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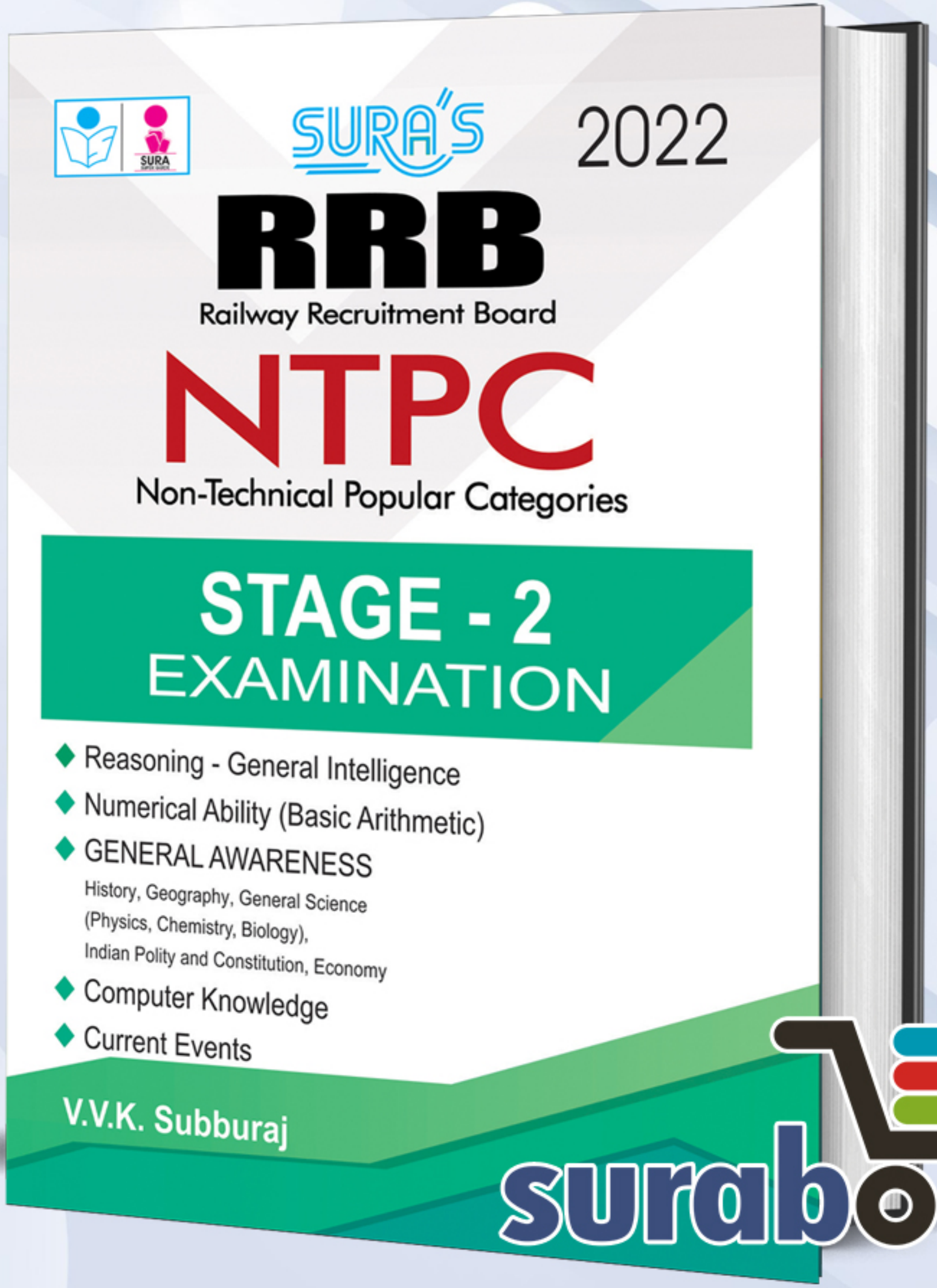
Exam Guide



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RAILWAY RECRUITMENT BOARD

NTPC

NON TECHNICAL POPULAR CATEGORIES

STAGE 2 EXAMINATION

Numerical Ability | Reasoning | General Knowledge

by

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RRB NTPC STAGE-2 EXAMINATION

by
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GOVERNMENT OF INDIA, MINISTRY OF RAILWAYS

RAILWAY RECRUITMENT BOARD

Elgibility Criteria

AGE LIMIT:

Candidates age should be minimum 18 to 32 years to apply.

Relaxation Age :- SC/ST candidates-5 year

OBC candidates-3 year

EDUCATIONAL QUALIFICATION:

Candidates should have requisite Education of **Degree from the recognized University or its equivalent** on the date of submission of the ONLINE application for this Centralized Employment Notice. Those awaiting results of the final examination need NOT apply.

