

Previous Years Paper

21st May 2023 (Shift - 1)

Q1. Choose the one which is different from the rest three.

- (a) 431 (b) 162
(c) 831 (d) 232

Q2. The area of a circle is numerically equal to its circumference. Find the diameter of the circle.

- (a) 2 unit (b) 4 unit
(c) 1 unit (d) 5 unit

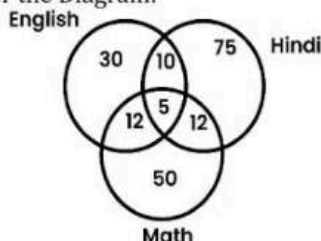
Q3. Which of the following players didn't receive Medal in Tokyo Olympics 2020?

- (a) PV Sindhu (b) Neeraj Chopra
(c) Abhinav Bindra (d) Ravi Kumar Dahiya

Q4. 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°

Q5. Consider the Diagram:



500 Candidates appeared in an Examination comprising test in English, Hindi and Maths. The Diagram gives number of students who failed in different tests. What is the % percentage of student who failed at least two subjects?

- (a) 6.8% (b) 7.8%
(c) 1.0% (d) 0.078%

Q6. A railway half-ticket costs half the full ticket. However, the reservation charge for all the tickets is constant. One full reserved ticket for a journey is 2525. If the cost of one full and one half reserved ticket for the same journey is 1850, then what is the reservation charge per ticket?

- (a) 2120 (b) 2150
(c) 2125 (d) 2115

Q7. 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 days (d) 13 days

Q8. Match List I with List II.

LIST I River	LIST II City
A. Mahanadi	I. Ludhiana
B. Godavari	II. Cuttack
C. Sutlej	III Lucknow
D. Gomti	IV. Nasik

Choose the most appropriate answer from the options given below:

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

Q9. Match List I with List II.

LIST I Diseases	LIST II Deficiency
A. Insulin	I. Kwashiorkor
B. Protein	II. Scurvy
C. Thyroxin	III. Diabetes
D. Vitamin C	IV. Goitre

Choose the correct answer from the options given below:

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

Q10. Major is related to Lieutenant in the same way as 'Squadron Leader is Related to ____?

- (a) Pilot officer (b) Flying Attendant
(c) Group captain (d) Flying officer

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. How many terms are there in the A.P. 3, 7, 11,, 407?

- (a) 100 (b) 101
(c) 99 (d) 102

Q14. Which of the following is a metal?

- (a) Carban (b) Mercury
(c) Sulphur (d) Iodine

Q15. X got 98 marks in his exam which is 56% of the total marks. What is the maximum marks of the exam?

- (a) 150 (b) 175
(c) 200 (d) 225

Q16. Match List I with List II.

LIST I Diet deficiency	LIST II Disease
A. Deficiency of Vitamin B	I. Anaemia
B. Deficiency of Vitamin A	II. Beri-Beri
C. Deficiency of Iron	III. Goitre
D. Deficiency of Iodine	IV. Night blindness

Choose the most appropriate answer from the options given below:

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

Q17. Match List I with List II

LIST I Scientists	LIST II Discoveries
A. Har Gobind Khorana	I. Discovery of Zero
B. CV Raman	II. Genetic composition of cell
C. Jagdish Chandra Bose	III. Scattering of light
D. Aryabhata	IV. Measurement of plant growth

Choose the most appropriate answer from the options given below:

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

Q18. **Statement I:** Constitution is the framework for the governance of a country which delegates power and authority to the executive, legislative and judiciary.

Statement II: It serves a country in maintaining good relationships with her neighbouring countries.

In the light of the above statements, choose the most appropriate answer from the options below:

- (a) Both Statement I and Statement II are correct
(b) Both Statement I and Statement II are incorrect
(c) Statement I is correct but Statement II is incorrect
(d) Statement I is incorrect but Statement II is correct

Q19. Which of the following speeds is the least?

