

RRB NTPC Previous Year Question Paper

28 march 2016 Shift 3



1. Who won the Miss Universe pageant 2015 ?

- (A) Monika Radulovic
- (B) Pia Wurtzbach
- (C) Asiadna Gutierrez
- (D) Olivia Jordan
- A. (B)
- B. (A)
- C. (D)
- D. (C)

Sol.

- 2015 Miss Universe pageant was held in AXIS in Las Vegas, Nevada, United States.
- **Pia Wurtzbach won the 2015 Miss Universe pageant.**

• 80 contestants competed for the crown.
2. To make the equations to meet which of the following two symbols must be interchanged.

$$3 + 2 \times 6 - 4 \div 5 = 10$$

- A. + and \div
- B. \times and \div
- C. \div and -
- D. \div and \times

Sol. From option (A), (+ and \div) we get;

$$3 + 2 \times 6 - 4 \div 5 = 10$$

After changing the signs

$$= 3 \div 2 \times 6 - 4 + 5$$

$$= 9 - 4 + 5$$

$$= 10$$

Hence, option A is correct.

$$\frac{\sqrt{3}}{2}$$

3. If $\sin \theta = \frac{\sqrt{3}}{2}$, then $\tan \theta = ?$

- (A) $\frac{3}{2}$
- (B) $\frac{1}{2}$
- (C) 3
- (D) $\sqrt{3}$
- A. (B)
- B. (C)
- C. (A)
- D. (D)

$$\frac{\sqrt{3}}{2}$$

Sol. $\sin \theta = \frac{\sqrt{3}}{2}$,
then $\theta = 60$ degrees
then $\tan \theta = \sqrt{3}$

4. Real currency belongs to which country?

- (A) China
- (B) Cuba
- (C) Brazil
- (D) Gambia
- A. (B)
- B. (A)
- C. (C)
- D. (D)

Sol.

- The **Brazilian real** is the official currency of Brazil.
- The value of 1 Brazilian real is approx 17 rupees.
- It was introduced on 1 July 1994.

5. Which of the following conduct the watercycle on earth?

- (A) Wind
- (B) Moon
- (C) Sun
- (D) Earth
- A. (C)
- B. (B)
- C. (A)
- D. (D)

Sol.

- Water cycle is the continuous movement of water in cycle form from the oceans to the atmosphere to the Earth and on again.
- Basically, the sun drives the water cycle by heating water in the oceans.

6. Choose the odd one-

- (A) GMT
- (B) UTC
- (C) EDT
- (D) BMI
- A. (D)



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

- B. (C)
C. (A)
D. (B)

Sol. GMT, UTC and EDT are time zones. BMI refers to the body mass index. Hence, BMI is different from others.

7.

If $\Delta \times \square = 48$, $O \times \Delta = 24$, $\diamond \times O = 8$,
Then find $\diamond \times \Delta = ?$

- A. 12
B. 16
C. 24
D. 32

Sol.

Here the number coded for the given symbols as shown as below:

$$\Delta \times \square = 48$$

$$6 \times 8 = 48$$

$$O \times \Delta = 24$$

$$4 \times 6 = 24$$

$$\diamond \times O = 8$$

$$2 \times 4 = 8$$

$$\text{So, } \diamond \times \Delta = 2 \times 6 = 12$$

Hence, option A is correct answer.

8. Choose the completely different in the following?

15/20, 48/60, 21/28, 75/100

- (A) 15/20
(B) 48/60
(C) 21/28
(D) 75/100
A. (B)
B. (D)
C. (C)
D. (A)

Sol. In the simplest forms

$$15/20 = 3/4,$$

$$48/60 = 4/5,$$

$$21/28 = 3/4,$$

$$75/100 = 3/4$$

Thus 48/60 is unique

9. Transportation of water and minerals in a plant is conducted by _____

- (A) Stem
(B) Roots
(C) Xylem
(D) Petiole
A. (D)
B. (A)
C. (C)
D. (B)

Sol.

• **Xylem transports water and solutes** from the roots to the leaves.

• The phloem carries nutrients up and down the plant.

• At night, when stomata close, the water is held in the stem and leaf by the cohesion of water molecules to each other as well as the adhesion of water to the cell walls of the xylem vessels and tracheids.

10. Famous Titanic ship belongs to which country?

- (A) U.S.A.
(B) China
(C) Great Britain
(D) France
A. (C)
B. (D)
C. (A)
D. (B)

Sol.

• Titanic was a British passenger liner that sank in the North Atlantic Ocean in 1912.

• It belonged to **Great Britain**.

• It was built in Belfast, Ireland, in the United Kingdom of Great Britain and Ireland.

11. Solve the equation $(a^{-2} + 1)(a^2 - 1) - a^2$:

- (A) $1/a^2$
(B) a^2
(C) $-1/a^2$



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

(D) $-a/(a-1)^2$

- A. (D)
- B. (C)
- C. (B)
- D. (A)

Sol. Given that, $(a^{-2}+1)(a^2-1) - a^2$

$$\begin{aligned} &= \left(\frac{1}{a^2} + 1\right)(a^2 - 1) - a^2 \\ &= \left(\frac{1+a^2}{a^2}\right)(a^2 - 1) - a^2 \\ &= \left(\frac{a^4-1}{a^2}\right) - a^2 \\ &= -1/a^2 \end{aligned}$$

12. Which of the following won the academy award for the best-animated feature film?

- (A) Songs of the sea
 - (B) Big Hero
 - (C) The tale of princess Kaguyo
 - (D) The box trolls
- A. (A)
 - B. (D)
 - C. (B)
 - D. (C)

Sol.

- **Big Hero 6 is a 2014 American 3D** computer-animated superhero film.
- It was the highest-grossing animated film of 2014.
- It won the animated feature award.

13. Who was the first recipient of Dada Saheb Phalke Award?

- (A) Prithvi Raj Kapoor
 - (B) Lata Mangeshkar
 - (C) Satyajit Roy
 - (D) Devika Rani
- A. (C)
 - B. (A)
 - C. (D)
 - D. (B)

Sol.

