

Q1. Who is the Author of "India—The mother of Democracy"?

- (a) Sashi Tharoor
- (b) Vikram Seth
- (c) Dr. Bajrang Lal Gupta
- (d) Dharmendra Pradhan

Q2. MGNREGA stands for:

- (a) Mahatma Gandhi National Regular Employment Generating Act
- (b) Mahatma Gandhi National Regional Employment Guarantee Act
- (c) Mahatma Gandhi National Rural Employment Guarantee Act
- (d) Mahatma Gandhi National Rural Regular Employee Guarantee Act

Q3. Who discovered electron?

- (a) J.J. Thomson
- (b) Louis Pasteur
- (c) J.D. Watson
- (d) Edward Jenner

Q4. Due to ocean acidification when the ocean becomes more acidic, what happens to the pH level of the ocean?

- (a) The pH level goes down.
- (b) The pH level stays the same.
- (c) The pH level goes up.
- (d) The pH level becomes zero.

Q5. Match **List-I** with **List-II**.

A.	Vishakhadatta	I.	Medicine
B.	Kartikeya Sarabhai	II.	Poet
C.	Charaka	III.	Environmentalist
D.	Satyendra Nath Bose	IV.	Mathematics

Choose the **correct** answer from the options given below:

- (a) A-I, B-III, C-IV, D-II
- (b) A-II, B-III, C-I, D-IV
- (c) A-II, B-I, C-III, D-IV
- (d) A-III, B-IV, C-I, D-II

Q6. The following states were formed after 1960. What was the correct sequence of their formation?

- (A) Haryana
- (B) Sikkim
- (C) Nagaland
- (D) Goa

Choose the **correct** answer from the options given below:

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

Q7. Which one of the following countries is **not** a member of the "Quadrilateral Security Dialogue", also known as "QUAD"?

- (a) China
- (b) Japan
- (c) India
- (d) Australia

Q8. Which of the following disease is caused due to the deficiency of proteins?

- (a) Arthritis
- (b) Kwashiorkor
- (c) Goitre
- (d) Night Blindness

Q9. Match **List-I** with **List-II**.

List-I		List-II	
Navy (Institution)		Place	
A.	INS Chilka	I.	Goa
B.	INS Hansa	II.	Andhra Pradesh
C.	INS Satavahana	III.	Kerala
D.	INS Garuda	IV.	Odisha

Choose the **correct** answer from the options given below:

- (a) A-III, B-I, C-II, D-IV
- (b) A-I, B-IV, C-II, D-III
- (c) A-IV, B-I, C-III, D-II
- (d) A-IV, B-I, C-II, D-III

Q10. Jamshedpur is situated at the bank of _____ river.

- (a) Godavari
- (b) Damodar
- (c) Subarnarekha
- (d) Soan

Q11. Match List I with List II

LIST I	LIST II
A. Blue Revolution	I. Increase in crop yield and Agricultural Products
B. White Revolution	II. Increase in Oil-Seeds Production
C. Yellow Revolution	III. Increase of Fish Production
D. Green Revolution	IV. Increase in the field of milk production

Choose the most appropriate answer from the options given below:

- (a) A-IV, B-III, C-II, D-I
- (b) A-III, B-IV, C-II, D-I
- (c) A-I, B-III, C-II, D-IV
- (d) A-III, B-I, C-II, I-IV

Q12. Major constituent of natural gas is _____.

- (a) Propane
- (b) Butane
- (c) Methane
- (d) Carbon

Q13. Which of the following is not a 'state'?

- (a) Nagaland
- (b) Manipur
- (c) Ladakh
- (d) Meghalaya

Q14. The relationship between the values of a country's imports and its exports is called.

- (a) Balance of Trade
- (b) Balance of Payment
- (c) Balance of currency
- (d) Bill of exchange

Q15. Who is known as the father of "Indian Space Program"?

- (a) Dr. C.V. Raman
- (b) Vikram Sarabhai
- (c) Subramanyan Chandrasekhar
- (d) Dr. A.P.J. Abdul Kalam

Q16. One of the Harappan site known as Kalibangan is located in which state of India?

