

7. If a radio is purchased for Rs.490 and sold for Rs.465.50. find the loss percent _____.
8. What value comes in the question mark in given number $5172.49 + 378.352 + \underline{\hspace{2cm}} = 9318.678$.
9. In how many ways the letters of the word 'LEADER' is arranged _____.
10. Look at the series F2 _____ D8, C16, B32...

State True or False:

11. The LCM of 22, 54, 108, 135 and 198 is 5940.
12. If $A:B = 3:4$ and $B:C = 8:9$ then $A:C$ is $2:4$.
13. Average of all prime number between 30 and 50 is 39.3.
14. A paint is coded as 74128 and excel is coded as 93556 the accept is encoded as 455974.
15. 19, 28, 39, 52, 67, 84, 102 in this series odd man out is 102.

Match the following:

- | | |
|--------------------|----------------------------|
| 16. (a^3+b^3) | - a) $(u - v)$ km / hr |
| 17. (a^3-b^3) | - b) $\log_a x - \log_a y$ |
| 18. $\log_a(xy)$ | - c) $(a+b)(a^2-ab+b^2)$ |
| 19. $\log_a(x/y)$ | - d) $(a-b)(a^2+ab+b^2)$ |
| 20. Speed upstream | - e) $\log_a x + \log_a y$ |

SECTION – B

Answer all the questions:

5 x 4= 20

21. a. (i) What is the value of $397 \times 397 + 104 \times 104 + 2 \times 397 \times 104$?
- (ii) The LCM of $1/3, 5/6, 2/9, 4/27$ is what? (2 + 2)

OR

- b. What value will come in place of question mark?
i) $0.006 \div ? = 0.6$ ii) $? \div 0.025 = 80$ (2 + 2)
22. a. Evaluate i) 45% of 750 – 25% of 480 is what?
ii) $16 \frac{2}{3}\%$ of 600 gm – $33 \frac{1}{3}\%$ of 180gm is what? (2 + 2)

OR

- b. i) 'A' does a work in 10 days and 'B' does the same work in 15 days. In how many days they together will do the same work.
ii) A car moves at the speed of 80 km/hr. what is the speed of the car in meter per second. (2 + 2)
23. a. Find the simple interest on Rs.3000 at $6 \frac{1}{4}\%$ per annum for the period from 4th Feb. 2005 to 18th April 2005.

OR

- b. In a 100m race, 'A' can beat 'B' by 25m and 'B' can beat 'C' by 4m. In the same race 'A' can beat 'C' by?
24. a. The bus discount on a bill due 9 months hence at 12% per annum is Rs.540. find the amount of the bill and its present worth.

OR

- b. Find the odd man out in the below series.
i) 40960, 10240, 2560, 640, 200, 40, 10
ii) 3, 7, 15, 39, 63, 127, 255, 511 (2 + 2)
25. a. Look at the series what will be the next number.
i) 42, 40, 38, 35, 33, 31, 28 _____?
ii) ELFA, GLHA, ILJA _____ MLNA (2 + 2)

OR

- b. i) In a certain language 'MADRAS' is coded as NBESBT, how is BOMBAY coded in that code.
ii) In a certain code 'TRIPPLE' is written as SQHOOKD how is DISPOSE written in that code? (2 + 2)

SECTION – C

Answer any FOUR questions:

4 x 15 = 60

26. i) At present, the ratio between the ages of Arun and Deepak is 4:3. After 6 years Arun's age will be 26 years. What is the age of Deepak at present? (8)
- ii) Find the value of $[5(8^{1/3} + 27^{1/3})^3]^{1/4}$ (7)
27. i) If $x:y = 3:4$ find $(4x + 5y) : (5x - 2y)$ (5)
- ii) 'A' and 'B' can do a piece of work in 72 days. 'B' and 'C' can do it in 120 days; 'A' and 'C' can do it in 90 days. In what time can 'A' alone do it? (10)
28. i) A rectangular block 6cm by 12cm by 15 cm is cut up into an exact number of equal cubes. Find the least possible number of cubes? (8)
- ii) What was the day of the week on 4th June 2002? (7)
29. i) In how many different ways can the letters of the word 'CORPORATION' be arranged so that the vowels always come together? (7)
- ii) Two cards are drawn from a pack of 52 cards. The probability that either both are red or both are kings is? (8)
30. i) In a certain language 'COUNSEL' is coded as 'BITIRAK' then how would write the code of GUIDANCE? (4)
- ii) In a certain code 33946 is written as PPOAL, 1987 is written as ROSE then how would you coded as 94678. (4)
- iii) Find the missing term of QPO, NML, KJI, _____ EDC. (3)
- iv) Draw a Venn diagram to indicate the best relationship between travelers, train and bus. (4)
