

1. Kamya purchased an item of Rs. 46,000 and sold it at loss of 12 per cent. With that amount she purchased another item and sold it at a gain of 12 per cent. What was her overall gain/loss?
(A) Loss of Rs. 662.40
(B) Profit of Rs. 662.40
(C) Loss of Rs. 642.80
(D) Profit Rs. 642.80
(E) None of these
2. The sum of six consecutive even numbers of set-A is 402 . What is the sum of another set-B of four consecutive numbers whose lowest number is 15 less than double the lowest number of set- $\mathbf{A}$ ?
(A) 444
(B) 442
(C) 440
(D) 446
(E) None of these
3. Call rate of a sim company-A is 1 paisa for every $\mathbf{3}$ seconds. Another sim company-B charges 45 paisa per minute. A man talked 591 seconds from Sim Company-A and 780 seconds from sim company-B. What would be the total amount he spent?
(A) Rs. 7.80
(B) Rs. 7.40
(C) Rs. 7.46
(D) Rs. 7.82
(E) Rs. 8.46
4. A 280 metre long train moving with an average speed of $108 \mathrm{~km} / \mathrm{hr}$ crosses a platform in 12 seconds. A man crosses the same platform in 10 seconds. What is the speed of the man in meter / second?
(A) $5 \mathrm{~m} / \mathrm{s}$
(B) $8 \mathrm{~m} / \mathrm{s}$
(C) $12 \mathrm{~m} / \mathrm{s}$
(D) Cannot be determined
(E) None of these
5. The ratio between the three angles of a quadrilateral is $13: 9: 5$ respectively. The value of the fourth angle of the quadrilateral is $36^{\circ}$. What is the difference between the largest and the second smallest angles of the quadrilateral?
(A) $104^{\circ}$
(B) $108^{\circ}$
(C) $72^{\circ}$
(D) $96^{\circ}$
(E) None of these

Directions-(Q.6-10) Study the following pie-chart and bar chart and answer the following questions.
Percentagewise Distribution of students in six different Schools
Total number of Students $=\mathbf{6 0 0 0}$
Percentage of Students


Number of Boys out of the $\mathbf{6 0 0 0}$ Students in each School Separately

6. What is the total number of girls in School-C, number of girls in School-E and the number of boys in school-D together?
(A) 1700
(B) 1900
(C) 1600
(D) 1800
(E) None of these
7. What is the respective ratio between the number of boys in School-C, number of girls in school-B and total number of students in School-E?
(A) 45: 7: 97
(B) 43: 9: 97
(C) 45: 7: 87
(D) 43: 9: 87
(E) None of these
8. What is the difference between the total number of students in School-P and the number of boys in school-E?
(A) 820
(B) 860
(C) 880
(D) 900
(E) None of these
9. In which school the total number of students (both boys and girls) together are equal to the number of girls in School-E?
(A) A
(B) B
(C) C
(D) D
(E) F
10. Number of girls in School-A is approximately what per cent of total number of students in School-B?
(A) 55
(B) 50
(C) 35
(D) 45
(E) 40

Directions-(Q.11-15) What will come in place of question-mark (?) in the following number series?
11. $958,833,733,658,608,(?)$
(A) 577
(B) 583
(C) 567
(D) 573
(E) None of these
12. 11, 10, 18, 51, 200, (?)
(A) 885
(B) 1025
(C) 865
(D) 995
(E) None of these
13. 25, 48, 94, 186, 370, (?)
(A) 738
(B) 744
(C) 746
(D) 724
(E) None of these
14. 14, 24, 43, 71, 108, (?)
(A) 194
(B) 154
(C) 145
(D) 155
(E) None of these
15. $144,173,140,169,136,(?)$
(A) 157
(B) 148
(C) 164
(D) 132
(E) None of these

Directions-(Q.16-20) In the following questions two equations numbered I and II are given. You have to solve both the equations and give answer if:
(A) $x>y$
(B) $x \geq y$
(C) $x<y$
(D) $\mathbf{x} \leq \mathbf{y}$
$(E) x=y$ or the relationship cannot be established
16.
I. $\sqrt{25 x^{2}}-125=0$
II. $\sqrt{361} y+95=0$
17.
I. $\frac{5}{7}-\frac{5}{21}=\frac{\sqrt{x}}{42}$
II. $\frac{\sqrt{y}}{4}+\frac{\sqrt{y}}{16}=\frac{250}{\sqrt{y}}$
18.
I. $(625)^{1 / 4} \mathrm{x}+\sqrt{1225}=155$
II. $\sqrt{196} y+13=279$
19.
I. $5 x^{2}-18 x+9=0$
II. $3 y^{2}+5 y-2=0$
20.
I. $\frac{13}{\sqrt{x}}+\frac{9}{\sqrt{x}}=\sqrt{x}$
II. $\mathrm{y}^{4}-\frac{(13 \times 2)^{9 / 2}}{\sqrt{y}}=0$