- (a) Rajasthan
- (b) Gujarat
- (c) Madhya Pradesh
- (d) Punjab

Q17. Who appoints the chairman of the Union Public Service Commission?

- (a) Prime Minister
- (b) President
- (c) Speaker of the Lok Sabha
- (d) Home Minister

Q18. In the given question find the water image of the word "FAMILY".

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

Q19.

Choose the correct option (figure) after folding the figure along the dotted line.

(a)

(b)

(c)

(d)

Q20. XY $\Rightarrow$ Delete the last letter,

YZ $\Rightarrow$ Replace the fourth letter with next in the alphabet,

ZX $\Rightarrow$ Reverse the whole sequence of the letters.

Then LOGICAL $\Rightarrow$ XY $\rightarrow$ YZ $\rightarrow$ ZX $\rightarrow$?

(a) ACLOJG

(b) ACOJGL

(c) ACJGOL

(d) ACGJOL

Q21. Mohit is 15th from the right end in a row of 49 boys. What is his position from left end?

(a) 35

(b) 26

(c) 27

(d) 20

Q22. Starting from point A Tianna moves 20m till point C in north east direction before turning to her right. She walks 20m again turning to her right stopping at point B. How far is point A from point B.

(a) $20\sqrt{2}m$

(b) $10\sqrt{2}m$

(c) 20m

(d) 10m

Q23. If in a certain code, ALMIRAH is written as BNPMWGO, which would be written as DNRWLUA?

(a) COSGOLT

(b) TOGSOLC

(c) TOGCLOS

(d) CLOSGOT

Q24. Statements:

1. Dogs do not bark on the arrival of friends of the family

2. When A entered B's house, B's dog started barking.

Conclusion: A is B's enemy.

The conclusion drawn is:

(a) Follows from the given statements.

(b) Is probably true.

(c) Does not follow from the given statements.

(d) Is probably false.

Q25. Five girls sitting in a row. Raashi is not adjacent to Grace or Adhya. Anu is not adjacent to Grace. Raashi is adjacent to Venus. Venus is at the middle in the row. Then Anu is adjacent to whom?

(a) Raashi

(b) Grace

(c) Aadhya

(d) Venus

Q26. A Hockey Coach is trying to put together a team of 4 players for the forthcoming tournament. For this, 7 players are available. Males P, Q and R and females S, T, U and Z. All players have equal capability and atleast 2 males will be there in the team. For a team of 4, all players must be able to play with each other. But, Q cannot play with S, R cannot play with Z and S.

If U is selected and Q is Rejected, then the team will consist of which one of the following groups

(a) P, R, S and U

(b) P, R, T and U

(c) P, R, U and Z

(d) P, S, U and Z

Q27. Choose alternative which most closely resembles the water image of the given figure.

(a) (A)

(b) (B)

(c) (C)

(d) (D)

Q28. Find which of the statements is/are sufficient to answer the given question.

What does 'Brown' represent in a code language?

(A) 'hiw ka tac' means 'Brown and Grey' in that code language.

(B) 'ma ta da' means 'you are Green' in that code language.

(C) 'ka da rac' means 'you can Brown' in that code language.

(a) Only (A) and (C)

(b) Only (A) and (B)

(c) Only (B) and (C)

(d) All (A), (B) and (C)

Q29. Read the following information carefully to answer the given question.

Five friends P, Q, R, S and T are sitting on a bench and wearing different colours jacket, i.e., brown, red, yellow, white and grey (not necessarily in this order)

(A) P is sitting next to Q and wearing red jacket.

(B) R is sitting next to S and not wearing either brown or grey jacket.

(C) S is not sitting with T and T is wearing brown jacket.

(D) T is on the left end of the bench.

(E) R is on the second position from the right.

(F) P is on the right of Q and T, and Q is wearing grey jacket.

(G) P and R sitting together.

(H) S is not wearing white jacket.

What is the color of R's jacket?

(a) Brown

(b) Red

(c) White

(d) Yellow

Q30. Pointing to Anil, Shivani said, "He is the son of my father's only son". How is Anil's mother related to Shivani??