- (a) 50 meter/second
(b) 50 meter/minute
(c) 70 km/hour
(d) 5 km/minute

Q20. Which of the following is not a 'state'?

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

Q21. In a row of 40 children. A is 13th from the left end and B is ninth from the right end. How many children are there between A and C if C is fourth to the left of B.

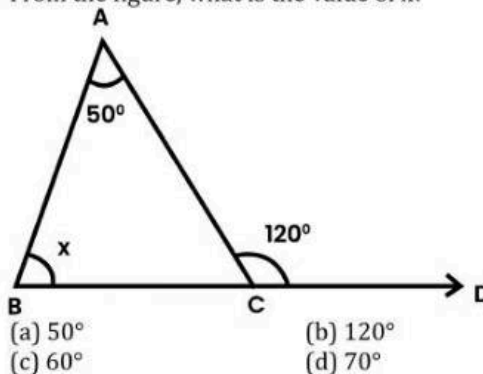
- (a) 13
(b) 14
(c) 15

- (d) 16

Q22. Find the perimeter of a rhombus whose one diagonal is 16 cm long and area is 240 cm^2 .

- (a) 68 cm (b) 30 cm
(c) 24 cm (d) 36 cm

Q23. From the figure, what is the value of x ?



Q24. If today is Saturday, then what will be the day on 363rd day?

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

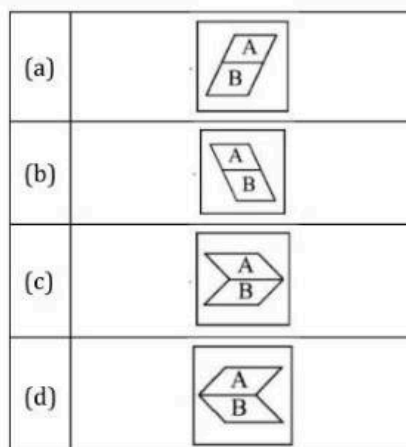
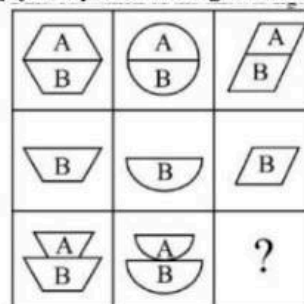
Q25. Arrange the following in meaningful sequence:

- 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

Q26. Find out which of the answer figures (a), (b), (c) and (d) completed the figure matrix?



Q27. Find the next term in the alpha-numeric series D4T, F9R, H20P, J43N.

- (a) L 90 M (b) N 90 N
(c) L 90 L (d) J90 L

- Q28.** 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

- Q29.** Match List I with List II

LIST I Books	LIST II Authors
A. India Wins Freedom	I. RK Narayan
B. The Guide	II. Mahatma Gandhi
C. India from Midnight to Millenium	III. Abdul Kalam Azad
D. Conquest of Self	IV. Shashi Tharoor

Choose the most appropriate answer from the options given below:

- (a) A-I, B-III, C-IV, D-II (b) A-III, B-I, C-IV, D-II
(c) A-III, B-I, C-II, D-IV (d) A-I, B-IV, C-II, D-III
- Q30.** Which book is written by Dr. S. Radhakrishnan?
(a) The world's largest democracy
(b) India divided
(c) Indian Philosophy
(d) India Priceless heritage
- Q31.** A is 3 years younger than C but one year older than D. D is one year older than B but 4 years younger than C. Cis 15 years old. What is the age of B in years
(a) 13 (b) 12
(c) 11 (d) 10
- Q32.** A man walks 2 km towards East and then he turns to South and walks 6 km. Again, he turns to East and walks 4 km, after this he turns to North and walk 14 km. How far is he from his starting point?
(a) 10 km (b) 15 km
(c) 20 km (d) 25 km
- Q33.** A bag contains 5 black, 3 white and 2 red balls. Three balls are drawn in succession. What is the probability that the first ball is red, the second ball is black and the third ball is white?
(a) $\frac{1}{24}$ (b) $\frac{3}{10}$
(c) $\frac{1}{10}$ (d) $\frac{1}{2}$
- Q34.** What is the smallest square number which is divisible by 4, 6 and 32?
(a) 100 (b) 196
(c) 96 (d) 576
- Q35.** Match List I with List II