SCHEME OF STAGE–2 ONLINE WRITTEN EXAMINATION:

Sl.	Name of Tests	No.of Questions	Duration
1 2 3	General Knowledge Arithmetic Ability General Intelligence & Reasoning	120	90 minutes

MARKING SYSTEM:

There will be 1 Mark for each correct answer. There will be negative marking for marking wrong answers. 1/3 mark will be deducted for each wrong answer.

SYLLABUS:

Mathematics: Simplification, HCF, LCM, Percentage, Problem based on Train, Boat & Stream, Time and Distance, Profit and Loss, Average & Number System.

General Intelligence (Reasoning): Series problems, Age problems, Analogies, Direction Sense, Relationship Concepts, Arrangement problems

General Knowledge: Important Events, Important Days, Current Affairs, Politics, Sports, Cinema, Books and Authors,etc.,

RAILWAY RECRUITMENT BOARD
NTPC – STAGE II EXAM

Date : 17.01.2017
Marks : 120

Solved Original Question Paper - 2017

Duration : 90 min

GENERAL KNOWLEDGE

1. Optical fiber works on the principle of

A) Diffusion **B)** Total Internal Reflection
C) Scattering **D)** Refraction

Explanation **Ans : (B)**

Optical fiber works on the principle of total internal reflection. The total internal reflection is the phenomenon in which the complete reflection of a light ray reaching an interface with a less dense medium when the angle of incidence exceeds the critical angle.

2. In October 2015, more than 250 landmarks in more than 90 countries were lit blue, the official colour of the United Nations. What was the occasion?

A) 70th Anniversary of United Nations
B) 90th Anniversary of United Nations
C) 50th Anniversary of United Nations
D) 60th Anniversary of United Nations

Explanation **Ans : (A)**

The 70th anniversary of the United Nations : On UN Day in October, 2015 in celebration of the UN's 70th anniversary, more than 350 landmarks in more than 90 countries across the globe lit blue-the official colour of the United Nations.

3. The Environment (Protection) Act of India was enacted in the year

A) 1997 **B)** 1986
C) 2004 **D)** 2012

Explanation **Ans : (B)**

The Environment Protection Act of 1986 (EPA) was enacted by the Government of India under Article 253 of the Indian Constitution. The Act came in as a result of the Bhopal gas tragedy as well as India's commitment to follow United Nations Conference on the Human Environment that took place at Stockholm in June, 1972. On November 19, 1986, the Environment Protection Act of 1986 came into force and was extended to the whole country. The Act comprises of 4 chapter and 26 sections

4. In February 2016, which city topped the 'Swachh Survekshan-2016' ranking of 73 cities in India with minimum open defecation and extensive adoption of solid waste management practices?

A) Navi Mumbai **B)** Mysore
C) Gangtok **D)** Vishakapatnam

Explanation **Ans : (B)**

Swachh Survekshan is a ranking exercise taken by up the Government of India to assess rural and urban areas for their levels of cleanliness and active implementation Swachhata mission initiatives in a timely and innovative manner.

The objective of the survey is to encourage large scale participation of citizens and create awareness amongst all sections of society about the importance of working together towards making towns and cities a better place to live in.

In 2016, Swachh Survekshan was conducted in 73 cities having a population of one million or more and capitals of states/UTs. Mysore had bagged the award of being the cleanest city of India.

5. In 2015, a special semi-luxury train covering Jaisalmer, Jodhpur & Jaipur was launched by the IRCTC. What is the name of this train?

A) Rajasthan Darshan **B)** Rajasthan Queen
C) Desert Circuit **D)** Desert Queen

Explanation **Ans : (C)**

The Desert Circuit Tourist Train is a joint initiative of Indian Railways and the Indian Railways Catering and Tourism Corporation (IRCTC). The train aims to boost heritage tourism, by providing an affordable and accessible way of visiting the desert cities of Jaisalmer, Jodhpur and Jaipur in Rajasthan.

6. How many Indian States and Union Territories share the Indian coastline?

A) 9 States and 4 Union Territories
B) 12 States and 3 Union Territories
C) 7 States and 5 Union Territories
D) 5 States and 3 Union Territories

Explanation **Ans : (A)**

Indian coastline touches 9 states and 4 union territories.

9 states : 1. Gujarat, 2. Maharashtra, 3. Goa, 4. Karnataka, 5. Kerala, 6. Tamil Nadu, 7. Andhra Pradesh, 8. Odisha, 9. West Bengal.

