Directions—(Q. 1–15) What should come in place of the question mark (?) in the following questions ?

1. $417 \cdot 25 - 41 \cdot 72 - 4 \cdot 53 = ?$
   - (A) $380 \cdot 06$
   - (B) 371
   - (C) 348
   - (D) 315
   - (E) None of these

2. $896 - (?)^3 = 4608 \div 12$
   - (A) 2
   - (B) 2^3
   - (C) 8^2
   - (D) 4^2
   - (E) 2^4

3. $273 \div 3 - 9 \cdot 1 = ?$
   - (A) $81 \cdot 9$
   - (B) $62 \cdot 3$
   - (C) $84 \cdot 9$
   - (D) $91 \cdot 8$
   - (E) None of these

4. $\sqrt{3969} \div 1 \cdot 4 = ? \times 2 \cdot 5$
   - (A) 18
   - (B) $112 \cdot 5$
   - (C) 16
   - (D) 24
   - (E) None of these

5. $15 \cdot 8 \times 3 + 8 \cdot 1 - 21 \cdot 5 = ? + 14 \cdot 6$
   - (A) $14 \cdot 9$
   - (B) $20 \cdot 1$
   - (C) $18 \cdot 4$
   - (D) $19 \cdot 4$
   - (E) None of these

6. $83^{27 \cdot 3} \div 83^{1 \cdot 4} \times 83^{46 \cdot 8} = 83^{31 \cdot 9} + ?$
   - (A) $64 \cdot 1$
   - (B) $41 \cdot 9$
   - (C) $40 \cdot 8$
   - (D) $39 \cdot 1$
   - (E) None of these

7. 43% of $586 = 341 \cdot 2 - ?$
   - (A) $76 \cdot 28$
   - (B) $49 \cdot 53$
   - (C) $82 \cdot 99$
   - (D) $48 \cdot 96$
   - (E) None of these

8. $(504 \cdot 14 \div 14) \div 13 = ?$
   - (A) $2 \cdot 77$
   - (B) $2 \cdot 56$
   - (C) $3 \cdot 14$
   - (D) $2 \cdot 17$
   - (E) None of these

9. $4431 + 431 - 31 = ?$
   - (A) 4530
   - (B) 3969
   - (C) 4831
   - (D) 4031
   - (E) None of these

10. $2\frac{13}{17} + \frac{4}{17} = ?$
    - (A) 5
    - (B) $2 \cdot 9$
    - (C) 7
    - (D) 4
    - (E) None of these

11. $1001 + 96 \div 16 = ?$
    - (A) 1108
    - (B) 996
    - (C) 1070
    - (D) 1007
    - (E) None of these

12. $\frac{1}{5}$ of $\frac{2}{7}$ of $\frac{8}{3}$ of $4095 = ?$
    - (A) 642
    - (B) 598
    - (C) 648
    - (D) 475
    - (E) None of these

13. 32% of $150 \times 53\%$ of $? = 7632$
    - (A) 480
    - (B) 324
    - (C) 300
    - (D) 298
    - (E) None of these

14. $1767 = ? \times 57$
    - (A) 27
    - (B) 31
    - (C) 39
    - (D) 37
    - (E) None of these

15. $7^2 + 3^4 - 4^3 = ? - 11^2$
    - (A) 55
    - (B) 196
    - (C) 172
    - (D) 187
    - (E) None of these

Directions—(Q. 16–20) What **approximate** value should come in place of the question mark (?) in the following questions ?

(Note : You are not expected to calculate the exact value)

16. $(10 \cdot 97)^2 + (4 \cdot 13)^3 \times 3 \cdot 79 = ?$
    - (A) 428
    - (B) 376
    - (C) 197
    - (D) 204
    - (E) 302

17. $12 \cdot 13\%$ of $935 \cdot 81 + 1498\%$ of $25 \cdot 85 = ?$
    - (A) 500
    - (B) 550
    - (C) 478
    - (D) 341
    - (E) 596

18. $\sqrt[3]{65} \times 23 \cdot 93 - 31 \cdot 04 = ?$
    - (A) 98
    - (B) 65
    - (C) 102
    - (D) 35
    - (E) 79

19. $1624 \cdot 12 \times 3 \cdot 891 = ?$
    - (A) 6100
    - (B) 6900
    - (C) 6000
    - (D) 6400
    - (E) 6500

20. $3018 \cdot 19 \div 2 \cdot 87 - 841 \cdot 02 = ?$
    - (A) 365
    - (B) 90
    - (C) 387
    - (D) 1000
    - (E) 200

Directions—(Q. 21–25) What should come in place of the question mark (?) in the following series ?