- **Devika Rani** was the first recipient of the Dadasaheb Phalke Award.

- She got the award in 1969.
- She is also regarded as the "first lady of Indian cinema".

14. The Arithmetic mean of 20 inspections is 15.5 it was found later that 24 was read as 42 by mistake. Then find the correct mean?

- (A) 14
 - (B) 14.4
 - (C) 14.6
 - (D) 15
- A. (A)
 - B. (D)
 - C. (C)
 - D. (B)

Sol. Incorrect total sum = $20 \times 15.5 = 310$

Since 24 is misread as 42

Correct sum = $310 + 24 - 42 = 292$

Correct mean = $292/20 = 14.6$

15.

|||Common||| **Direction:** Answer the question on the basis of given information. In a party of 70 people, 52 can speak English and 26 can speak French.

|||End|||

How many people can speak both French and English?

- (A) 8
 - (B) 10
 - (C) 12
 - (D) 6
- A. (D)
 - B. (C)
 - C. (A)
 - D. (B)

Sol. English = 52

French = 26

Both English and French = $52 + 26 - 70 = 8$

16. How many people can speak only French?

- (A) 8
- (B) 16
- (C) 18



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

- (D) 24
A. (A)
B. (D)
C. (B)
D. (C)

Sol. Only french = 26 - Both English and French = 26 - 8 = 18

17.
How many people can speak only English?
(A) 44
(B) 18
(C) 26
(D) 32
A. (A)
B. (D)
C. (C)
D. (B)

Sol. English = 52
French = 26
Both English and French = 52 + 26 - 70 = 8
Only English = 52 - 8 = 44

18. What is the colour of blood of octopus?
(A) Red
(B) Blue
(C) Pink
(D) Black
A. (C)
B. (A)
C. (B)
D. (D)

Sol.
• Octopus has **blue blood**.
• They evolved a copper rather than the iron-based pigment that is called hemocyanin, which makes its blood blue.

19. Find the H.C.F. of 198 and 78?
(A) 8
(B) 9
(C) 6
(D) 7
A. (D)
B. (B)

- C. (C)
D. (A)

Sol. $198 = 2 \times 3^2 \times 11$
 $78 = 2 \times 3 \times 13$

HCF = $2 \times 3 = 6$

20. A man walks with the speed of 4 km/hr for 3 hrs and returns the same distance with the 16 km/hr by running. Find out the time taken by him in running?

- (A) 45 Minutes
(B) 72 Minutes
(C) 30 Minutes
(D) 42 Minutes
A. (B)
B. (D)
C. (A)
D. (C)

Sol. Distance = $4 \times 3 = 12$ km
Time in running = $12/16$ hr = $3/4$ hr = 45 minutes

21. Cost of a residential flat increases by 15% every year if the present cost is Rs. 60,00,000, then find its cost after 2 years.
(A) Rs. 78,00,000
(B) Rs. 83,45,000
(C) Rs. 85,39,500
(D) Rs. 79,35,000
A. (D)
B. (A)
C. (B)
D. (C)

Sol. Cost after 2 years = $6000000(1 + 15/100)(1 + 15/100)$
 $= 6000000 \times 1.15 \times 1.15 = 7935000$

22. What was another name of Chanakya?
(A) Dev Varman
(B) Vishnu Gupt
(C) Ram Gupt
(D) Brijeshwar
A. (A)



Gradeup SSC & Railway **Super Subscription**
Access to all Structured Courses & Test Series

- B. (D)
C. (B)
D. (C)

Sol.

- Chanakya was an ancient Indian teacher, philosopher, economist, jurist and royal advisor.

- **He was also known as Vishnu Gupta.**

- He assisted the first Mauryan emperor Chandragupta.

23. Which process is responsible to generate solar energy in the sun?

- (A) Nuclear Fusion
(B) Solar Power
(C) Thermal Power
(D) Gravitational energy
A. (D)
B. (C)
C. (B)
D. (A)

Sol.

- **Nuclear fusion** is responsible to generate solar energy in the sun.

- It converts hydrogen atoms into helium.

- The energy released from nuclear fusion reactions accounts for the longevity of stellar heat and light.

24. Who has received the Dronacharya Award in boxing?

- (A) Gurucharan Singh
(B) Balwan Singh
(C) Rajinder Singh
(D) Sanjeev Kumar Singh
A. (B)
B. (D)
C. (A)
D. (C)

Sol.

- **Gurcharan Singh is an Indian Professional boxer.**

- He received the Dronacharya Award in boxing in the year 2004.

25. What would be the no. in the following services in place of question mark (?)
26, 29, 33, 38, ?, 51.

- A. 44
B. 42
C. 46
D. 49

Sol. The series will be,

$$26+3 = 29$$

$$29+4 = 33$$

$$33+5 = 38$$

$$38+6 = 44$$

$$44+7 = 51$$

hence, option A is the correct response.

26. Which city is a planned city according to Vastushastra?

- (A) New Delhi
(B) Bangalore
(C) Mumbai
(D) Chandigarh
A. (A)
B. (C)
C. (D)
D. (B)

Sol.

- **Chandigarh was planned by the famous French architect Le Corbusier.**

- It is a union territory in India.

- It is internationally known for its architecture and urban design.

- It is located near the foothills of the Sivalik Range of the Himalayas

27. Mariana Trench is situated in which of the ocean?

- (A) Atlantic ocean
(B) Pacific ocean
(C) Indian ocean
(D) Southern ocean
A. (D)
B. (C)
C. (B)
D. (A)

Sol.



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

• Mariana trench is the deepest sea trench in the floor of the western **North Pacific Ocean**.

• The maximum known depth is 10,984 metres.

• It is named after the nearby Mariana Islands.

28. The cost in manufacturing of a machine is divided among material, labour and extra expenditure and the ratio was 5:3:1. If extra expenditure was ₹ 149,500, what was the price of machine?