LIST I Movement	LIST II Purpose
A. Quit India Movement	I. To achieve self-Government in India of demand for large political representation

B. Civil Disobedience Movement	II. Compelled British's to leave India
C. Non-Cooperation Movement	III. Refusal to obey certain laws orders or the Commands of the Government
D. Home rule league Movement	IV. Indians resigning their title boycotting foreign goods and Government institutions refused to pay taxes

Choose the most appropriate answer from the options given below:

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

- Q36.** The only Indian who received noble prize in literature is:
(a) Bankim Chandra Chatterjee
(b) Toru Dutt
(c) R.K. Narayan
(d) Rabindranath Tagore

- Q37.** Match List I with List II Cities with their nicknames

LIST I Cities	LIST II Nickname
A. Nagpur	I. Diamond City
B. Surat	II. Pink City
C. Jaisalmer	III. Orange City
D. Jaipur	IV. Golden City

Choose the most appropriate answer from the options given

- (a) A-III, B-I, C-IV, D-II
(b) A-I, B-III, C-IV, D-II
(c) A-III, B-I, C-II, D-IV
(d) A-II, B-I, C-III, D-IV
- Q38.** Which of the following is not the satellite launched by India?
(a) Explorer (b) APPLE
(c) Bhaskar (d) INSAT
- Q39.** If the 2nd half of the letters of the word INTERMEDIATE is reversed and placed before 1st half of the letters, which letter will be 2nd to the right of 10th letter from the right?
(a) A (b) D
(c) E (d) I
- Q40.** Find the angle of elevation of the Sun when the length of the shadow of a tree is $\frac{1}{\sqrt{3}}$ times the height of the tree.
(a) 30° (b) 45°
(c) 60° (d) 90°
- Q41.** The point $(-2, 3)$ lies in which quadrant?
(a) I (b) II
(c) III (d) IV
- Q42.** The rate of ages of 2 boys is 37. 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. Who won the Noble Prize for in the field of "physiology or medicine"?

- (a) C.V. Raman
(b) Jagdish Chandra Bose
(c) Homi Jehangir Bhabha
(d) Har Gobind Khorana

Q44. 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) $\frac{2}{7}$

Q45. In a class boys stand in a single line. One of the boys is seventeenth in order from both the ends. How many boys are in the class?

- (a) 34 (b) 33
(c) 32 (d) 27

Q46. What sum of money will amount to Rs. 520 in 5 years and to Rs. 568 in 7 years on simple interest?

- (a) Rs. 400 (b) Rs. 120
(c) Rs. 510 (d) Rs. 220

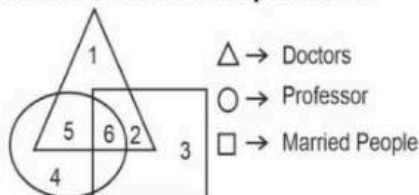
Q47. The minimum number of colours to required paint all sides of a cube that no two adjacent faces may have the same colour is.

- (a) 5 (b) 4
(c) 3 (d) 6

Q48. Bhoodan-Gram Dan Movement was initiated by:

- (a) Mahatma Gandhi
(b) Vinoba Bhave
(c) Shri Ram Chandra Reddy
(d) Sardar Patel

Q49. In figure out which Number indicate doctors who are not married and are not professors



- (a) 2 (b) 4
(c) 1 (d) 6

Q50. 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

Q51. Statements:

- I. Some cars are black
II. Some Lions are cars

Conclusions:

- I. Some blacks are Lions
II. No black is Lion

- (a) Only I follow (b) Only II follow
(c) Either I or II follows (d) None follows

Q52. The average of 12 numbers is 15 and the average of the first two numbers is 14. What is the average of the remaining numbers?