(a) Daughter

(b) Aunt

(c) Sister-in-law

(d) Sister

Q31. Select the option from given alternatives which will come in place of?

EXI :: 5X9 :: NXS : ____?

(a) 12X17

(b) 13X17

(c) 14X19

(d) 14X21

Q32. Find the angle traced by hour hand of a correct clock between 7 pm 0 clock and 2 am 0 clock.

(a) 200° (b) 210°

(c) 310° (d) 290°

Q33. If today is Saturday, then what will be the day on 363rd day?

(a) Sunday (b) Monday

(c) Thursday (d) Friday

Q34. Arrange the following in meaningful sequence:

A. Key B. Door

C. Lock D. Room

Choose the most appropriate answer from the options given below:

(a) A, C, B, D (b) D, C, A, B

(c) B, A, D, C (d) C, B, D, A

Q35. The sum of LCM and HCF of two numbers is 854. If the LCM is 60 times the HCF and one of the numbers is 70, then the other number is

(a) 160 (b) 164

(c) 168 (d) 172

Q36. In an examination, it is required to get 300 marks to pass. A student gets 225 marks and is declared fail by 10% marks. What are the maximum marks of the examination ?

(a) 700 (b) 750

(c) 800 (d) 850

Q37. If the mean of 3, 4, 9, 2k, 10, 8, 6 and (k + 6) is 8, and mode of 2, 2, 3, 2p, (2p + 1), 4, 4, 5 and 6 (p is a natural number) is 4, then the value of (k - 2p) is :

(a) 0 (b) 1 (c) 2 (d) 3

Q38. $\frac{256 \times 256 \times 256 - 144 \times 144 \times 144}{256 \times 256 + 256 \times 144 + 144 \times 144}$ is equal to:

(a) 122

(b) 112

(c) 400

(d) 312

Q39. A and B can do a work in 9 days and 12 days respectively. If they work on alternate days starting with A. then in how many days will the work be completed?

(a) 36 days (b) 10 days

(c) $10\frac{1}{4}$ days (d) 13 days

Q40. If the median of $\frac{x}{5}$, x , $\frac{x}{4}$, $\frac{x}{2}$ and $\frac{x}{3}$ (where $x > 0$) is 8, then the value of x will be

(a) 24 (b) 32

(c) 8 (d) 16

Q41. What is the probability that any non-leap year will have 53 Sundays?

(a) $\frac{1}{53}$ (b) $\frac{2}{53}$

(c) $\frac{1}{7}$ (d) $\frac{2}{7}$

Q42. The ratio of ages of 2 boys is 3:7. After 2 years, the ratio of their ages will become 5:9. The ratio of their ages after 10 years will be

(a) 15:16

(b) 5:17

(c) 17:18

(d) 13:17

Q43. The mean of 9 observations is 43. Later, it was found that 59 was misread as 69. What would be the correct mean? (correct to two decimal places)

(a) 44.11

- (b) 41.89
(c) 42.11
(d) 43.89
- Q44.** If $243^{3x} = 27^{(4x-1)}$, then the value of 4^x is:
(a) 4
(b) - 4
(c) $\frac{1}{4}$
(d) $\frac{1}{16}$
- Q45.** A toy is made in the shape of a hemisphere of diameter 7 cm surrounded by a cone. If this 15.5 cm high toy is polished at 20 paise per cm^2 , then find the cost of polishing. (Take $\pi = \frac{22}{7}$)
(a) ₹ 39
(b) ₹ 40.50
(c) ₹ 42.90
(d) ₹ 45
- Q46.** A certain sum becomes $\frac{36}{25}$ of itself after 2 years on compound interest. Find the rate of interest per annum.
(a) 15%
(b) 20%
(c) 25%
(d) 10%
- Q47.** Fractions $\frac{3}{4}, \frac{2}{3}, \frac{5}{6}, \frac{11}{18}$, when written in descending order are:
(a) $\frac{11}{18}, \frac{2}{3}, \frac{5}{6}, \frac{3}{4}$
(b) $\frac{5}{6}, \frac{2}{3}, \frac{3}{4}, \frac{11}{18}$
(c) $\frac{2}{3}, \frac{5}{6}, \frac{3}{4}, \frac{11}{18}$
(d) $\frac{5}{6}, \frac{3}{4}, \frac{2}{3}, \frac{11}{18}$
- Q48.** The altitude of an equilateral triangle having perimeter 18 m, is
(a) $3\sqrt{3} m$
(b) $4\sqrt{3} m$
(c) $\frac{\sqrt{3}}{4} m$
(d) $5\sqrt{3} m$
- Q49.** The speed of a boat in still water is 5 km/h. If it can travel 26 km downstream and 14 km upstream in the same time, then the speed of the stream is
(a) 1.5 km/h
(b) 2 km/h
(c) 2.5 km/h
(d) 3 km/h
- Q50.** Sumit sold a television at ₹ 15,500 and suffered a loss of 20%. What price did he buy the television?
(a) ₹ 21,350
(b) ₹ 18,730
(c) ₹ 19,375
(d) ₹ 12,916

