

**SECTION A:**

1. a and b are prime numbers. Which of the following is true?

I.  $a^2$  has three positive integer factors.

II.  $ab$  has four positive integer factors

III.  $a^3$  has four positive integer factors

- a) I and II only                      b) II and III only                      c) All of these                      d) None of these

2. A group of four numbers has only one prime number amongst them. Which of the following must be true about the group?

I. The HCF of the four numbers of the group is either 1 or equal to that prime number.

II. The LCM of the four numbers of the group is same as the product of the prime number and the LCM of the remaining three numbers.

III. The product of four numbers is equal to the product of the prime number \* the HCF of the group \* the LCM of the group.

- a) I only                      b) II only                      c) I and II only                      d) I, II and III

3. Find the number whose square is equal to the difference between the squares of 75.15 and 60.12.

- a) 225.9                      b) 67.635                      c) 45.09                      d) 15.03

4. A certain piece of property having depreciated by Rs.2355, is now worth Rs 3925. What was its original value? By what % has it depreciated?

- a) Rs 6280, 37.5%                      b) Rs. 6280, 30%                      c) Rs, 1570, 37.5%                      d) None of these

5. 21 pencils and 29 pens cost rs.79. But if the number of pencils and pens were interchanged, the cost would be reduced by Rs. 8. Find the cost of each pen.

- a) Re.1                      b) Rs.2                      c) Rs.3                      d) Rs.4

6. Find three consecutive positive integers such that the square of their sum exceeds the sum of their squares by 214.

- a) 5,6,7                      b) 10,11,12                      c) 9,10,11                      d) 7,8,9

7. In an election for the President, 261 valid votes are cast, for the 5 contestants. Find the least number of votes a candidate requires to receive to win the election.

- a) 53                      b) 54                      c) 257                      d) 72

8. The median and mode of 25,26,28,29,30,21,25,28,27,25 is:

- a) 26,25                      b) 26.5,25                      c) 25.5,26                      d) 25,25

9. Rs. 79.20 is divided among 7 men, 11 women and 5 boys, so that each woman may have thrice as much as a boy and a man as much as a woman and boy have together. Find the share of a man.

- a) Rs. 1.20                      b) Rs. 2.40                      c) Rs. 4.80                      d) Rs.5

10. Cask A contains wine and water in the ratio 6:7 and cask B in the ratio 9:4. In what ratio must the contents of the two casks be mixed to give a mixture of wine and water in the ratio 8:5?

- a) 1:3                      b) 2:3                      c) 1:2                      d) None of these

11. A man travels from A to B to buy goods which he can get 10% cheaper in B than in A. If the expenses of the journey are Rs.15 and he makes a clear saving of Rs.10, how much does he pay for the goods?

- a) Rs.225                      b) Rs.200                      c) Rs150                      d) Cannot be determined

12. Three shepherds A, B and C rented a pasture for a year. A grazed 22 sheep's for 4 months, B grazed 16 sheep's for 8 months and C grazed 32 sheep's for 6 months. If C's share of rent is Rs.600, the total rent for the year was:

- a) Rs.3550                      b) Rs.2000                      c) Rs.1275                      d) Rs.675

13. Refer to the information below: (The variation in the speed of a car on a particular day at respective times.)

<b>S (Km/Hr)</b>	0	40	50	85	10	10
<b>T (Hr)</b>	11.00am	11.30am	1.00pm	1.30pm	3.30pm	4.30pm

If the car maintains the speed it has at 4:30pm then at what time will the car cover the same distance as it had covered from 11:00am to 1:00pm?

- a) 6:30pm                      b) 8:45am                      c) 10:30pm                      d) 12:15am

14. If 10 men can do a work in 4 days, in how many days can 8 men do it?

- a) 5 days                      b) 6 days                      c) 7 days                      d) 8 days

15. 63, 45, 72 litres are to be drawn from three cans respectively. What is the exact capacity of measure, which will do it most quickly?

- a) 9 litres                      b) 7 litres                      c) 8 litres                      d) 11 litres

**SECTION B:**

**Refer to the information below for Questions no.16 to 25**

Each question is followed by two statements, I and II. Answer each question using following instructions:

Choose 1: if the question can be answered by using one of the statements alone, but cannot be answered using the other statement alone.

Choose 2: if the question can be answered by using either of the statement alone.

Choose 3: if the question can be answered by using both of the statement together, but cannot be answered using either of the statement alone.

Choose 4: if the question cannot be answered even by using both the statement together.

16. A circle is circumscribed over a regular hexagon. What is the length of each side of the hexagon?

I. The difference between the areas of the circle and the hexagon is 50 sq. units.

II. The perimeter of the hexagon is equal to the circumference of the circle multiplied by 0.955.

- a) 1                                      b) 2                                      c) 3                                      d) 4

17. Average sales of Bata shoes for the month of January, March and April were 1,52,000. What were the sales in February?