4 Union Territories : 1. Pondicherry, 2. Andaman and Nicobar, 3. Lakshadweep, 4. Daman and Diu.

7. The Mahabodhi Temple Complex, which is one of the four holy sites related to the life of the Lord Buddha, is located in:

A) Bihar **B)** Tamil Nadu
C) Karnataka **D)** Delhi

Explanation **Ans : (A)**

The Mahabodhi Temple complex in Bodh Gaya is located in the central part of the state of Bihar. The first temple was built by Emperor Asoka in the 3rd century B.C.

Mahabodhi temple is a UNESCO world heritage site.

The other three holy sites are Lumbini, Saranath and Khushinagar.

8. In 2004, NASA launched the Messenger Spacecraft to study .....

A) Saturn **B)** Jupiter
C) Pluto **D)** Mercury

Explanation **Ans : (D)**

MESSENGER – Mercury Surface, Space Environment, Geochemistry and Ranging.

It was the seventh discovery – class mission and the first spacecraft to orbit mercury. Its primary goal was to study the geology, magnetic field and chemical composition of the planet.

The spacecraft was launched aboard a Delta II rocket in August 2004.

9. Mount St. Helena is an 'active stratovolcano' located in .....

A) Japan
B) India
C) United States of America
D) Chile

Explanation **Ans : (C)**

Mount St. Helena is an active stratovolcano located in Skamania country, Washington, in the pacific northwest region of the United States of America.

10. A tank, filled partially with a liquid, is subjected to a uniform horizontal acceleration. Which of the following is true for the surface of liquid in the tank?

A) The liquid surface falls down on the direction of motion and rises up on the back side of the tank
B) The liquid surface falls down only at the center of the tank
C) The surface of the liquid remains horizontal
D) The liquid surface rises up on the direction of motion and falls down on the back side of the tank

Explanation **Ans : (A)**

If the liquid is accelerated horizontally, then the two points in the same horizontal line cannot have equal pressure.

Therefore, the free surface of the liquid is inclined to the horizontal with larger depth at the rear end as the tanker is moving in the forward direction with uniform acceleration. Hence option 'A' is correct answer.

11. Which Schedule of the Constitution of India lists the States and Union Territories of India?

A) First Schedule **B)** Second Schedule
C) Third Schedule **D)** Fourth Schedule

Explanation **Ans : (A)**

First schedule contains the list of states and union territories.

Second schedule contains provisions for the President, Governors of States, Speaker and the Deputy Speaker of the House of the people and the Chairman and the Deputy Chairman of the council of states and the Speaker and the Deputy Speaker of the Legislative Assembly and the Chairman and the Deputy Chairman of the Legislative Council of a state, the Judges of the Supreme Court and the High Courts and the Comptroller and Auditor – General of India.

The third schedule contains the forms of Oaths and Affirmations.

The fourth schedule contains provisions as to the allocation of seats in the council of states.

12. Who among the following is the current Lokayukta of Delhi?

A) Justice Manmohan Sarin
B) Justice Reva Khetrapal
C) Justice Mohd. Shamim
D) Justice Rajendra Nath Aggarwal

Explanation **Ans : (B)**

The last Lokayukta Justice (Retd) Manmohan Sarin, had relinquished office in November 2013. Former Delhi High Court Judge, Justice Reva Khetrapal is the capital's new Lokayukta.

13. In a Windows-based computer, two files cannot be in the same folder if

A) they have different names, but same creation date
B) they have different names, but are of same file type
C) they have the same name, and are of the same file type
D) they have the same name, but are of different file type

Ans : (C)

14. The Gandhara art – a style of Buddhist visual art that developed between 1st century BCE and the 7th century CE, flourished largely during the ..... dynasty.

A) Kushan **B)** Gupta
C) Pallava **D)** Maurya

Explanation **Ans : (A)**

Gandhara art is the style of Buddhist visual art. It developed what is now North-Western Pakistan and Eastern Afghanistan between 1st century BCE and the 7th century CE. During the reign of the Indian Emperor Ashoka (3rd century BCE) the region became the scene of intensive Buddhist missionary activity.

The style of Greco-Roman origin seems to have flourished largely during the Kushan dynasty.

15. In 2015, the United Nations Climate Change Conference was held at

A) Paris **B)** Doha
C) Montreal **D)** Copenhagen

Explanation **Ans : (A)**

CoP21, the 2015 United Nations Climate Change Conference was held in Paris from November 30th to December 12th. The objective is to achieve a legally binding and universal agreement on climate change.