21. 5   6   16   57   ?   1245
    - (A) 244
    - (B) 148
    - (C) 296
    - (D) 271
    - (E) None of these

22. 12   ?   168   504   1260   2520
    - (A) 96
    - (B) 59
    - (C) 61
    - (D) 48
    - (E) None of these

23. 4   9   29   ?   599   3599
    - (A) 117
    - (B) 347
    - (C) 258
    - (D) 174
    - (E) None of these

24. 177   170   159   146   ?   110
    - (A) 132
    - (B) 106
    - (C) 129
    - (D) 127
    - (E) None of these

25. 2   3   11   38   102   ?
    - (A) 402
    - (B) 182
    - (C) 227
    - (D) 168
    - (E) None of these

26. On a particular day, sweets were to be equally distributed among 495 students of a school. However, on that particular day 396 students from a nearby school also joined them. Hence each student present on that day got four sweets less. How many sweets were distributed ?
    - (A) 5445
    - (B) 4950
    - (C) 4455
    - (D) 3960
    - (E) None of these

27. A student requires 324 pencils in 6 years. How many dozen pencils will he require in 14 years ?
    - (A) 52
    - (B) 64
    - (C) 59
    - (D) 62
    - (E) None of these

28. In how many different ways can the letters of the word 'REPLACE' be arranged ?
   (A) 2630   (B) 5040
   (C) 1680   (D) 2580
   (E) None of these

29. A particular sum was divided among A, B and C in the ratio 2 : 6 : 7 respectively. If the amount received by A was ₹ 4,908, what was the difference between the amounts received by B and C ?
   (A) ₹ 2,454   (B) ₹ 3,494
   (C) ₹ 2,135   (D) ₹ 2,481
   (E) None of these

30. The average of four consecutive even numbers P, Q, R and S respectively (in increasing order) is 51. What is the product of P and R ?
   (A) 2592   (B) 2400
   (C) 2600   (D) 2808
   (E) None of these

31. What is the least number to be added to 4523 to make it a perfect square ?
   (A) 101   (B) 34
   (C) 238   (D) 121
   (E) None of these

32. The product of two consecutive even numbers is 7568. What is 150% of the sum of the two numbers ?
   (A) 204   (B) 261
   (C) 304   (D) 198
   (E) None of these

33. Length of the floor of a rectangular auditorium is 6 m more than the radius of a circle with a circumference of 572 m. The perimeter of the floor of the rectangular auditorium is 356 m. What will be cost of flooring the auditorium (only the floor of the auditorium), if the cost of flooring is ₹ 12/m² ?
   (A) ₹ 87,954   (B) ₹ 91,236
   (C) ₹ 94,284   (D) ₹ 75,490
   (E) None of these

34. A car covers a distance of 528 km in a certain time at a speed of 66 km/hr. How much distance would a truck cover at an average speed which is 24 km/hr less than that of the speed of the car in time which is 7 hours more than that taken by the car ?
   (A) 336 km   (B) 682 km
   (C) 598 km   (D) 630 km
   (E) None of these

35. The average age of a man and his son is 30 years. The ratio of their ages four years ago was 10 : 3 respectively. What is the difference between the present ages of the man and his son ?
   (A) 28 years   (B) 16 years
   (C) 26 years   (D) 44 years
   (E) None of these

36. What would be the compound interest obtained on an amount of ₹ 7,790 at the rate of 10 p.c.p.a after two years ?
   (A) ₹ 1532·60   (B) ₹ 1495·90
   (C) ₹ 1653·50   (D) ₹ 1635·90
   (E) None of these

37. The difference between 20% of a number and $\frac{4}{5}$th of the same number is 2499. What is $\frac{2}{7}$th of that number ?
   (A) 2156   (B) 1190
   (C) 1090   (D) 1465
   (E) None of these

38. The average height of 27 persons was recorded as 162 cm. If the height of Shreyas was deleted from the observation, the average height reduced by 1 cm. What was Shreyas' height ?
   (A) 184 cm   (B) 226 cm
   (C) 179 cm   (D) 186 cm
   (E) None of these

39. The cost of 14 keyboards and 8 mouse-pads is ₹ 26,240. What is the cost of 35 keyboards and 20 mouse-pads ?
   (A) ₹ 65,600
   (B) ₹ 58,800
   (C) ₹ 76,550
   (D) Cannot be determined
   (E) None of these

40. In order to pass in an examination, a student is required to get 342 marks out of the aggregate marks. Neha got 266 marks and was declared fail by 8 per cent. What is the minimum passing percentage of the examination ?
   (A) 28   (B) 36
   (C) 33   (D) 26
   (E) None of these