I. Average of March and April was 1,41,000.

II. Average of January and February is 1,53,000.

- a) 1                                      b) 2                                      c) 3                                      d) 4

18. What is the units digit in the product of  $(328)^{64} \times (849)^x$ ?

I. x is a multiple of 3 less than 10.

II. x is odd.

- a) 1                                      b) 2                                      c) 3                                      d) 4

19. If 2 plates and a spoon cost Rs. 4, how much does a spoon cost?

I. 6 plates and 6 forks cost Rs. 12.

II. A fork costs half as much as a spoon.

- a) 1                                      b) 2                                      c) 3                                      d) 4

20. B is as older as A as he is younger than C. What is B's age?

I. The sum of the ages of A, B and C is 72 years.

II. B's age is equal to the average of A and C's age.

- a) 1                                      b) 2                                      c) 3                                      d) 4

21. What is the value of x in  $14x433$ ?

I. The number  $14x433$  is divisible by 3.

II.  $x < 5$ .

- a) 1                                      b) 2                                      c) 3                                      d) 4

22. What is the first term of the A.P.?

I. The sum of first three terms is 30.

II. The product of the first three terms is 960.

- a) 1                                      b) 2                                      c) 3                                      d) 4

23. If x and y are prime numbers, what is the value of  $x \times y$  where x and y are tens and units digits of a two digit number respectively.

I.  $x + y = 10$ .

II. 1050 is divisible by  $x \times y$ .

- a) 1                                      b) 2                                      c) 3                                      d) 4

24. Is p or q negative?

I.  $pq^2$  is positive.      II.  $pq$  is negative.

- a) 1                                      b) 2                                      c) 3                                      d) 4

25. What is the profit % on the sale of a toy?

I. The marked price is 20% higher than the cost price and a discount of 10% is offered thereon.

II. The selling price is Rs. 1050.

- a) 1                                      b) 2                                      c) 3                                      d) 4

**Choose the correct alternative for question no. 26 & 27.**

26. If in a certain code COVET is written as FRYHW, which word would be written as SHDUO?

- a) QUAKE                                      b) REPAY                                      c) VKGXR                                      d) PEARL

27. If REASON is coded as 5 and BELIEVED as 7, what is the code number for GOVERNMENT?

- a) 6                                      b) 8                                      c) 9                                      d) 10

**SECTION C:**

**For Questions 28 to 30 choose the pair that is related to each other in the same way as the capitalized pair.**

28. GALLEY: SHIP

- a) mall: market                      b) kitchen: house                      c) banquet: feast                      d) restaurant: hotel

29. LETHARGIC: STIMULATE

- a) skeptical: convince                      b) bored: disinterested                      c) unwilling: willing                      d) erudite: teach

30. MANDATORY: COMPLY

- a) command: obey                      b) forbidden: abstain                      c) tacit: approve                      d) lawful: abide

**For Questions 31 to 33 find the odd one out from the group of four words**

31. a) Files                      b) Desks                      c) Typewriters                      d) Washing – machines

32. a) Microwaves                      b) Refrigerators                      c) Coolers                      d) Air – conditioners

33. a) Teak                      b) Pine                      c) Birch                      d) Ivy

34. . Choose the pair that is NOT related to each other in the same way as the capitalized pair

**PENCHANT: REPUGNANCE**

- a) Confute: Refute                      b) Dogmatism: Rationality                      c) Neophyte: Epiphyte                      d) Incertitude: Certainty

35. Find a word, which will bear a similar relation with the third word as the first word has with the second. Bolt: Spanner::Peg:??

- a) nail                      b) screw                      c) hammer                      d) anvil

**For questions 35 & 36 pick the word from the alternatives given that is most APPROPRIATE in the given context.**

36. Egregious: A generation ago, parents would not tolerate such egregious behaviour, but nowadays they just smile and say that it's just a phase all adolescents go through.

- a) indolent                      b) impertinent                      c) unwonted                      d) outrageous

37. Gelid: It is hard to believe that any life could ever arise in the gelid environment of Titan.

- a) frigid                      b) suffocating                      c) gelatinous                      d) hostile

**For Questions 38 to 40 choose the word or set of words for each blank that best fits the meaning of the sentence as a whole.**

38. Gangs are no longer limited to the big cities; they are found almost everywhere, and are proliferating even in the \_\_\_\_\_ and most bucolic places .

- a) quieter                      b) quietest                      c) alcoholic                      d) vitriolic

39. One of the hallowed glories of the British constitution is the way power passes \_\_\_\_\_ at a general election from the government to its successor.

- a) forth                      b) instantly                      c) to the next generation                      d) over

40. If it had not been affecting our \_\_\_\_\_, the ongoing soap opera would indeed have been \_\_\_\_\_.

- a) minds....insane                      b) health.....clean fun                      c) children.....banned                      d) governance....amusing