- (A) ₹ 7,47,500
(B) ₹ 13,45,500
(C) ₹ 13,78,800
(D) ₹ 14,22,200

- A. (B)
B. (A)
C. (C)
D. (D)

Sol. Ratio of costs- Material : Labour : Extra Expenditure = 5 : 3 : 1

The Price of Machine = Material + Labour + Extra Expenditure = 9 units

Extra expenditure = 1 unit.

Given 1 unit = ₹ 149,500

Hence, 9 units (Price of Machine) = ₹ 13,45,500

29. Where is the head office of ONGC?

- (A) Dibrugarh
(B) Kandla
(C) Visakhapatnam
(D) Delhi

- A. (A)
B. (D)
C. (C)
D. (B)

Sol.

• ONGC is Oil and Natural Gas Corporation.

• It is India's largest oil and gas exploration and production company

• **The head office of ONGC is in Delhi.**

30. Ankita is standing at the corner of a rectangular field having 40 meter and 30 meter length and breadth respectively. If she runs along the diagonal and returned to the initial point then find out total distance travelled by her.

- (A) 100 meter
(B) 80 meter
(C) 140 meter
(D) 120 meter

- A. (A)
B. (B)
C. (C)
D. (D)

Sol. Length of diagonal = $\sqrt{(30^2 + 40^2)} = 50\text{m}$

Since she also returned to the original point
So total distance travelled = $50 \times 2 = 100\text{m}$

31. There is 6% of sugar in a 5 litre mixture of sugar. Out of it 1 litre water vapourises. Find the percentage of sugar in the remaining mixture?

- (A) 5%
(B) 7.5%
(C) 6%
(D) 4%

- A. (C)
B. (D)
C. (B)
D. (A)

Sol. Sugar in the initial mixture = $(6/100) \times 5 = 0.3$ litres

Remaining is water in mixture.

Thus, Water in the mixture = $5 - 0.3 = 4.7$ litres.

Now since 1 ltr water vaporizes:

New quantity of water in mixture = 3.7 litres.

So, percentage of sugar in final mixture = $(0.3/4) \times 100 = 7.5\%$

32. Which one of the following rivers emerged from western Ghat?



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

- (A) Ghaggar
(B) Krishna
(C) Damodar
(D) Son
A. (D)
B. (B)
C. (C)
D. (A)

Sol.

- The **Krishna river originates in the Western Ghats near Mahabaleshwar** at an elevation of about 1,300 metres.
- The major river systems originating in the Western Ghats are the Godavari, Kaveri, Krishna, Thamiraparani and Tungabhadra rivers.

33. What is LAN in computer language?

- (A) Largest Area Network
(B) Local Area Network
(C) Legal Area Network
(D) Longest Area Network
A. (D)
B. (C)
C. (B)
D. (A)

Sol.

- A local area network (LAN) is a group of computers and peripheral devices that share a common communications line or wireless link to a server within a distinct geographic area.
- One LAN can be connected to other LANs over any distance via telephone lines and radio waves.

34. If in a code SCHOOL is written as FPUBBY then what would be the middle letter of the code for COLLEGE?

- (A) P
(B) B
(C) R
(D) Y
A. (A)
B. (D)
C. (C)

D. (B)

Sol. The code of SCHOOL will be,

$S+13 = F$
 $C+13 = P$
 $H+13 = U$
 $O+13 = B$
 $O+13 = B$
 $L+13 = Y$

similarly, for COLLEGE

$C+13 = P$
 $O+13 = A$
 $L+13 = Y$
 $L+13 = Y$
 $E+13 = R$
 $G+13 = T$
 $E+13 = R$

The middle letter is Y

Hence, option B is the correct response.

35. Which of the following game has been removed from Olympic?

- (A) Volleyball
(B) Carling
(C) Baseball
(D) Basket ball
A. (C)
B. (A)
C. (B)
D. (D)

Sol.

- Baseball and softball were voted out of the 2012 Summer Olympics in London.
- They were removed after the 2008 games because Major League Baseball refused to allow its players to participate.

36. There are some statements and conclusions given below. Consider the statements correct despite they are different from known general facts?



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

Statements:

1. No country in the world has gained self-reliance.
2. Mechanization is failed completely.

Conclusions:

- I. Becoming self-reliant is impossible.
- II. Human labor is more productive in comparison to the machine.

Decide which of the following conclusion Follows :

- A. Both I and II follows
- B. None follows
- C. Only conclusion II follows
- D. Only conclusion I follows

Sol. It is mentioned in the given statement that No country in the world has gained self-reliance but this doesn't mean that become self-reliant is impossible thus conclusion I is not implicit. It cannot be concluded that human labor is more productive in comparison to the machine just because Mechanization is failed completely thus conclusion II is not implicit. So, none follows.
Hence, option B is correct.

37.If area of a equilateral triangle is $24\sqrt{3}$ then find out the perimeter of triangle?

- (A) $16\sqrt{6}$
 - (B) 96
 - (C) $4\sqrt{6}$
 - (D) $12\sqrt{6}$
- A. (A)
 - B. (D)
 - C. (B)
 - D. (C)

Sol. Area of equilateral triangle = $(\sqrt{3}/4)a^2$
 $= 24\sqrt{3}$
 $a = \sqrt{96} = 4\sqrt{6}$

$$\text{Perimeter} = 3a = 12\sqrt{6}$$

38.Robert Galbraith is known by which name?

- (A) Agatha Christie
 - (B) Sidney Sheldon
 - (C) Enid Blyton
 - (D) J.K. Rowling
- A. (A)
 - B. (D)
 - C. (B)
 - D. (C)

Sol.

- Joanne Rowling known by her pen name J. K. Rowling, is a British novelist, screenwriter, producer, and philanthropist.
- She is best known for writing the Harry Potter fantasy series.

$$39.1 \text{ billion} \div 1000 = ?$$

- (A) 1 crore
 - (B) 1 Lakh
 - (C) 10 crore
 - (D) 10 Lakh
- A. (D)
 - B. (B)
 - C. (A)
 - D. (C)

$$\text{Sol. } 1 \text{ billion} = 100 \text{ crore} = 10^9$$

$$1 \text{ billion} \div 1000 = 10^9 \div 10^3 = 10^6 = 1000000 = 10 \text{ Lakhs}$$

40.The average of marks scored by James in Math, Science and History is 89. The average is lowered to 88.25 if the marks of language is also added. Calculate the marks in language obtained by him.