Conference of the parties	Year	Place
COP1	1995	Berlin, Germany
COP 2	1996	Geneva, Switzerland
COP 3	1997	Kyota, Japan

Conference of the parties	Year	Place
COP 4	1998	Buenos Aires, Argentina
COP 5	1999	Bonn, Germany
COP 6	2000	The Hague, Netherland
COP 7	2001	Marrakech, Morocco
COP 8	2002	New Delhi, India
COP 9	2003	Milan, Italy
COP 10	2004	Buenos Aires, Argentina
COP 11	2005	Montreal, Canada
COP 12	2006	Nairobi, Kenya
COP 13	2007	Bali, Indonesia
COP 14	2008	Poznan, Poland
COP 15	2009	Copenhagen, Denmark
COP 16	2010	Cancun, Mexico
COP 17	2011	Durban, South Africa
COP 18	2012	Doha, Qatar
COP 19	2013	Warsaw, Poland
COP 20	2014	Lima, Peru
COP 21	2015	Paris, France
COP 22	2016	Marrakech, Morocco
COP 23	2017	Bonn, Germany
COP 24	2018	Katowice, Poland
COP 25	2019	Madrid, Spain
COP 26	2020	Glasgow, United Kingdom

16. Which of the following is NOT a form of Monosaccharide Sugar?

A) Galactose **B)** Glucose
C) Fructose **D)** Maltose

Explanation **Ans : (D)**

Galactose is a Monosaccharide sugar that is about as sweet as glucose. It is a C-4 epimer of glucose.

Glucose is Monosaccharide polymer of hydrocarbon and a monomer of carbohydrate.

Fructose is a simple ketonic Monosaccharide found in many plants.

Maltose is a disaccharide.

17. UNITAR stands for

A) United Nations Institute for Transport and Agriculture Research
B) United Nations Initiative for Total Agricultural Readiness
C) United Nations Institute for Training and Research
D) United Nations Initiative for Transport Readiness

Explanation **Ans : (C)**

UNITAR – The United Nations Institute for Training and Research.

It was established in 1963 following a UN General Assembly resolution. Headquarters of UNITAR – Geneva.

18. Which State hosted the 12th National Ice-Skating Championship in India?

A) Sikkim **B)** Himachal Pradesh
C) Uttarakhand **D)** Jammu and Kashmir

Explanation **Ans : (D)**

Jammu and Kashmir hosted the 12th National Ice-Skating championship at the Ski-resort of Gulmarg from December 30, 2015 for five days.

19. How much time does a Geostationary satellite take to complete one orbit, at the height of 35790 km?

A) 30 days **B)** 24 hours
C) 365 hours **D)** 12 hours

Explanation **Ans : (B)**

As the height of satellite increases, so the time for the satellite to orbit increases. At a height of 35790 km, it takes 24 hours for the satellite to orbit. This type of orbit is known as 'Geosynchronous orbit'.

20. Given below is a statement followed by some conclusions. Decide which of the given conclusions logically follow(s) from the given statements.

Statements : Fortune favors the brave.
Conclusions:
I. Risks are necessary for success.
II. Cowards die many times before their death
Select the correct answer :
A) Either Conclusion I or II follows.
B) Only Conclusion I follows.
C) Only Conclusion II follows.
D) Neither Conclusion I nor II follow.

Explanation **Ans : (B)**

According to the statement, only those who tackle situations bravely achieve success. So the conclusion I follows. However, the conclusion is vague with regard to the given statement and so does not follow.

21. In which Indian State is the Nanda Devi peak located?

A) Uttarakhand **B)** Arunachal Pradesh
C) Himachal Pradesh **D)** Sikkim

Explanation **Ans : (A)**

Nanda Devi peak is located in the state of Uttarakhand.

Nanda Devi is the second-highest mountain in India and the highest located entirely within the country.

It is the 23rd highest peak in the world.

22. Find the similarity among the following:

Makar Sankranti, Pongal, Lohri, Baisakhi
A) All are festivals of North India
B) All are names of harvest festivals
C) All are festivals celebrated in the month of January
D) There is no similarity at all

$\Rightarrow 16000\times\left[\frac{105}{100}\right]^3 = 16000\times\left(\frac{21}{20}\right)^3$

$\Rightarrow 16000\times\frac{21}{20}\times\frac{21}{20}\times\frac{21}{20} = 18522$

C.I = 18522 – 16000 = ₹ 2522

69. The cash difference between the selling price of an article at a profit of 4% and 6% is ₹ 3. The ratio of two selling prices is:

A) 51 : 53 **B)** 55 : 53
C) 52 : 53 **D)** 54 : 53

Explanation **Ans : (C)**

Let the CP of the article be 100

SP of first article = $100\times\frac{104}{100}$ = ₹104

SP of second article = $100\times\frac{106}{100}$ = ₹106

The ratio of SP of the first article to that of second article = 104 : 106 = 52 : 53