Solutions

S1. Ans. (d)

Sol. Union Education and Skill Development Minister Shri Dharmendra Pradhan released the book "India—The Mother of Democracy" which was prepared by Indian Council of Historical Research (ICHR). From the options given, the most appropriate answer may be suggested in the form of Dharmendra Pradhan while others have no association with the book. Hence, the answer will be (4). i.e., Dharmendra Pradhan.

S2. Ans. (c)

Sol. **MGNREGA** stands for **Mahatma Gandhi National Rural Employment Guarantee Act**. It is a social security scheme enacted in 2005 to guarantee the 'right to work' by providing at least 100 days of wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work.

S3. Ans. (a)

Sol. Electron was discovered by J.J. Thomson. He suggested that electrons are necessary constituents of all atoms.

S4. Ans. (a)

Sol. When the ocean becomes more acidic due to ocean acidification, the pH level goes down.

S5. Ans. (b)

Sol. (A) - (II), (B) - (III), (C) - (I), (D) - (IV)

S6. Ans. (b)

Sol. The correct sequence of formation is:

(C) Nagaland (1963)

(A) Haryana (1966)

(B) Sikkim (1975)

(D) Goa (1987)

S7. Ans. (a)

Sol. The Quadrilateral Security Dialogue (QUAD) consists of the United States, Japan, India, and Australia. China is not a member.

S8. Ans. (b)

Sol. Kwashiorkor is a disease caused by protein deficiency.

S9. Ans. (d)

Sol. (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

S10. Ans. (c)

Sol. **Jamshedpur** is located on the banks of the **Subarnarekha River** in the state of Jharkhand. The river plays an important role in supporting the industrial and urban needs of the city, which is home to Tata Steel and other industries.

S11. Ans. (b)

Sol.

LIST I	LIST II
A. Blue Revolution	III. Increase of Fish Production
B. White Revolution	IV. Increase in the field of milk production
C. Yellow Revolution	II. Increase in oil-seeds production
D. Green Revolution	I. Increase in crop yield and agricultural products

S12. Ans. (c)

Sol. Natural gas consists of methane (85%), ethane (10%) and little amount of propane and butane. Thus, the major constituent of natural gas would be methane.

S13. Ans. (c)

Sol. Among the given options, Ladakh is correct because it has been made a Union Territory by The Jammu and Kashmir Reorganisation Act 2019.

S14. Ans. (a)

Sol. Balance of Trade is the relationship between values of a country's imports and its exports. This balance of trade is constituent of balance of payment. Thus, correct answer is balance of trade.

S15. Ans. (b)

Sol. Dr. Vikram Sarabhai is regarded as the **Father of the Indian Space Program**. He was instrumental in establishing the Indian Space Research Organisation (ISRO) and initiating India's space journey. His vision and leadership laid the foundation for India's development in space science and satellite technology.

S16. Ans. (a)

Sol. Kalibangan is an ancient archaeological site and a major Indus Valley Civilization (Harappan) site located in Rajasthan, India.