- (A) 90
 - (B) 82
 - (C) 86
 - (D) 83
- A. (C)
 - B. (B)
 - C. (A)
 - D. (D)



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

Sol. Total marks excluding language = $89 \times 3 = 267$
Total marks including language = $88.25 \times 4 = 353$
Marks in language = $353 - 267 = 86$

41. In the following question, select the related word from the given alternatives.

Fish : Shoal :: ? : Colony

- A. Ants
- B. House
- C. Cow
- D. Life

Sol. Group of fish is known as shoal.

Similarly, group of ants is termed as colony.

Hence, option A is the correct answer.

42. If a man is at 14th position in a row from both side, then how many people are there in the row?

- A. 24
- B. 25
- C. 27
- D. 26

Sol. Number of people in the row = $(14 \times 2) - 1 = 28 - 1 = 27$

Hence, option C is the correct response.

43. If HIDE = 1440 then what could be WIDE?

- (A) 1560
- (B) 3265
- (C) 4140
- (D) 2580
- A. (B)
- B. (D)
- C. (A)
- D. (C)

Sol. The code for HIDE -

H - 8

I - 9

D - 4

E - 5

HIDE - $8 \times 9 \times 4 \times 5 = 1440$

Similarly for WIDE

W - 23

I - 9

D - 4

E - 5

WIDE - $23 \times 9 \times 4 \times 5 = 4140$

Hence, option D is the correct response.

44.

Direction: In the following question, some statements are followed by some Assumptions. You have to consider the statement to be true, even if they seem to be at variance from commonly known facts. You have to decide Which assumption is definitely true.

Statements

- (i) All mangoes are sweet
- (ii) Some apples are sweet
- (iii) All round fruits are sweet
- (iv) Jenny is eating a sweet fruit

Assumptions :

- (A) Jenny is eating an apple
- (B) Jenny don't like lemon
- (C) Jenny is eating an Orange
- (D) Jenny is eating mango.

A. (D)

B. (B)

C. (A)

D. (C)

Sol.

Assumptions :

- (A) Jenny is eating an apple - It cannot be assumed because not all Apples are sweet.
- (B) Jenny don't like lemon - It cannot be assumed because all round fruits are sweet and jenny is eating a sweet fruit, so we can't say.



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

(C) Jenny is eating an Orange - It cannot be assumed because all round fruits are sweet, all mango are sweet and jenny is eating a sweet fruit, so we can't say.

(D) Jenny is eating mango - **It can be assumed** because it is given in the statement that all mango are sweet and jenny is eating a sweet fruit.

So, only **assumption (D)** is implicit.

Hence, the correct option is A.

45. $\text{Cosec}\theta \times \tan\theta \div \cos\theta$ has the value-

- (A) $\sin \theta$
- (B) $1/\sin^2\theta$
- (C) $1/\cos^2\theta$
- (D) $\cos \theta$

A. (B)

B. (A)

C. (D)

D. (C)

Sol. $\text{Cosec}\theta \times \tan\theta \div \cos\theta = (1/\sin\theta) \times ((\sin\theta/\cos\theta) \times (1/\cos\theta)) = 1/\cos^2\theta$

46. What is the unit of life?

- (A) Cell
- (B) Organ
- (C) Tissue
- (D) Nucleus

A. (D)

B. (B)

C. (A)

D. (C)

Sol.

- A **cell** is the smallest unit of life.
- It is the basic structural, functional, and biological unit of all known organisms.
- It was discovered by Robert Hooke in 1665.

47. Find the principle money becomes Rs.1000 by 8% yearly simple rate in 9 months?

- (A) Rs.781.40
- (B) Rs.981.40
- (C) Rs.943.40
- (D) Rs.843.40

A. (D)

B. (A)

C. (C)

D. (B)

Sol. $I = \text{PRT}/100$

$A - P = \text{PRT}/100$

Here time = 9 months = $3/4$ years

$1000 - P = \text{Px}8 \times 3/(4 \times 100) = 3P/50$

$53P = 50000$

$P = 50000/53 = \text{Rs.}943.40$

48. The word equinox stands for-

- (A) The same shape
- (B) Same time period of day and night
- (C) Same time period of summer and cold
- (D) The weather is of same time period

A. (A)

B. (D)

C. (B)

D. (C)

Sol.

• Equinox comes from the Latin words "aequi" means equal, and "nox" means night.

• So, the word equinox means the same time period of day and night.

• An **equinox** is when the sun passes directly over the equator.

49. If a man loses 10% by selling an object in Rs.3735 than to gain 10% of profit he should sell the object in-

- (A) Rs.4150
- (B) Rs.4565
- (C) Rs.4108.50
- (D) Rs.4518.50

A. (A)

B. (C)

C. (D)

D. (B)

Sol. Let x be the CP

Since he loses 10%

$\text{SP} = x - 10\% \text{ of } x$

$= 0.9x = 3735$

or $x = 3735/0.9$



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

After 10% gain

$$SP = 1.1x = 1.1 \times 2735 / 0.9 = 11 \times 3735 / 9 = 4565$$

50. Indian Institute of science is situated at-

- (A) Kanpur
- (B) Bangalore
- (C) Mumbai
- (D) Chennai

- A. (B)
- B. (A)
- C. (D)
- D. (C)

Sol.

• **Indian Institute of Science** is a public university for scientific research and higher education.

- It is located in **Bangalore**.
- It was established in 1909.

51. 15 men can do a piece of work in 10 days. If to complete the work 10 men more were added then what would be the time to finish the work?

