		O launch the Mars Orbiter
	Mission?	
	(1) 2012	(2) 2015
	(3) 2014	(4) 2013
82.		12% of 2400, so that the sum
	will be equal to 18% of	
	(1) 288	(2) 952
	(3) 684	(4) 972
83.	In a rectangle, the leng	th is twice the breadth and
		ctangle is 48 cm. The area of
	the rectangle is:	(2) 128 $-\pi^2$
	(1) 288 cm^2	 (2) 128 cm² (4) 144 cm²
84.	(3) 512 cm^2	(4) 144 cm ²
04.	sequentially placed in	the blanks will create a
	repetitive pattern.	the blands will create a
	a bha cab ac ab ac	
	(1) a; c; b; c; b (3) b; a; b; c; c	(2) a; b; c; b; c
85.	If $\sin\theta = \frac{3}{2}$ and $\cos\theta$	$0 = \frac{5}{4}$, then the value of
	4	4
	1 → tan A	

 $1 + \tan \theta$ is: $1 - \cot \theta$

(1)
$$\frac{11}{5}$$
 (2) $\frac{2}{5}$
(3) $-\frac{12}{5}$ (4) $-\frac{8}{5}$

86. Select the option that is related to the third number in the same way as the second number is related the first number.

21:11::31:?

(1)	16	(2)	15
(2)	17	(4)	10

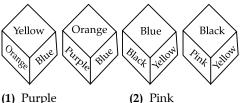
- (3) 17 (4) 18
- 87. Select the number from among the given options that can replace the question mark (?) in the following table.

28	63	94
8	18	?
6	9	13

(1) 69 (3) 75

(2) 76

- 88. P is the brother of Q and R. S is R's mother. T is P's father. Which of the following statements CANNOT be definitely true?
 - (1) T is S's husband (2) S is P's mother
 - (3) T is Q's husband (4) T is Q's father
- 89. From among the given options, select the word which CANNOT be formed using the letters of the given word. DAUGHTER
 - (1) HURT (2) GET (3) TOUGH (4) DATE
- 90. Four different positions of a cube are shown in the figure. Which of the following colours is on the face opposite to the face that has black written on it?



(3) Blue (4) Orange 91. Five students are sitting in a row, Sunil is neither a neighbour of Aastha nor Shyam, Aastha is a neighbour of Shyam and she is on the left end of the row. Sunil is a neighbour of Manjeet, Manjeet is exactly in the middle of the row, and is not a

neighbour of Amita. Who are the neighbours of Sunil?

- (1) Manjeet and Amita (2) Shyam and Amita (3) Shyam and Manjeet (4) Aastha and Manjeet
- 92. Select the number from among the given options that can replace the question mark (?) in the following series.

69, 55, 26, 13, ?

(1) 2	(2) 5	,
(3) 3	(4) 4	ŀ

93. Five girls Beena, Leena, Meena, Reena and Teena are playing game. They are sitting in a row facing towards the north. Meena is sitting at the west end and Teena is sitting at the end. Leena and Reena are sitting together next to each other. Beena is sitting to the left of Leena and to the right of Meena. Who is sitting second from the east end?

(3) Teena	(4) Beena
-----------	-----------

94. Select the number that can replace the question marks (?) in the following series.

97, 86, 101, 89, 107, ?, ?

(1) 114; 169 (2)	94; 115
--------------------------------	---------

- (3) 84; 125 (4) 121; 144
- 95. Read the given statements and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statements. Statements:

	All Roses are Red. Some Red are Colours. All Colours are Paints. Conclusions: I. Some Red are Paints II. All Red are Roses. (1) Neither conclusion	I nor II follows			
96.	(2) Only conclusion I f(3) Both conclusion I a(4) Only conclusion IIFour letter clusters have	ollows. nd II follow.	99.	 (1) 30 (2) 31 (3) 32 (4) 29 Select the number that can replace the questi mark (?) in the following series. 5, 10, 17, 26, ? (1) 37 (2) 35 (3) 36 (4) 34 	
	 (3) MNPO Four word-pairs have three are alike in some resolution select the odd one. (1) Paper : noter (3) Head : cap 	 (4) ACBD been given, out of which nanner and one is different. (2) Giftr : gift wrap 	100.	 The positions of Deepti and Mohan in a row are 14th from the left and 9th from the right respectively. If they interchange their places, then Mohan will be 21st from the right, find the position of Deepti from the left row and the total number of persons in the row. (1) 24, 38 (2) 33, 27 	

(3) 26, 34

(4) 34, 26

(3) Head : cap (4) Hand : glove98. Find the number of triangles in the diagram given below:

хх