70. Find the HCF of 3341 and 3328.

A) 257 **B)** 337
C) 13 **D)** 31

Explanation **Ans : (C)**

13	3341
257	257
	1

Prime factors of 3341 = 13 , 257

2	3328
2	1664
2	832
2	416
2	208
2	104
2	52
2	26
13	13
	1

Prime factors of 3328 = $2^8\times$ 13

∴ HCF of two numbers = 13

71. Mr. Kiran sold a bus for ₹ 18,700 at a loss of 15%. At what price should the bus be sold to get a profit of 15%?

A) ₹ 25,523 **B)** ₹ 25,522
C) ₹ 25,300 **D)** ₹ 25,521

Explanation **Ans : (C)**

Let cost price be ₹ 100

Loss = 15%

S.P = 100 – 15 = 85%

If SP of 85, then CP = 100

If SP of 18700, then CP = $\frac{100}{85}\times 18700$ = ₹ 22000

Required profit = 15%

15% of 22000 = $\frac{15}{100}\times 22000 = 3300$

∴ He must sell the bus at ⇒ 22000 + 3300 = ₹ 25300

72. A mobile plan costs ₹ 32 for 6 minutes. What is the approximate cost, in rupees, for 4 minutes?

A) 21.30 **B)** 21.40
C) 21.20 **D)** 21.50

Explanation **Ans : (A)**

Mobile plan cost for 6 minutes = ₹ 32

∴ Cost for 4 minutes = $4\times\frac{32}{6} = \frac{64}{3}$ = ₹21.30

73. Compute : 1112 ÷ 139 – 5

A) $\frac{557}{67}$ **B)** –3

C) $\frac{556}{67}$ **D)** 3

Explanation **Ans : (D)**

1112 ÷ 139 – 5 = 8 – 5 = 3

74. 3 men dig a hole in 10 days. How many days would it take for 5 men to dig the same hole?

A) $\frac{50}{3}$ **B)** 7

C) 5 **D)** 6

Explanation **Ans : (D)**

Time taken to dig a hole by 3 men = 10 days

∴ Time taken to dig a hole by 5 men

$=\frac{3}{5}\times 10 = 6$ days

Direction (Qnos. 75 & 76) Comprehension : Read the following information and answer the questions given below:

A has 28 elements, B has 32 elements and A∪B has 40 elements.

75. How many elements does A∩B have?

A) 12 **B)** 8
C) 10 **D)** 20

Explanation **Ans : (D)**

n(A) = 28, n(B) = 32, n(A∪B) = 40

n(A∪B) = n(A) + n(B) – n(A∩B)

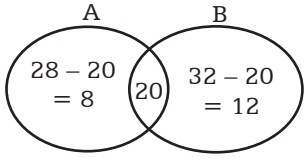
40 = 28 + 32 – n(A∩B)

∴ n(A∩B) = 60 – 40 = 20

76. How many elements are present only in B?

A) 28 **B)** 18
C) 12 **D)** 10

Explanation **Ans : (C)**



12 elements are present only in B.

77. What is the value of $\frac{0.55\times4.5}{0.81}$?

A) 3.555 **B)** $\frac{55}{18}$

C) 3.05 **D)** $\frac{55}{81}$

Explanation **Ans : (B)**

$\left[\frac{(0.55\times4.5)}{0.81}\right]\times\frac{10000}{10000}$

$\Rightarrow \frac{55\times450}{8100}=\frac{55\times50}{900}=\frac{55}{18}$

78. Simplify : $(2x)^2-(2y)^2-(4x)^2$

A) $-12x^2+4y^2$ **B)** $12x^2-4y^2$

C) $-12x^2-4y^2$ **D)** $12x^2+4y^2$

Explanation **Ans : (C)**

$(2x)^2-(2y)^2-(4x)^2$

$\Rightarrow 4x^2-4y^2-16x^2$

$\therefore -12x^2-4y^2$

79. If $\sin x=\frac{4}{5}$, then $\operatorname{cosec} x+\cot x=$

A) 31/12 **B)** 35/12

C) 2 **D)** 1/2

Explanation **Ans : (C)**

$\text{Sin } x=\frac{4}{5}$

$\therefore \text{Cosec } x=\frac{1}{\sin x}=\frac{5}{4}$

$\text{Cot } x=\sqrt{\text{cosec}^2x-1}=\sqrt{\frac{25}{16}-1}$

$\Rightarrow \sqrt{\frac{25-16}{16}}=\sqrt{\frac{9}{16}}$

$\text{Cosec } x+\cot x=\frac{5}{4}+\frac{3}{4}=\frac{8}{4}=2$

80. What is 15% of 34?

A) 5.1 **B)** 5

C) 5.2 **D)** 4.9

Explanation **Ans : (A)**

$\frac{15}{100}\times34=\frac{510}{100}=5.1$

81. If the product of two numbers is 3026 and their LCM is 89, then their HCF is:

A) 33 **B)** 34

C) 35 **D)** 29

Explanation **Ans : (B)**

The product of LCM and HCF of two numbers is equal to the product of two numbers.