- (A) 8
- (B) 10
- (C) 15
- (D) 6
- A. (C)
- B. (D)
- C. (B)
- D. (A)

Sol. $M_1D_1 = M_2D_2$

$$15 \times 10 = 25 \times D_2$$

$$D_2 = 6 \text{ days}$$

52. Which one of these is an example of chemical reaction?

- (A) Sublimation
- (B) Crystallization
- (C) Neutralization
- (D) Distillation

- A. (C)
- B. (A)
- C. (B)
- D. (D)

Sol.

• Neutralization is an example of chemical reaction.

• A neutralization reaction is when an acid and a base react to form water and a salt and involves the combination of H^+ ions and OH^- ions to generate water.

• The neutralization of a strong acid and strong base has a pH equal to 7

53. Which one of these was a Indian mathematician?

- (A) Bharat
- (B) Bana
- (C) Bhaskar
- (D) Bhavbhuti

- A. (C)
- B. (A)
- C. (B)
- D. (D)

Sol.

• Bhaskara was born in Bijapur in Karnataka.

• He was an Indian mathematician and astronomer and is known as the greatest mathematician of medieval India

• Lilavati is written by Bhaskara .

54. If 10 men can dig a canal in 8 days then how many days would be taken by 15 men?

- (A) 12
- (B) 7
- (C) 6.67
- (D) 5.33

- A. (C)
- B. (A)
- C. (D)
- D. (B)

Sol. $M_1D_1 = M_2D_2$

$$10 \times 8 = 15 \times D_2$$

$$D_2 = 16/3 = 5.33 \text{ days}$$

55. Who was the Chief justice of India in 2016?

- (A) H.L. Dattu



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

- (B) Raghuram Rajan
(C) Sanjeev Behari
(D) T.S. Thakur
A. (D)
B. (A)
C. (B)
D. (C)

Sol.

- T. S. Thakur was the 43rd Chief Justice of India.
- He was appointed Chief Justice of India on 18 November 2015, He retired on 4 January 2017 on turning of 65 years of age

56. The relation of pen to writer is the same that of the Needle to----is.

- (A) Sewing
(B) Yarn
(C) Tailor
(D) Sewing Machine
A. (B)
B. (D)
C. (C)
D. (A)

Sol. As, the writer uses a pen to write. Similarly, Tailor uses a needle to sew. Hence, option C is the correct response.

57. Which is the largest mammal?

- (A) The African Elephant
(B) Male Hippopotamus
(C) Blue whale
(D) Male hammer head shark
A. (C)
B. (B)
C. (D)
D. (A)

Sol.

- The blue whale is a marine mammal belonging to the suborder of baleen whales.
- At 30 meters (98 ft) in length and 180 metric tons (200 short tons) or more in weight, it is the largest known animal to have ever existed

58. Thomas cup belongs to which sport?
(A) Tennis

- (B) Badminton
(C) Table Tennis
(D) Hockey

- A. (C)
B. (B)
C. (A)
D. (D)

Sol.

- Thomas cup is an **international badminton competition** among teams representing member nations of the Badminton World Federation (BWF), the sport's global governing body.

- It was founded in 1949.

59. The product of two number of 2 digits is 2160 LCM is 180. Find out no.?

- (A) 72 and 30
(B) 36 and 60
(C) 45 and 48
(D) 54 and 40
A. (C)
B. (D)
C. (B)
D. (A)

Sol. $LCM \times HCF = \text{Product of two numbers} = 2160$

$$HCF = 2160/180 = 12$$

Let the numbers be $12x$ and $12y$

$$144xy = 2160$$

$$xy = 15$$

Since numbers are of 2 digits

$x=3$ and $y=5$ will satisfy the condition

Ans = 36 and 60



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

60. Select the different one among given below-

Running, Jumping, Yoga, Jogging

- (A) Running
- (B) Jumping
- (C) Yoga
- (D) Jogging

- A. (A)
- B. (D)
- C. (C)
- D. (B)

Sol. Running, jumping and jogging are the part of the exercise. Yoga is completely different from the rest.

Hence, option C is the correct response.

61. Which is the most speaking language?

- (A) Mandarin
- (B) Spanish
- (C) English
- (D) Hindi

- A. (A)
- B. (B)
- C. (D)
- D. (C)

Sol.

○ Mandarin Chinese is the most spoken language in the world.

○ Spanish is second most spoken language in the world.

62. If JESUS is coded as EZNPN the what could be JACK?

- (A) EXVG
- (B) EVXF
- (C) EWYH
- (D) EVWF

- A. (C)
- B. (D)
- C. (B)
- D. (A)

Sol. JESUS is coded as,

J - 5 = E

E - 5 = Z

S - 5 = N

U - 5 = P

S - 5 = N

JACK will be coded as,

J - 5 = E

A - 5 = V

C - 5 = X

K - 5 = F

Hence, option C is the correct response.

63. Which one is the lowest porous?

- (A) Sandy soil
- (B) Silty soil
- (C) Clay soil
- (D) Saline soil

- A. (B)
- B. (C)
- C. (A)
- D. (D)

Sol.

• **Clay soil is the least porous soil.**

• The spaces between the molecules of the soil are less and water cannot pass through them.

• Porous soil is made from coarse particles that leave large gaps known as pores.

64.

|||Common||| **Direction:** According to table answer the question-

The table shows the number of students whose obtained marks are given under various ranges.

Obtained Marks	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100
No. of Students	5	9	16	22	26	18	11	6	4	3

|||End|||

What is the percentage of student who scored between 41% and 70%?