S17. Ans (b)

Sol. The Chairman and other members of the Union Public Service Commission are appointed by the President of India. This is mentioned in Article 316 of the Indian Constitution.

S18. Ans. (a)

Sol.

S19. Ans. (a)

Sol.

S20. Ans. (c)

Sol. Firstly, last letter will be deleted, so word would be 'LOGICA'
In the next step, 4th letter would be replaced by next alphabet, so word would become 'LOGJCA'
In the last step, word would be reversed. So final word would be 'ACJGOL'.

S21. Ans. (a)

Sol. Mohit's position from the left end = $49 - 15 + 1 = 35$

S22. Ans. (a)

Sol.

Required Distance = $AB = \sqrt{20^2 + 20^2} = 20\sqrt{2}\text{m}$

S23. Ans. (d)

Sol. The first, second, third, fourth, fifth, sixth and seventh letters in the code are respectively one, two, three, four, five, six and seven steps ahead of the corresponding word.

S24. Ans. (c)

From the statement it is clear that dogs do not bark on the arrival of friends of the family, they only bark on the arrival of some first-time visitor or a stranger. So, it cannot be said that A is B's enemy. He might be a delivery boy or a person visiting B for the first time. Hence, the answer is option C.

S25. Ans. (a)

Sol. Two cases can be made from the given information, but in both the cases Anu is adjacent to Raashi.

S26. Ans. (b)

Sol. From the question, it is clear that Q is rejected. It means, from among males, P and R must be the part of team as it is given that at least two males must be there in the team. Now, from the given information, it is clear that if R is selected Z must be rejected. So, Z must not be the part of team. It is also given in question that U is selected. From the above information, it is clear that if U is selected S must be rejected. So, from females, T and U will be the part of the team. As a result, the team will consist of P, R, T and U.

S27. Ans. (c)

Sol.

S28. Ans. (a)

Sol. From Statement A and C we can find the code for 'Brown' which is 'ka'.

S29. Ans. (c)

Sol.

Person	Colour
P	Red
Q	Grey
R	White
S	Yellow
T	Brown

S30. Ans. (c)

Sol. Shivani's father's only son would be Shivani's brother. So, Anil is son of Shivani's Brother. Therefore, Shivani is aunt of Anil. Therefore, Shivani's mother would be sister-in-law of Shivani.

S31. Ans. (c)

Sol.

S32. Ans. (b)

Sol. Angle made by hour hand in 1 hour = 30°

7 pm to 2 am = 7 hours.

Angle traced = $30^\circ \times 7 = 210^\circ$

S33. Ans. (d)

Sol. $363/7 = 6$ remainder

Saturday + 6 = Friday

S34. Ans. (a)

Sol. At first, we have to key, then we unlock the lock, then open the door and enter into room.

So, sequence is $\rightarrow A, C, B, D$

S35. Ans. (c)

Sol. Let HCF be x then LCM will be $60x$.

According to the question,

$$\Rightarrow x + 60x = 854 \Rightarrow 61x = 854 \Rightarrow x = 14$$

Then LCM = 840

We know that $LCM \times HCF = 1st\ num \times 2nd\ num$

$$\Rightarrow 2nd\ Number = \frac{840 \times 14}{70} = 168$$

S36. Ans. (b)

Sol. Required number = 300 but student get 300 marks

Difference = $300 - 275 = 75$

Given, $75 = 10\%$

Thus maximum marks of the examination = 750

S37. Ans. (c)

Sol. Mean of the given data

$$\Rightarrow 8 = \frac{3+4+9+2k+10+8+6+(k+6)}{8}$$

$$\Rightarrow \frac{46+3k}{8} = 8$$

$$\Rightarrow k = 6$$

For 4 to be the mode, it must occur more frequently than any other number. We already have two 4's, so there must be fewer occurrences of any other value including $2p$ and $2p + 1$.

If $2p = 4$ then $p = 2$

If $p = 2$ then $2p + 1 = 5$

The list then becomes: 2, 2, 3, 4, 5, 4, 4, 5, 6. This includes three 4's, satisfying the mode condition.