89 × H.C.F = 3026

$\therefore \text{H.C.F}=\frac{3026}{89}=34$

82. Mr. Rajesh buys a toy for ₹ 27.50 and sells it for ₹ 28.60. Find the gain percentage.

A) 5% **B)** 4%

C) 6% **D)** 3%

Explanation **Ans : (B)**

$\text{Gain percentage}=\frac{(\text{S.P}-\text{C.P})}{\text{C.P}}\times100$

CP = ₹ 27.50, SP = ₹ 28.60

$\Rightarrow \frac{28.60-27.50}{27.50}\times100$

$\Rightarrow \frac{1.1}{27.50}\times100=\frac{110}{27.50}=4\%$

83. Hema takes a total of 9 hours 55 min to walk a certain distance and then cycling back to the same place from where she had started. She could walk both ways in 12 hours 30 min. The time she will take to cycle both ways is:

A) 7 hour 20 min **B)** 7 hour 15 min

C) 7 hour 35 min **D)** 7 hour 45 min

Explanation **Ans : (A)**

Time taken by Hema to walk one way $=\frac{12.30}{2}$

= 6 hours 15 minutes

Time taken by Hema to cycle one way = 9:55 – 6:15

= 3 hours 40 minutes

Time taken by Hema to cycle both ways,

⇒ 2 × 3 hours 40 minutes = 7 hours 20 minutes

84. All rational numbers are ..... numbers.

A) integer **B)** whole

C) irrational **D)** real

Explanation **Ans : (D)**

A rational number is a number that can be expressed as the quotient or fraction $\frac{p}{q}$ of two integers, a numerator p and a non-zero denominator q.

Real numbers are number comprising rational and irrational numbers. Hence all rational numbers are real numbers.

85. Two cars start from a house at an interval of 10 minutes and travel at a speed of 20 km/hr. With how much speed (km/hr.) should a woman coming from the opposite direction towards the house travel, to meet the cars at an interval of 8 minutes?

A) 5 **B)** 6

C) 7 **D)** 4

Explanation **Ans : (A)**

Let the speed of the woman be x km/hr.

Distance covered in 10 minutes at 20 km/hr is equal to distance covered in 8 minutes at $(20+x)$ km/hr.

$20\times\frac{10}{60}=\frac{8}{60}(20+x)$

$\Rightarrow 200 = 160 + 8x$

$\Rightarrow 8x = 200 - 16 = 40$

$\therefore x = 40 \div 8 = 5$ km/hr

86. Two numbers are in the ratio 3:5 and their HCF is 20. Their LCM is

A) 30 **B)** 300
C) 60 **D)** 10

Explanation **Ans : (B)**

Let the two numbers be $3x$ and $5x$

HCF of $3x$ and $5x = x$

x = HCF = 20

∴ Two numbers are 3×20 and 5×20.

⇒ 60 and 100

LCM of 60 and 100 = 300

2	60, 100
2	30, 50
5	15, 25
	3, 5

LCM = $2\times2\times5\times3\times5 = 300$

87. Mr. Mike borrowed ₹ 8500 at 4% per annum compound interest. The compound interest annually for 2 years is:

A) ₹ 9139.6 **B)** ₹ 639.6
C) ₹ 9193.6 **D)** ₹ 693.6

Explanation **Ans : (D)**

P = ₹ 8500, r = 4%, n = 2 years

$$C.I = P\left[1+\frac{r}{100}\right]^n - P$$

$$C.I = 8500\left[1+\frac{4}{100}\right]^2 - 8500$$

$$\Rightarrow 8500\left[1+\frac{1}{25}\right]^2 - 8500$$

$$\Rightarrow \left(8500\times\frac{26}{25}\times\frac{26}{25}\right) - 8500$$

⇒ 9193.6 – 8500 = ₹ 693.6

88. The surface area (in sq. cm.) of a sphere with radius 1 cm is: $\left(\text{Take } \pi = \frac{22}{7}\right)$

A) 89/7 **B)** 89/21
C) 88/21 **D)** 88/7

Explanation **Ans : (D)**

Surface area of sphere = $4\pi^2$

$$\therefore 4\times\frac{22}{7}\times1\times1 = \frac{88}{7} \text{ sq.cm}$$

89. Divide ₹ 210 in the ratio 2 : 3 : 4 : 5. The respective amounts are:

A) 30, 45, 65 and 70
B) 30, 45, 60 and 75
C) 35, 40, 60 and 75
D) 30, 40, 60 and 80