- (A) 55%
- (B) 45.8%



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

- (C) 35%
(D) 11.83%
A. (B)
B. (D)
C. (C)
D. (A)

Sol. Total students = 120
Students between 41%-70% = 26+18+11 = 55
Total no. of students = 5+9+16+22+26+18+11+6+4+3=120
Percentage of students = $55/120 \times 100 = 45.83\% = 45.8\%$ approx

- 65.If qualifying percentage is 41, then the percentage of students who did not qualify?
(A) 40%
(B) 62%
(C) 43%
(D) 22%
A. (D)
B. (B)
C. (A)
D. (C)

Sol. Total students = 120
Students who scored 40% or less = 5+9+16+22 = 52
Percentage of students who scored 40% or less i.e failed = $52/120 \times 100 = 43.33\% = 43\%$ approx

66.
How many percentage of student scored more than 80% marks?
(A) 7%
(B) 5.8%
(C) 8.5%
(D) 8%
A. (D)
B. (C)
C. (B)
D. (A)

Sol. Total students = 120
Students above 80% = 4+3 = 7

Percentage of students = $7/120 \times 100 = 5.8\%$

67. There are 25 questions in an exam. 4 marks are given for each correct answer and 2 marks are deducted for each wrong answer. If Seema scored 70 marks, how many questions did she mark right?
(A) 10
(B) 15
(C) 20
(D) 22
A. (A)
B. (C)
C. (D)
D. (B)

Sol. Let n be the number of correct questions attempted.
A.T.Q.:

$$\begin{aligned} (+4) \times n + (-2)(25 - n) &= 70 \\ \Rightarrow 4n - 50 + 2n &= 70 \\ \Rightarrow 6n &= 120 \end{aligned}$$

$$\Rightarrow n = 20$$

68. Sum of Salary of A and B is 25,000. They spend 75% of their Salary, their Saving ratio is 14:11. respectively. Find out their salary in rupees?
(A) 15,000 and 10,000
(B) 14,000 and 11,000
(C) 13,000 and 12,000
(D) 12500 each
A. (C)
B. (A)
C. (B)
D. (D)

Sol. Since both save 25% of their income. So, their salaries are in the same ratio as their savings = 14:11
So, salaries are Rs.14000 and Rs.11000.
or
Let the salary of A is Rs x.
Therefore, salary of B is (25000-x).
Since both save 25% of their income.



Gradeup SSC & Railway **Super Subscription**
Access to all Structured Courses & Test Series

Therefore, according to question:
25% of x: 25% of (25000-x) = 14:11
By solving it, we get
x = 14000.

69. Most densely populated city of Australia is-

- (A) Canberra
- (B) Sydney
- (C) Melbourne
- (D) Perth

- A. (D)
- B. (B)
- C. (A)
- D. (C)

Sol.

- The largest city in Australia is Sydney, with a population of 4,627,345 people.
- But the most densely populated city is Melbourne.

70. Find the value of $0.000825 \div 0.05$:

- (A) 0.0165
 - (B) 0.165
 - (C) 0.00165
 - (D) 0.015
- A. (B)
 - B. (D)
 - C. (A)
 - D. (C)

Sol. $0.000825 \div 0.05 = 0.0165$

71. Which one of these is noble element?

- (A) Iron
- (B) Silver
- (C) Bronze
- (D) Aluminum

- A. (C)
- B. (D)
- C. (A)
- D. (B)

Sol.

• **Silver is a noble metal.**

- These are the metals that are resistant to corrosion and oxidation in moist air.

- Silver is a chemical element with the symbol Ag.

72. Who gave the way for Chemical symbols in modern time used by us?

- (A) Louis Pasteur
- (B) Robert Boyle
- (C) Berzelius
- (D) John Dalton

- A. (B)
- B. (A)
- C. (D)
- D. (C)

Sol.

- The Swedish chemist **Jons Jacob Berzelius** was one of the first European scientists to accept John Dalton's atomic theory and to recognize the need for a new system of chemical symbols. He was a dominant figure in chemical science.

- Berzelius's work with **atomic weights** and his theory of electrochemical dualism led to his development of a modern system of chemical formula notation

73.

In the following question, select the odd word from the given alternatives.

- A. Dinosaur
- B. Cow
- C. Lion
- D. Monkey

Sol. Out of all the options, only 'Dinosaur' is an extinct animal.

Hence, option A is different from others.

74.

|||Common||| Read the following information carefully and answer the given question.

P is father of A, whose son is S. L is Mother of K, who is sister of S. |||End|||

The relation of A with L?

- (A) Brother
- (B) Husband
- (C) Mother



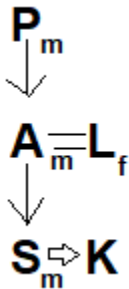
Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

(D) Sister

- A. (D)
- B. (C)
- C. (B)
- D. (A)

Sol. The relation will be,

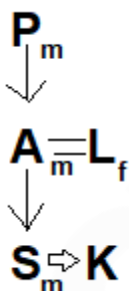


Hence, option C is the correct response.

75. The relation of A with K?

- (A) Father
- (B) Mother
- (C) Father in law
- (D) Son
- A. (C)
- B. (D)
- C. (A)
- D. (B)

Sol. The relation will be,



Hence, option C is the correct response.

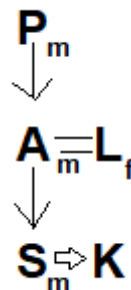
76.

How is P related to L?

- A. Father in-law
- B. Son
- C. Father

D. Daughter in-law

Sol. According to the given information,



As per the above diagram, it is clear that P is the Father in-law of L.

Hence, option A is the correct response.

77. The product of two positive integer is 375. If one no is divided by another one then $5/3$ remains. What is the smallest number?

- (A) 15
- (B) 25
- (C) 20
- (D) 12
- A. (C)
- B. (B)
- C. (A)
- D. (D)

Sol. Let the numbers be a and b.

Given, $a/b = 5/3$

Let a be $5x$ and b be $3x$.

So, Product = $ab = 15x^2 = 375$

$\Rightarrow x^2 = 25 \Rightarrow x = 5$

So, the numbers are $5x = 25$ and $3x = 15$.

Hence, Smaller number = 15

78. 5 kg sugar whose cost price is Rs.15/kg and 10 kg another type of sugar whose cost price is Rs.18/kg are mixed and sold at Rs.20/kg. Find out percentage of profit?