- (a) 15 (b) 15.2
(c) 14 (d) 14.2

Q53. Find a single equivalent increase if the number is successively increased by 20%, 25% and 30%?

- (a) 75% (b) 85%
(c) 95% (d) 35%

Q54. Match List I with List II

LIST I		LIST II	
Physical Quantity		Units	
A.	Electric charge	I.	Newton
B.	Force	II.	Coulomb
C.	Power	III.	Joule
D.	Energy	IV.	Watt

Choose the most appropriate answer from the options given below:

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

Q55. When seen through a mirror, a clock shows 3:30. What is the correct time.

- (a) 2:30 (b) 8:30
(c) 5:30 (d) 4:30

Q56. If the word 'LEADER' is coded as 20-13-9-12-13-26. How would you write "LIGHT"?

- (a) 20-16-15-17-22 (b) 20-17-15-16-28
(c) 20-15-16-18-23 (d) 20-16-17-15-27

Q57. Here are some words translated from an artificial language

Holo polo means base ball

Moto prot means my India

Prot shot means India won

Which word could be mean "All India Radio"

- (a) Holo polo prot (b) Kud prot nid
(c) Prot polo nid (d) Polo nid prot

Q58. If selling price of 80 articles is equal to the cost price of 100 articles, then find the gain percentage.

- (a) 30% (b) 25%
(c) 40% (d) 50%

Q59. Find the angle of elevation of the Sun, when the length of the shadow of a tree is $\frac{1}{\sqrt{3}}$ times the height of tree.

- (a) 30° (b) 45°
(c) 60° (d) 90°

Q60. Find out which of the figures out of given option can be formed from the pieces given in fig (x).

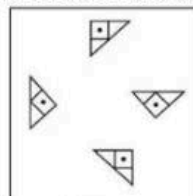
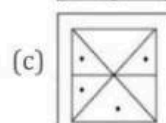
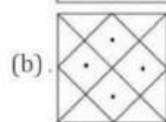
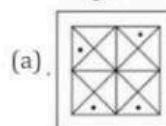


Fig X



(d) None of these

SOLUTIONS

S1. Ans. (a)

Sol. Among the given numbers 431 is a prime number.

S2. Ans. (b)

Sol. Area of circle = Circumference of circle

$$\pi r^2 = 2\pi r$$

$$r^2 = 2r$$

$$r = 2 \text{ Then } d = 2r = 4 \text{ units}$$

S3. Ans. (c)

Sol. (a) P. V. Sindhu received Bronze medal in Badminton

(b) Neeraj Chopra received Gold medal in men's Javelin throw

(c) Abhinav Bindra did not receive any medal in Tokyo Olympic 2020 games.

(d) Ravi Kumar Dahiya received silver medal in wrestling.

S4. Ans. (b)

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

7 pm to 2 am = 7 hours.

$$\text{Angle traced} = 30^\circ \times 7 = 210^\circ$$

S5. Ans. (b)

Sol. No. of students failed in atleast two subjects = $10 + 5 + 12 + 12 = 39$

$$\text{Percentage} = \frac{39}{100} \times 100 = 7.8\%$$

S6. Ans. (c)

Sol. Let x be the fare and y be reservation charge.

$$x + y = 525 \dots (i)$$

$$\text{One full and one-half ticket} = 1 + \frac{1}{2} = \frac{3}{2}$$

$$\text{Cost of half ticket} = x/2$$

$$x + y + \frac{x}{2} + y = 850$$

$$\frac{3}{2}x + 2y = 850$$

$$3x + 4y = 1700 \dots (ii)$$

Solving (i) & (ii),

$$x = 400 \dots (iii)$$

Using (iii) in (i), $y = 125$

So, reservation charge is ₹125.