Explanation **Ans : (B)**

Let the ratio be $2x : 3x : 4x : 5x$

⇒ $2x+3x+4x+5x = 210$

⇒ $14x = 210$

∴ $x = 15$

Respective amounts,

$2\times15 = 30$,

$3\times15 = 45$,

$4\times15 = 60$,

$5\times15 = 75$

90. A shopkeeper cheats to the extent of 10% while buying and selling fruits, by using tampered weights. His total gain, in percentage is:

A) 21 **B)** 24
C) 22 **D)** 23

Explanation **Ans : (A)**

Cheat % while buying = 10%

Cheat % while selling = 10%

Let the shopkeeper is buying 100 units of product.

Number of units the shopkeeper actually buys be cheating,

⇒ 100 + 10% of 100

$$\Rightarrow 100+\frac{10}{100}\times100 = 110 \text{ units}$$

He has paid only for 100 units.

Number of units the shopkeeper actually sells by cheating,

⇒ 110+10% of 110

$$\Rightarrow 110+\frac{10}{100}\times110 = 121$$

The shopkeeper has bought 110 units and sold 121 units of the product.

Total gain = 121 – 100 = 21 units

$$\text{Gain percentage} = \frac{21}{100}\times100 = 21\%$$

91. The mode of the data 12, 1, 10, 1, 9, 3, 4, 9, 7, 9 9:

A) 4 **B)** 12
C) 1 **D)** 7

Explanation **Ans : (A)**

The mode is the value that appears most frequently in data set.

9 appears more frequently (3 times) and is mode of the data.

92. In a class test, a student scored 22 marks out of 25 marks. The student's marks, in percentage is:

A) 88 **B)** 80
C) 90 **D)** 75

Explanation **Ans : (A)**

Required percentage

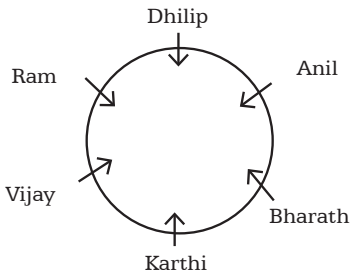
$$= \frac{22}{25}\times100 = 88\%$$

106. Which of the following is the position of Anil in relation to Vijay?
A) Second to the right
B) Third to the right
C) Second to the left
D) First to the left

107. Who is between Vijay and Dhilip?
A) Anil **B)** Bharath
C) Karthi **D)** Ram

108. Who is between Bharath and Vijay?
A) Karthi **B)** Dhilip
C) Anil **D)** Ram

Explanation : (106 – 108)



106. (B) 107. (D) 108. (A)

109. There are total 200 students in a school, of which 1/5th are boys. Find the number of girls in the school.
A) 160 **B)** 16
C) 140 **D)** 40

Explanation **Ans : (A)**

Number of boys $= \frac{1}{5} \times 200 = 40$

$\therefore$ Number of girls $= 200 - 40 = 160$

110. If in a certain language A is coded as 1, B is coded as 2, C is coded as 3, and so on, how is BIDDIC coded in that language?
A) 284483 **B)** 294483
C) 294439 **D)** 294493

Explanation **Ans : (D)**

Place value of the letters in alphabet is given

B	I	D	D	I	C
↓	↓	↓	↓	↓	↓
2	9	4	4	9	3

111. Arrange the given English words in alphabetical order and choose the one that comes first
A) Accumulate
B) Actuate
C) Account
D) Achieve

Explanation **Ans : (C)**

As per alphabetical order.

Account, Accumulate, Achieve, Actuate

112. What will be the next set of alphabets in the series?

PBA, QCB, RDC, SED, ...
A) TFD **B)** TFE
C) TGE **D)** RST

Explanation **Ans : (B)**

$P \xrightarrow{+1} Q \xrightarrow{+1} R \xrightarrow{+1} S \xrightarrow{+1} \boxed{T}$

$B \xrightarrow{+1} C \xrightarrow{+1} D \xrightarrow{+1} E \xrightarrow{+1} \boxed{F}$

$A \xrightarrow{+1} B \xrightarrow{+1} C \xrightarrow{+1} D \xrightarrow{+1} \boxed{E}$

113. Given below is a statement followed by some conclusions. Decide which of the given conclusions logically follow(s) from the given statements.