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

- (A) 18%
(B) 17.65%
(C) 17.5%
(D) 19%
A. (C)
B. (B)
C. (D)
D. (A)

Sol. Total CP of 15 kg sugar = $15 \times 5 + 18 \times 10 = 255$

Total SP of 15 kg sugar = $20 \times 15 = 300$

Profit = $300 - 255 = 45$

profit% = $45/255 \times 100 = 17.65\%$

79. Teacher: Student, then Nurse: ?

- (A) Hospital
(B) Doctor
(C) Patient
(D) Injection
A. (C)
B. (B)
C. (A)
D. (D)

Sol. As teachers imparted Knowledge to their students.

Similarly, Nurse takes care of their patients.

Hence, option A is the correct response.

80. A Shopkeeper offers a successive discount of 20% and 10% and receives Rs.108 for his product. Find out its real cost?

- (A) Rs.142
(B) Rs.147
(C) Rs.150
(D) Rs.153
A. (C)
B. (B)
C. (A)
D. (D)

Sol. Successive discounts of 20% and 10%.
Let the Marked Price is Rs. P
then,

if two successive discounts are given than,
the selling price = $P \times (100-20)\% \times (100-10)\%$

$$108 = P \times 80/100 \times 90/100$$

$$P = 150 \text{ Rs.}$$

81. Who was the father of Subhash Chandra Bose?

- (A) Satyendra Nath Bose
(B) Janki Nath Bose
(C) Jagdish Chandra Bose
(D) S.N. Bose
A. (D)
B. (A)
C. (C)
D. (B)

Sol.

• Janakinath Bose was the father and Prabhavati Devi is mother of Subhas Chandra Bose.

• Netaji Subhash Chandra Bose was born on 23 January, 1897 in Cuttack (Orissa).

• Janakinath Bose, was an affluent and successful lawyer in Cuttack and received the title of "Rai Bahadur".

82. Which is the smallest bone of human body?

- (A) Tibia
(B) Trapezium
(C) Stapes
(D) Femur
A. (C)
B. (B)
C. (D)
D. (A)

Sol.

• **The stapes** is the smallest bone of the human body.

• It is the third bone of the three ossicles in the middle ear.

83. Who had defined the concept of ecosystem-

- (A) Arthur Tansley
(B) Evelyn Hutchinson



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

- (C) Raymond Lindeman
(D) Charles Elton
A. (C)
B. (B)
C. (A)
D. (D)

Sol.

- The term ecosystem was first used in 1935.
- It was used by British ecologist **Arthur Tansley**.
- He used it to draw attention to the importance of transfers of materials between organisms and their environment.

84. Find the correct set of the symbols : $7 _ 7 _ 7 = 14$

- (A) $\times, +, \div$
(B) $+, +, \times$
(C) $-, \times, \div$
(D) $+, \times, \div$
A. (B)
B. (C)
C. (D)
D. (A)

Sol. from option D,

$$7 + 7 \times 7 \div 7$$

$$7 + 7$$

$$14$$

Hence, option D is the correct response.

85. What is light pen?

- (A) Micro tip pen
(B) Input device
(C) Pen to write in the dark
(D) Weightless pen
A. (D)
B. (C)
C. (B)
D. (A)

Sol.

- A light pen is a light-sensitive pointing input device commonly used to select or otherwise modify text or data on a screen.
- Used with a CRT monitor, these devices were an early form of manipulating and highlighting data on the screen.

86. If the meaning of \div is $-$, \times is $+$, $-$ is \times and $+$ is \div , then find the value of $7 \times 3 + 2 - 24 \times 4$?

- A. 1
B. 47
C. 6
D. 21

Sol. $7 \times 3 + 2 - 24 \times 4$

After changing the signs,

$$7 + 3 \div 2 \times 24 + 4$$

$$7 + 36 + 4$$

$$47$$

Hence, option B is the correct response.

87. The only bird which can fly in backward direction-

- (A) Hummingbird
(B) Kiwi
(C) Albatross
(D) Eagle
A. (C)
B. (D)
C. (B)
D. (A)

Sol.

- Hummingbird is a tiny bird that can fly forward, hover, and are the only known birds to fly backward as well.
- The hummingbird has a unique muscle and wing structure that gives them a high level of flight control.

88. In a book shelf 30 books are related with Science, G.K., English and Hindi. Every book on Science is adjacent to English book, Every Hindi book is adjacent to G.K. book and No G.K. book is adjacent to Science book. English and Hindi books are not adjacent. If Science Book is left



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

then what would be the possible order of books.

- (A) Science, English, G.K., Hindi
 (B) Science, English, Hindi, G.K.
 (C) Science, Hindi, English, G.K.
 (D) Science, Hindi, G.K. English
 A. (A)
 B. (B)
 C. (C)
 D. (D)

Sol.

The possible order will be,
 Every book on Science is adjacent to English book,
 Science - English
 Every Hindi book is adjacent to G.K. Book,
 Hindi - GK,
 No G.K. Book is adjacent to Science Book,
 Science - English - Hindi - GK,
 Also,
 English and Hindi Books are not adjacent together,
 Science - English - GK - Hindi
 Therefore,
 Science Book is in the left, so final arrangement will be,
 Science - English - GK - Hindi

Hence, the correct sequence is -(A)
 Science, English, G.K., Hindi.

89.If $\frac{2}{3}$ of $\frac{1}{4}$ of a number is 100 then what is the number?

- (A) 400
 (B) 600
 (C) 300
 (D) 500
 A. (A)
 B. (D)
 C. (C)
 D. (B)

Sol. Let the number be x
 $\frac{2}{3} \times \frac{1}{4} \times x = 100$
 SO $x = 100 \times 4 \times \frac{3}{2} = 600$

90.Evolution Theory was given by:

- (A) Charles Darwin
 (B) Charles Dickens
 (C) Albert Einstein
 (D) Isac Newton
 A. (B)
 B. (A)
 C. (C)
 D. (D)

Sol.

