

EXAM DATE : 2-September-2016 Evening Shift

Question 1.A and B together can do a piece of work in 12 days while A alone can do the same work in 30 days. B alone can do it in

Options:

- (A) 18 days
- (B) 20 days
- (C) 15 days
- (D) 22 days

Question 2.

The diagonal of a cube is $\sqrt{192}$ cm . Its volume (in cm^3) will be

Options:

- (A) 216
- (B) 432
- (C) 512
- (D) 624

Question 3.A watch is listed for Rs.230 and is sold at a discount of 12%, then the sale price of the watch is

Options:

- (A) Rs.27.6
- (B) Rs.276
- (C) Rs.202.4
- (D) Rs.257.6

Question 4.Ravi has a roadmap with a scale of 1.5 cm for 18 km. He drives on that road for 72 km. What would be his distance covered in that map.

Options:

- (A) 4 cm
- (B) 6 cm
- (C) 8 cm
- (D) 7 cm

Question 5.The profit (in Rs.) after selling an article for Rs.524 is the same as the loss (in Rs.) after selling it for Rs.452. The cost price of the article is:

Options:

- (A) Rs.480
- (B) Rs.485
- (C) Rs.488
- (D) Rs.500

Question 6.A circle and a square have same area. The ratio of the side of the square to the radius of the circle will be:

Options:

- (A)

$$\sqrt{\pi}:1$$

(B)

$$1:\sqrt{\pi}$$

(C)

$$\pi^2:1$$

(D)

$$1:\pi$$

Question 7. How long does a train, 75 m long, moving at 60 km/hr take to pass a certain telegraph post?

Options:

(A) 3.5 seconds

(B) 4.5 seconds

(C) 5 seconds

(D) 5.4 seconds

Question 8.

If $2x - \frac{2}{x} = 1$ ($x \neq 0$), then the value of $x^3 - \frac{1}{x^3}$ is

Options:

(A)

$$\frac{13}{4}$$

(B)

$$\frac{13}{8}$$

(C)

$$\frac{17}{4}$$

(D)

$$\frac{17}{8}$$

Question 9.

if $(a + \frac{1}{a})^2 = 3$, then the value of $a^2 + \frac{1}{a^2}$ will be

Options:

(A) 0

(B) 1

(C) 2

(D) 3

Question 10. The point equidistant from the vertices of a triangle is called its

Options:

- (A) incentre
- (B) circumcentre
- (C) orthocentre
- (D) centroid

Question 11. If one angle of a triangle is equal to half the sum of the other two equal angles, then the triangle is

Options:

- (A) isosceles
- (B) scalene
- (C) equilateral
- (D) right angled

Question 12.

If $\sin^2\theta - \cos^2\theta = \frac{1}{4}$, then the value of

$$\sin^4\theta - \cos^4\theta \text{ is}$$

Options:

- (A) $\frac{3}{4}$
- (B) $\frac{1}{4}$
- (C) $\frac{1}{16}$
- (D) $\frac{1}{2}$

Question 13. The least number, which when divided by 5, 6, 7 and 8 leaves a remainder 3 in each case, but when divided by 9 leaves no remainder, is:

Options:

- (A) 1677
- (B) 1683
- (C) 2523
- (D) 3363

Question 14. A cricketer, whose bowling average was 12.4 runs/wicket takes 5 wickets for 22 runs in a match, thereby decreases his average by 0.4. The number of wickets, taken by him before this match was:

Options:

- (A) 78
- (B) 87
- (C) 95
- (D) 105

Question 15. Sum of the factors of $4b^2c^2 - (b^2 + c^2 - a)^2$ is

Options:

- (A) $a + b + c$
- (B) $2(a + b + c)$

- (C) 0
- (D) 1

Question 16. If $\frac{1}{2}(a - b)^2 + ab = p(a + b)^2$, then the value of p is

Options:

- (A) $p = 4$
- (B) $p = \frac{1}{2}$
- (C) $p = \frac{1}{4}$
- (D) $p = 2$

Question 17. The sum of two angles of a triangle is 116° and their difference is 24° . The measure of smallest angle of the triangle is

Options:

- (A) 38°
- (B) 28°
- (C) 46°
- (D) 64°

Question 18. In a ΔABC , $DE \parallel BC$. D and E lie on AB and AC respectively. If $AB = 7$ cm and $BD = 3$ cm, then find $BC:DE$

Options:

- (A) 2:2
- (B) 3:2
- (C) 3.5 : 2
- (D) 7:2

Question 19.

The value of $\frac{\sin^2 63^\circ + \sin^2 27^\circ}{\cos^2 17^\circ + \cos^2 73^\circ}$ is

Options:

- (A) 0
- (B) 1
- (C) 2
- (D) -1

Question 20. The difference between the compound interest and the simple interest on Rs. 6250 at 8% per annum in 2 years is

Options:

- (A) Rs.30
- (B) Rs.40
- (C) Rs.50
- (D) Rs.60

Question 21. If the angle of elevation of the top of a pillar from the ground level is raised from 30° to 60° , the length of the shadow of a pillar of height $50\sqrt{3}$ will be decreased by

Options:

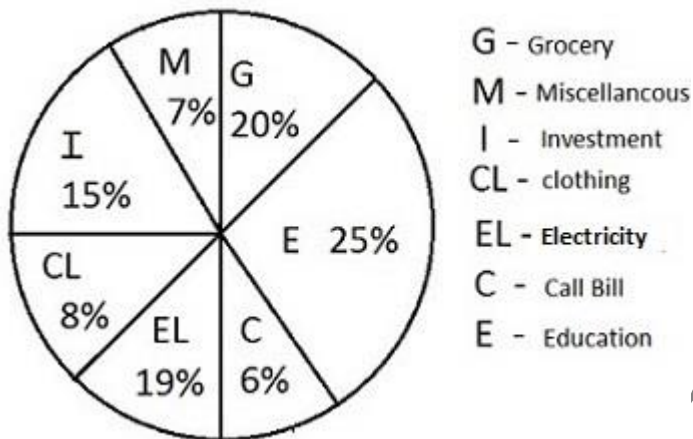
- (A) 60 m

- (B) 75 m
- (C) 100 m
- (D) 50 m

Question 22. Study the following pie-chart and answer the questions.

Budget estimated by a family for their monthly expenses.

Total salary = ₹ 32000 per month



The budget estimated by the family on Clothing and Grocery together is

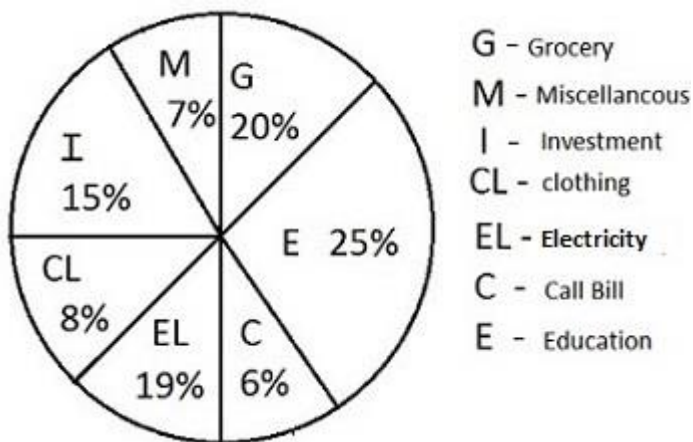
Options:

- (A) Rs.8950
- (B) Rs.8960
- (C) Rs.8850
- (D) Rs.8860

Question 23. Study the following pie-chart and answer the questions.

Budget estimated by a family for their monthly expenses.

Total salary = ₹ 32000 per month



Due to sudden marriage, the family incurs miscellaneous expenditure of Rs. 3040 in total. Then the increase in the amount under this head from that budgeted is

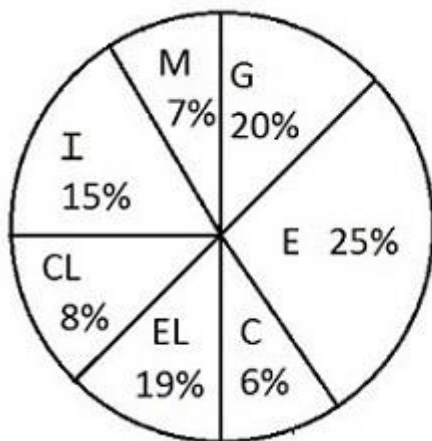
Options:

- (A) Rs.810
- (B) Rs.1738
- (C) Rs.234
- (D) Rs.800

Question 24. Study the following pie-chart and answer the questions.

Budget estimated by a family for their monthly expenses.

Total salary = ₹ 32000 per month



- G - Grocery
- M - Miscellaneous
- I - Investment
- CL - clothing
- EL - Electricity
- C - Call Bill
- E - Education

The difference in the amount estimated by the family on Electricity and Call bill is:

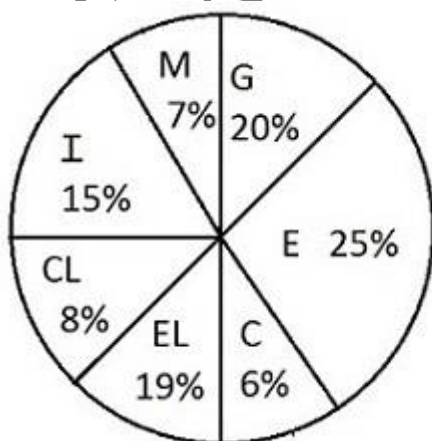
Options:

- (A) Rs.4560
- (B) Rs.4470
- (C) Rs.4168
- (D) Rs.4160

Question 25. Study the following pie-chart and answer the questions.

Budget estimated by a family for their monthly expenses.

Total salary = ₹ 32000 per month



- G - Grocery
- M - Miscellaneous
- I - Investment
- CL - clothing
- EL - Electricity
- C - Call Bill
- E - Education

The family actually spent Rs.4672 on Grocery. Then the difference in the amount budgeted and spent on grocery is:

Options:

(A) Rs.1528

(B) Rs.1728

(C) Rs.1278

(D) Rs.1628

Questions	Answer	Questions	Answer	Questions	Answer	Questions	Answer	Questions	Answer
1	B	2	C	3	C	4	B	5	C
6	A	7	B	8	B	9	B	10	B
11	C	12	B	13	B	14	C	15	B
16	C	17	C	18	C	19	B	20	B
21	C	22	B	23	D	24	D	25	B

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