Then, $k - 2p = 6 - 2 \times 2 = 6 - 4 = 2$

S38. Ans. (b)

$$\text{Sol. } \frac{(a^3 - b^3)}{(a^2 + ab + b^2)} = a - b$$

So, value is = $256 - 144 = 112$

S39. Ans. (c)

Sol.

$\frac{36}{7} = 5(1 \text{ rem})$ means 10 days and 1 unit work is remaining which is done by A = $\frac{1}{4}$

So, total to be taken = $10\frac{1}{4} \text{ days}$

S40. Ans. (a)

Sol. Arrange in ascending order: $\frac{x}{5}, \frac{x}{4}, \frac{x}{3}, \frac{x}{2}, x$

Middle value = $\frac{x}{3} = 8 \Rightarrow x = 24$

S41. Ans. (c)

Sol. Any non-leap year has 365 days = 52 weeks + 1 day extra.

In 52 weeks, 52 Sundays are confirmed and 1 extra day will be any day of 7 days of week.

So, probability of getting Sunday in this week = $\frac{1}{7}$

S42. Ans. (d)

Sol. Let their present age be $3x$ and $7x$.

After two years, $\frac{3x+2}{7x+2} = \frac{5}{9}$

$x = 1$

Present age = 3 years and 7 years

After 10 years = $3+10 = 13$ and $7 + 10 = 17 = 13 : 17$

S43. Ans. (b)

Sol. Sum of observations = $9 \times 43 = 387$

Correct Sum = $387 + 59 - 69 = 377$

Correct Mean = $\frac{377}{9} = 41.89$

S44. Ans. (c)

Sol. $243^{3x} = 27^{(4x-1)}$

$3^{15x} = 3^{3(4x-1)}$

By equating powers, $15x = 3(4x - 1)$

$3x = -3$

$x = -1$

Then, $4^x = \frac{1}{4}$

S45. Ans. (c)

Sol. Given, Diameter of hemisphere = 7 cm

Radius of hemisphere = $\frac{7}{2} = 3.5$ cm

We know, Height of the cone = $15.5 - 3.5 = 12$ cm

Slant height of cone (l) = $\sqrt{h^2 + r^2} = \sqrt{12^2 + (3.5)^2} = 12.5 \text{ cm}$

Total surface area of toy = Surface area of hemisphere + Surface area of Cone

Total surface area = $2\pi r^2 + \pi rl$

$$\text{Total surface area} = \frac{22}{7} \times 3.5 \times [12.5 + 2 \times 3.5]$$

$$\text{Total surface area} = 214.5 \text{ cm}^2$$

$$\text{Cost of polishing} = \text{Rs. } 42.90$$

S46. Ans. (b)

Sol. Let the rate of interest be 'R'

$$A = P \left(1 + \frac{R}{100} \right)^2$$

$$36 = 25 \left(1 + \frac{R}{100} \right)^2$$

$$\frac{6}{5} = 1 + \frac{R}{100}$$

$$\frac{R}{100} = \frac{1}{5}$$

$$R = 20\%$$

S47. Ans. (d)

$$\text{Sol. } \frac{5}{6}, \frac{3}{4}, \frac{2}{3}, \frac{11}{18}$$

S48. Ans. (a)

Sol. Perimeter of triangle = 3s

$$\text{Given, } 3s = 18 \text{ which gives } s = 6$$

$$\text{Altitude of equilateral triangle} = \frac{\sqrt{3}}{2} \times s = 3\sqrt{3}m$$

S49. Ans. (a)

Sol. Let the speed of the stream be x km/h

Then speed of the boat in downstream will be (5 + x) km/hr

And speed of the boat in upstream will be (5 - x) km/hr

As given, the boat travels 26 km downstream and 14 km upstream at the same time.

$$\frac{26}{5+x} = \frac{14}{5-x}$$

$$26(5 - x) = 14(5 + x)$$

$$x = 1.5 \text{ km/hr}$$

Speed of the stream is 1.5 km/hr.

S50. Ans. (c)

Sol. SP of television = ₹ 15,500, Loss = 20%

$$\text{So, CP of television set} = \frac{100}{100-20} \times 15500 = ₹19,375$$