- The theory of evolution by natural selection, first formulated in Darwin's book "**On the Origin of Species**" in **1859**, is the process by which organisms change over time as a result of changes in heritable physical or behavioral traits.
- Darwin himself had no knowledge of genetics and therefore, his theory of natural selection as an explanation of evolution was **based solely on what he observed and knew at the time.**

$$\frac{Y+1}{3} + \frac{Y+2}{5} = 3$$

91.Find out Y if

- (A) 2.5
 (B) 4.25
 (C) 3.75
 (D) 3.25
 A. (A)
 B. (B)
 C. (C)
 D. (D)

$$\frac{Y+1}{3} + \frac{Y+2}{5} = 3$$

Sol.

$$5Y + 5 + 3Y + 6 = 3 \times 15 = 45$$

$$8Y = 34$$

$$Y = 4.25$$

92.Which sanctuary was known as Bharatpur bird sanctuary earlier?

- (A) Samaspur bird sanctuary
 (B) Mayani bird sanctuary
 (C) Salim Ali bird sanctuary



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

(D) Keoladeo bird sanctuary

- A. (A)
- B. (B)
- C. (C)
- D. (D)

Sol.

• **Keoladeo National Park** or Keoladeo Ghana National Park formerly known as the Bharatpur Bird Sanctuary in **Bharatpur, Rajasthan**.

• The recent name Keoladeo, given to the Bharatpur Sanctuary, is derived from an ancient Hindu temple, devoted to Lord Shiva.

• It is a famous fauna sanctuary that hosts thousands of birds, especially during the winter season.

93. Trapezium is a quadrilateral whose

- (A) All sides are equal.
- (B) Opposite sides are equal.
- (C) Parallel opposite sides are of two pairs.
- (D) Parallel opposite sides are of one pairs.
- A. (A)
- B. (C)
- C. (B)
- D. (D)

Sol. D only since trapezium is a quadrilateral whose one pair of opposite sides are parallel.

$$94. \frac{3\sqrt{121} - \sqrt{361}}{\sqrt{529} + 2\sqrt{36}} = ?$$

- (A) 3/5
- (B) 4/7
- (C) 1/4
- (D) 2/5
- A. (D)
- B. (B)
- C. (C)
- D. (A)

$$\text{Sol. } \frac{3\sqrt{121} - \sqrt{361}}{\sqrt{529} + 2\sqrt{36}}$$

$$= \frac{3 \times 11 - 19}{23 + 2 \times 6}$$

$$= (33-19)/(23+12) = 14/35 = 2/5$$

95. If code for PORT is 2491, MUCE is 6538, what could be code for COMPUTER?

- A. 21456789
- B. 34625189
- C. 24618795
- D. 34582196

Sol. P - 2

O - 4

R - 9

T - 1

and,

M - 6

U - 5

C - 3

E - 8

Using the number codes of the above letters we obtain the code of,

C - 3

O - 4

M - 6

P - 2

U - 5

T - 1

E - 8

R - 9

So, code of COMPUTER is 34625189.

Hence, option B is the correct response.

96. If number 3, 6, 7, 11, x, 15, 19, 20, 25, 28 are in ascending order and their median is 13. What is x?

- (A) 11
- (B) 12
- (C) 13
- (D) 14
- A. (B)
- B. (D)
- C. (A)
- D. (C)

Sol. Total number of terms = 10 (even)



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series

When no. of terms is even then the median is the mean of the two middle terms.

$$\text{Thus, Median} = (5\text{th term} + 6\text{th term}) / 2 \\ = (x+15)/2 = 13$$

$$\text{So } x=11$$

97. A 90 meter long train crossed a bridge in 15 second with 15 meter/second speed. Find out the length of bridge?

- (A) 225 Meter
- (B) 135 Meter
- (C) 315 Meter
- (D) 160 Meter

A. (B)

B. (D)

C. (A)

D. (C)

Sol. Total distance travelled = Length of train + Length of bridge = $15\text{m/s} \times 15\text{s} = 225\text{m}$

$$\text{Length of bridge} = 225 - 90 = 135\text{m}$$

98. If the last day of February 2012 was a Wednesday, then what was the last day of February 2011?

- A. Thursday
- B. Monday
- C. Sunday
- D. Friday

Sol. Since 2012 is a leap year, total no. of days in between the last day of February 2011 and the last day of February 2012 is 366 days.

$366/7$ leaves a remainder of 2.

So, the last day of February 2011 is two days prior to the one in 2012, i.e., Monday. Hence, option B is correct.

99. Who was the founder of Brahmo samaj?

- (A) Raja Ram Mohan Roy
- (B) Dayanand Saraswati
- (C) Mahatma Gandhi
- (D) Lokmanya Tilak

A. (B)

B. (C)

C. (D)

D. (A)

Sol.

- Brahmo Samaj is a reformist movement of the Hindu religion that appeared during the Bengal Renaissance.

- It was started at Calcutta on 20 August 1828 by **Raja Ram Mohan Roy** and Debendranath Tagore.

100. Some statement and conclusion are given below. Proceed considering statements are right despite they are different from known general facts.

Statement:

1. Youths are very ambitious.

2. Many people destructing the young generation.

Conclusion:

(I) Young people don't have idea to whom they should believe.

(II) Some youth stray off the destination by bad effect.

Decide which conclusion follows the statement logically.

A. Only conclusion I follow

B. Only conclusion II follows

C. None follows

D. I and II Both follows

Sol. As, it is mentioned in the statement that youths are very ambitious and many people destructing the young generation due to which the youth stray off the destination by bad effect. Hence, conclusion II will follow. It cannot be generalized that young people do not have the idea to whom they should believe hence conclusion I cannot be follow.

Hence, option B is the correct response.



Gradeup SSC & Railway **Super Subscription**

Access to all Structured Courses & Test Series



Gradeup SSC & Railways Super Superscription

Features:

1. 18+ Structured Courses for SSC & Railways Exams
2. 550+ Mock Test for SSC & Railways Exams
3. Separate Batches in Hindi & English
4. Mock Test are available in Hindi and English
5. Available on Mobile and Desktop

Gradeup Super Subscription, Enroll Now