Statement : Good voice is a natural gift, but one has to keep practicing to improve and excel in the field of music.

Conclusions:
I. Natural gifts need nurturing and care.
II. By continuous practice, one can get a natural gift.

Select the correct answer :
A) Either Conclusion I or II follows.
B) Neither Conclusion I nor II follow.
C) Only Conclusion I follows.
D) Only Conclusion II follows.

Ans : (C)

114. What will be the next number in the series?

12, 48, 240, ...
A) 480 **B)** 440
C) 1200 **D)** 1440

Explanation **Ans : (D)**

$12 \times 4 = 48$

$48 \times 5 = 240$

$240 \times 6 = \boxed{1440}$

115. Thick : Thin :: Idle : .....
A) Inactivity **B)** Virtuous
C) Industrious **D)** Business

Explanation **Ans : (C)**

Tick is the opposite of Thin. Similarly, the opposite of Idle is Industrious.

Industrious means hard working.

116. If ENTRY is coded as 98462 and STEADY is coded as 749212, then how is NEATNESS written in that code?
A) 89648977 **B)** 89349877
C) 89348977 **D)** 89438977

Explanation **Ans : (C)**

E	N	T	R	Y			
↓	↓	↓	↓	↓			
9	8	4	6	2			
S	T	E	A	D	Y		
↓	↓	↓	↓	↓	↓		
7	4	9	2	1	2		

Therefore

N	E	A	T	N	E	S	S
↓	↓	↓	↓	↓	↓	↓	↓
8	9	3	4	8	9	7	7

117. A question and two statements labeled (I), (II) are given. You have to decide which statement(S) us/ are sufficient to answer the question.
What is Guna's age?
I. Guna, Vinay and Keshav are all of the same age.
II. Sum of ages of Vinay, Keshav and Arjun is 32; also Arjun is as old as Vinay and Keshav together.
Select the correct answer :
A) Statement II alone is sufficient.
B) Both the statements together are needed.
C) Either I or II alone are sufficient.
D) Statement I alone is sufficient.

Explanation **Ans : (B)**

From statement I

This alone cannot gives the answer.

From statement II

Vinay + Keshav + Arjun = 32 .....(i)

Arjun = Keshav + Vinay .....(ii)

Substitute equation (ii) in (i)

2 Arjun = 32 years

Arjun = 16 years

Keshav + Vinay = 16 years

Guna is not mentioned in statement II. Hence it is not possible to get the answer.

From I & II

Guna = Keshav = Vinay

Keshav + Vinay = 16

$\text{Vinay} = \frac{16}{2} = 8$ years

∴ Guna = 8 years

Hence both statements together are needed.

118. Shirt : Garment :: Potato : .....
A) Juice **B)** Onion
C) Fruit **D)** Vegetable

Explanation **Ans : (D)**

Skirt is a type of the category which is garment. Similarly, potato is an example of wide category of vegetables.

119. Below are given statements followed by some conclusions. You have to take the given statements to be true. Even if they seem to be at variance with the commonly known facts and then decide which of the given conclusions logically follow(s) from the given statements.
Statements:
All poets are readers. No reader is wise.
Conclusions:
I. No poet is wise.
II. All readers are poets
Select the correct answer :
A) Only conclusion II follows
B) Only conclusion I follows
C) Neither conclusion I nor II follows
D) Both conclusions I and II follow

Explanation **Ans : (B)**

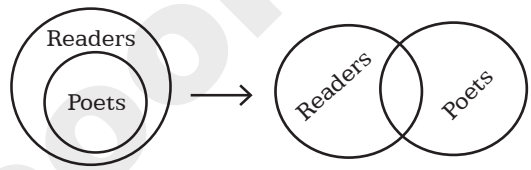
All poets are readers → (A-type)

No reader is wise → (E-type)

A+E ⇒ E-type on conclusion.

"No poet is wise". Hence the conclusion I follows.

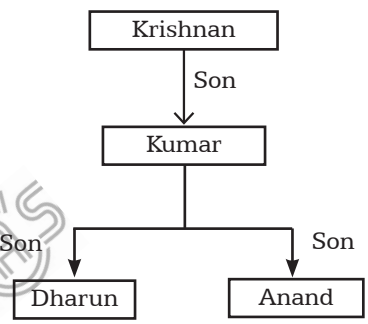
All poets are readers → Conversion into 'Some readers are poets'.



Hence the conclusion II does not follow.

120. Dharun has a brother Anand. Dharun is the son of Kumar. Krishnan is Kumar's father. How is Anand related to Krishnan?
A) Grandfather **B)** Father
C) Grandson **D)** Son

Explanation **Ans : (C)**



Anand is grandson to Krishnan.