S7. Ans. (c)

Sol.

$$\begin{array}{lcl} A \rightarrow \frac{1}{9} & \searrow & 4 \\ & 36 & \\ B \rightarrow \frac{1}{12} & \nearrow & 3 \end{array}$$

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

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

S8. Ans. (b)

Sol.

List I River		List II City	
A.	Mahanadi	II.	Cuttack
B.	Godavari	IV.	Nasik
C.	Sutlej	I.	Ludhiana
D.	Gomti	III.	Lucknow

S9. Ans. (a)

Sol.

LIST I Diseases	LIST II Deficiency
A. Insulin	III. Diabetes
B. Protein	I. Kwashiorka
C. Thyroxin	IV. Goitre
D. Vitamin C	II. Scurvy

S10. Ans. (d)

Sol. Major and Squadron Leader are equivalent ranks in Army and Air Force respectively. In the same way Lieutenant and Flying officer are equivalent ranks in Army and Air Force respectively.

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. (d)

Sol. Given 3, 7, 11, ... 407

So given sequence in A.P, with $a = 3$, $d = 4$

Now $T_n = 407$

$$\Rightarrow a + (n - 1)d = 407$$

$$\Rightarrow 3 + (n - 1)4 = 407$$

$$\Rightarrow n = 102$$

S14. Ans. (b)

Sol. Except mercury, all options belong to non-metal. Thus, mercury is metal.

S15. Ans. (b)

Sol. $56\% \rightarrow 98$

$$1\% \rightarrow 98/56$$

$$100\% \rightarrow \frac{98}{56} \times 100 = 175$$

S16. Ans. (b)

Sol.

LIST I Diet deficiency	LIST II Disease
A. Deficiency of Vitamin B	II. Beri-Beri
B. Deficiency of Vitamin A	IV. Night Blindness
C. Deficiency of Iron	I. Anaemia
D. Deficiency of Iodine	III. Goitre

S17. Ans. (c)

Sol.

LIST I Scientists	LIST II Discoveries
A. Har Gobind Khorana	II. Genetic composition of cell
B. CV Raman	III. Scattering of light
C. Jagdish Chandra Bose	IV. Measurement of plant growth
D. Aryabhata	I. Discovery of Zero

S18. Ans. (a)

Sol. Statement-I: Constitution of India provides for delegation of power and authority among three organs of state viz executive, legislative and judiciary. Thus, it is true statement
Statement-II: Constitution through Article 51 provides for maintenance of international peace and good relationships with her neighbouring countries.
Thus, this statement is also true.

S19. Ans. (b)

Sol. 50 m/s $\rightarrow$ 180 km/h
50 m/min $\rightarrow$ 3 km/h
70 km/h $\rightarrow$ 70 km/h
5 km/min $\rightarrow$ 300 km/h
So, 50 m/min is the least.

S20. 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.

S21. Ans. (b)

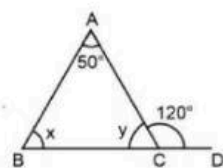
Sol. C's rank from right = $9 + 4 = 13^{\text{th}}$
So, C's rank from left = $(40 - 13) + 1 = 28^{\text{th}}$
Number of students between A and C = $(28 - 13) - 1 = 14$

S22. Ans. (a)

Sol. Area = 240 cm², One diagonal = 16 cm
Second diagonal = $\frac{\text{Area} \times 2}{d_1} = \frac{240 \times 2}{16} = 30$ cm
Perimeter = $2\sqrt{(d_1)^2 + (d_2)^2} = 2\sqrt{(16)^2 + (30)^2} = 68$ cm

S23. Ans. (d)

Sol.