Directions-(Q.21-25) What will come in place of question-mark (?) in the following questions?
21. $\frac{3}{19}$ of $30 \%$ of $3420=(?)^{2} \times 2$
(A) $(81)^{2}$
(B) 7
(C) 9
(D) 81
(E) 49
22. $1898 \div 73 \times 72=(?)^{2} \times 13$
(A) -256
(B) 256
(C) 12
(D) 144
(E) -16
23. $\sqrt{7^{2} \times 24 \times 2-(11)^{3}+3}=$ ?
(A) 42
(B) 1024
(C) 1764
(D) $(1024)^{2}$
(E) 32
24. $(\mathbf{0 . 8 1})^{2} \div(0.729)^{3} \times(0.9)^{2}=(0.9)^{?-3}$
(A) 6
(B) 2
(C) 4
(D) 0
(E) None of these
$25.65 \%$ of $\sqrt{3136} \times 5=? \div 154$
(A) 56
(B) 28
(C) 35
(D) 32
(E) None of these

Directions (Q.26-30): What will come in place of the question mark (?) in the following number series?
26.8101844124 (?)
(A) 344
(B) 366
(C) 354
(D) 356
(E) None of these
27.132561121205 (?)
(A) 323
(B) 326
(C) 324
(D) 313
(E) None of these
28. 65635220012486 (?)
(A) 67
(B) 59
(C) 62
(D) 57
(E) None of these
29. 454472445463436 (?)
(A) 436
(B) 456
(C) 454
(D) 434
(E) None of these
30. 121836102360 (?)
(A) 1364
(B) 1386
(C) 1384
(D) 1376
(E) None of these
31. The length of a rectangle is three-fifths of the side of a square. The radius of a circle is equal to side of the square. The circumference of the circle is $\mathbf{1 3 2} \mathbf{~ c m}$. What is the area of the rectangle if the breadth of the rectangle is 8 cm ?
(A) 112.4 sq cm
(B) 104.2 sq cm
(C) 100.8 sq cm
(D) Cannot be determined
(E) None of these
32. Five-ninths of a number is equal to twenty five percent of the second number. The second number is equal to one-fourth of the third number. The value of the third number is $\mathbf{2 9 6 0}$. What is 30 per cent of the first number?
(A) 88.8
(B) 99.9
(C) 66.6
(D) Cannot be determined
(E) None of these
33. The ratio of the present age of Manoj to that of Wasim is $3: 11$. Wasim is $\mathbf{1 2}$ years younger than Rehana. Rehana's age after 7 years will be 85 years. What is the present age of Manoj's father, who is $\mathbf{2 5}$ years older than Manoj?
(A) 43 years
(B) 67years
(C) 45 years
(D) 69 years
(E) None of these
34. Dinesh's monthly income is four times Suresh's monthly income. Suresh's monthly income is twenty per cent more than Jyoti's monthly income. Jyoti's monthly income is Rs. 22,000. What is Dinesh's monthly income?
(A) Rs. 1, 06, 500
(B) Rs. 1, 05, 600
(C) Rs. 1, 04, 500
(D) Rs. 1, 05, 400
(E) None of these
35. The smallest side of a right-angled triangle is $\mathbf{8} \mathbf{~ c m}$ less than the side of a square of perimeter 56 cm , The second largest side of the right-angled triangle is 4 cm less than the length of the rectangle of area 96 sq cm and breadth 8 cm . What is the largest side of the right-angled triangle?
(A) 20 cm
(B) 12 cm
(C) 10 cm
(D) 15 cm
(E) None of these
36. The ratio of the adjacent angles of a parallelogram is $7: 8$. Also, the ratio of the angles of quadrilateral is $5: 6: 7: 12$. What is the sum of the smaller angle of the parallelogram and the second largest angle of the quadrilateral?
(A) $168^{\circ}$
(B) $228^{\circ}$
(C) $156^{\circ}$
(D) $224^{\circ}$
(E) None of these
37. Raju runs 1250 metre on Monday and Friday. Another days he runs $\mathbf{1 5 0 0}$ metre except for Sunday (He does not run on Sunday). How many kilometre will he run in 3 weeks (first day starting from Monday)?

1) 12.5 km
2) 20.5 km
3) 8.5 km
4) 25.5 km
5) None of these
38. The sum of nine consecutive odd numbers of Set $A$ is 621 . What is the sum of a different set of six consecutive even numbers whose lowest number is 15 more than the lowest number of Set $A$ ?
(A) 498
(B) 468
(C) 478
(D) 488
(E) None of these
39. In a school there are $\mathbf{2 5 0}$ students, out of whom 12 percent are girls. Each girl's monthly fee is Rs. $\mathbf{4 5 0}$ and each boy's monthly fee is $\mathbf{2 4}$ per cent more than that of a girl. What is the total monthly fee of girls and boys together?
(A) Rs. $1,36,620$
(B) Rs. 1, 36, 260
(C) Rs. 1, 32, 660
(D) Rs. 1, 32, 460
(E) None of these
40. The average speed of a train is $1 \frac{3}{7}$ times the average speed of a car. The car covers a distance of 588 km in 6 hours. How much distance will the train cover in $\mathbf{1 3}$ hours?
(A) 1750 km
(B) 1760 km
(C) 1720 km
(D) 1850 km
(E) None of these

Directions (Q.41-45): Study the following pie-chart carefully to answer these questions:
Total number of passengers in six different trains $=4800$
Percentage-wise distribution of passengers

41. What was the average number of passengers travelling in Train $A$, Train $C$ and Train $F$ together?
(A) 816
(B) 826
(C) 824
(D) 812
(E) None of these
42. If the cost of one ticket is Rs. 124, what is the total amount paid by passengers of Train $B$ ? (Assuming all the passengers purchased tickets and cost of each ticket is equal)
(A) Rs. 53,658
(B) Rs. 53,568
(C) Rs. 53,558
(D) Rs. 53,468
(E) None of these
43. The number of passengers in Train $E$ is approximately what percentage of the total number of passengers in Train $B$ and Train $D$ together?
(A) 63
(B) 69
(C) 75
(D) 54
(E) 79
44. What is the difference between the number of passengers in Train $C$ and the number of passengers in Train A?
(A) 280
(B) 250
(C) 230
(D) 260
(E) None of these
45. What is the total number of passengers in Train $D$, Train $E$ and Train $F$ together?
(A) 2796
(B) 3225
(C) 2976
(D) 3125
(E) None of these

Directions (Q.46-50): Study the following table carefully to answer the questions that follow.
Semester fees (in Rs thousand) for five different courses in six different years

| Years | Course |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | B Tech | M Sc | B Ed | M Phil | Diploma |
| 2005 | 11.5 | 5.8 | 7.5 | 4.7 | 1.8 |
| 2006 | 14.5 | 6.4 | 11.6 | 5.8 | 3.2 |
| 2007 | 20.0 | 10.2 | 13.9 | 8.6 | 4.8 |
| 2008 | 22.2 | 14.6 | 15.8 | 12.7 | 5.6 |
| 2009 | 35.8 | 17.7 | 18.5 | 25.1 | 12.5 |
| 2010 | 50.7 | 20.9 | 22.6 | 18.9 | 14.9 |

46. What was the approximate per cent increase in the semester fees of B Ed course in the year 2007 as compared to the previous year?
(A) 26
(B) 30
(C) 20
(D) 16
(E) 10
47. What was the average semester fee charged for MSc course over all the years together?
(A) Rs. 12,700
(B) Rs. 12,600
(C) Rs. 12,060
(D) Rs. 12070
(E) Rs. 13,140
48. What was the difference between the total semester fee charged for Diploma course over all the years together and the fee charged for $B$ Tech course in the year 2009?
(A) Rs. 8,500
(B) Rs. 8,000
(C) Rs. 6,500
(D) Rs. 7,000
(E) None of these
49. The semester fee charged for $M$ Phil course in the year 2008 was approximately what percentage of the semester fee charged for MSc course in the year 2009?
(A) 67
(B) 84
(C) 80
(D) 76
(E) 72
50. What was the total semester fee charged for all the courses together in the year 2006 ?
(A) Rs. 42,500
(B) Rs. 41,500
(C) Rs. 41,600
(D) Rs. 42,200
(E) None of these

## ANSWER SHEET

| 1 | (A) |
| :---: | :---: |
| 2 | (B) |
| 3 | (D) |
| 4 | (B) |
| 5 | (D) |
| 6 | (D) |
| 7 | (C) |
| 8 | (E) |
| 9 | (B) |
| 10 | (E) |
| 11 | (B) |
| 12 | (D) |
| 13 | (A) |
| 14 | (B) |
| 15 | (E) |
| 16 | (A) |
| 17 | (C) |
| 18 | (A) |
| 19 | (A) |
| 20 | (C) |
| 21 | (C) |
| 22 | (C) |
| 23 | (E) |
| 24 | (D) |
| 25 | (B) |


| 26 | (B) |
| :---: | :---: |
| 27 | (D) |
| 28 | (A) |
| 29 | (C) |
| 30 | (B) |
| 31 | (C) |
| 32 | (B) |
| 33 | (A) |
| 34 | (B) |
| 35 | (C) |
| 36 | (A) |
| 37 | (D) |
| 38 | (E) |
| 39 | (B) |
| 40 | (E) |
| 41 | (A) |
| 42 | (B) |
| 43 | (A) |
| 44 | (E) |
| 45 | (C) |
| 46 | (C) |
| 47 | (B) |
| 48 | (D) |
| 49 | (E) |
| 50 | (B) |