$\angle y + 120^\circ = 180^\circ$ (angle on straight line)

$$\Rightarrow \angle y = 60^\circ$$

$\angle A + \angle y + \angle x = 180^\circ$ (sum of internal angle of triangle)

$$\Rightarrow 50^\circ + 60^\circ + \angle x = 180^\circ$$

$$\Rightarrow 110^\circ + \angle x = 180^\circ$$

$$\Rightarrow \angle x = 70^\circ$$

S24. Ans. (d)

Sol. $363/7 = 6$ remainder

Saturday + 6 = Friday

S25. 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 $\rightarrow A, C, B, D$

S26. Ans. (c)



S27. Ans. (c)

Sol. D 4 T, F 9 R, H 20 P, J 43 N, L 90 L

First letter = +2

Middle number = $(\times 2 + 1), (\times 2 + 2), (\times 2 + 3), (\times 2 + 4)$

Last letter = -2

S28. Ans. (a)

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

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

S29. Ans. (b)

Sol.

List I: Books	List II: Authors
A. India wins freedom	III. Abdul Kalam Azad
B. The guide	I. R K Narayan
C. India from midnight to Millenium	IV. Shashi Tharoor
D. Conquest of self	II. Mahatma Gandhi

S30. Ans. (c)

Sol.

	Books	Writers
(1)	The world's largest democracy	Ramachandra Guha
(2)	India divided	Dr Rajendra Prasad
(3)	Indian Philosophy	Dr Sarvepalli Radhakrishnan
(4)	India Priceless heritage	N.A. Palkhivala

S31. Ans. (d)

Sol. $A = C - 3$

$$A = D + 1$$

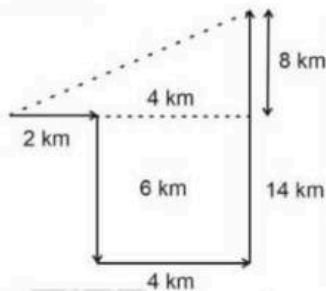
$$D = B + 1$$

$$D = C - 4$$

$C = 15$ So, $D = 11$, $A = 12$, $B = 10$ So, B's age is 10 years old.

S32. Ans. (a)

Sol.



Using Pythagoras theorem: $H^2 = 64 + 36 = 100$ Km. So, he is 10 km away from his starting point

S33. Ans. (a)

Sol. $\frac{2}{10} \times \frac{5}{9} \times \frac{3}{8} = \frac{1}{24}$

S34. Ans. (d)

Sol. L.C.M of 4, 6 and 32 = 96 = $2 \times 2 \times 2 \times 2 \times 2 \times 3$
2 and 3 are not in pairs, so we multiply them to 96
 $\Rightarrow 96 \times 2 \times 3 = 576$

S35. Ans. (d)

Sol.

LIST I Movement	LIST II Purpose
A. Quit India Movement	II. Compelled British's to leave India
B. Civil Disobedience Movement	III. Refusal to obey certain laws orders or Commands of the Government
C. Non-Cooperation Movement	IV. Indians resigning their title boycotting foreign goods and Government institutions refused to pay taxes
D. Home rule league Movement	I. To achieve self-Government in India of demand for large political representation

S36. Ans. (d)

Sol. 1968 Nobel Prize in the field of physiology or medicine was received by Har Gobind Khorana along with Marshall W. Nirenberg and Robert W. Holley for research that helped to show how the genetic components of the cell nucleus control the synthesis of proteins.

S37. Ans. (a)

Sol.

List I	List II
A. Nagpur	III. Orange City
A. Surat	I. Diamond City
B. Jaisalmer	IV. Golden City
C. Jaipur	II. Pink City

S38. Ans. (a)

Sol. Satellite, APPLE, Bhaskar and INSAT were launched by India or are associated with Indian Space Research Organisation (ISRO) while explorer was the first satellite launched by United States in 1958.

S39. Ans. (b)

Sol. Word: INTERMEDIATE

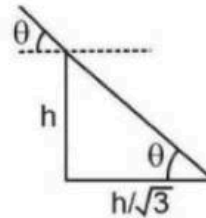
Reverse 2nd half and placed before 1st half

ETAIDEINTERM

$10 - 2 = 8$ th from right which is D.

S40. Ans. (c)

Sol.



$$\tan \theta = \frac{h}{h/\sqrt{3}}$$

$$\tan \theta = \sqrt{3}$$

$$\theta = 60^\circ$$

S41. Ans. (b)

Sol. (-2, 3) here x is negative and y is positive. So, this point lies in 2nd quadrant.

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. (d)

Sol. 1968 Nobel Prize in the field of physiology or medicine was received by Har Gobind Khorana along with Marshall W. Nirenberg and Robert W. Holley for research that helped to show how the genetic components of the cell nucleus control the synthesis of proteins.

S44. 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 = $1/7$

S45. Ans. (b)

Sol. Rank 1 $\rightarrow$ 17

Rank 2 $\rightarrow$ 17

$$\text{Total} = (R_1 + R_2) - 1 = 34 - 1 = 33$$

S46. Ans. (a)

Sol. Amount in 5 years = Rs. 520

Amount in 7 years = Rs. 568

$$\text{Interest of one year} = \frac{48}{2} = \text{Rs. } 24$$

$$\text{Interest of 5 years} = 24 \times 5 = \text{Rs. } 120$$

$$\text{So, sum} = 520 - 120 = \text{Rs. } 400$$

S47. Ans. (c)

Sol. Opposite sides have same colours. So, we need three different colours.

S48. Ans. (b)

Sol. Bhodan-Gram Dan movement was initiated by Vinoba Bhave in 1951 aimed to persuade wealthy

landowners to denote a portion of their land to landless peasants.

S49. **Ans. (d)**

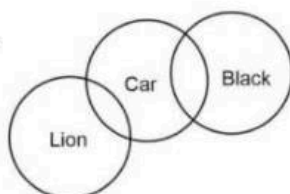
Sol. Number 1 indicates doctors who are not married and are not professors.

S50. **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.

S51. **Ans. (c)**

Sol.



S52. **Ans. (b)**

Sol. Sum of 12 numbers = $12 \times 15 = 180$
 Sum of first 2 numbers = $2 \times 14 = 28$
 Sum of first two + Sum of remaining = 180
 Sum of remaining = $180 - 28 = 152$
 Average = $\frac{152}{10} = 15.2$

S53. **Ans. (c)**

Sol. Let original number = 100
 Then after 20% it will be = 120
 After 25% increase it will be = $120 \times 125\% = 150$
 After 30% increase it will be = $150 \times 130\% = 195$
 So, single increase = $\frac{195-100}{100} \times 100 = 95\%$

S54. **Ans. (b)**

Sol.

List I		List II	
Physical Quantity		Units	
A.	Electric charge	II.	Coulomb
B.	Force	I.	Newton
C.	Power	IV.	Watt
D.	Energy	III.	Joule

S55. **Ans. (b)**

Sol. $11:60 - 3:30 = 8:30$
 So correct time is 8:30

S56. **Ans. (b)**

Sol.

12	5	1	4	5	18
L	E	A	D	E	R
+8	+8	+8	+8	+8	+8
↓	↓	↓	↓	↓	↓
20	13	9	12	13	26

So

L	I	G	H	T
12	9	7	8	20
+8	+8	+8	+8	+8
20	17	15	16	28

S57. **Ans. (b)**

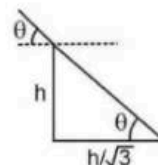
Sol. (1) Holo polo → Base ball
 (2) Moto prot → My India
 (3) Prot shot → India won India → Prot
 from (2) and (3) So in 2nd option prot is in middle.
 So, this answer because other two words unidentified.

S58. **Ans. (b)**

Sol. $100 \times CP = 80 \times SP$
 $\frac{SP}{CP} = \frac{100}{80} = \frac{5}{4}$
 Gain % = $\left(\frac{5}{4} - 1\right) \times 100 = 25\%$

S59. **Ans. (c)**

Sol.



$$\tan \theta = \frac{h}{h/\sqrt{3}} = \sqrt{3}$$

$$\theta = 60^\circ$$

S60. **Ans. (b)**

