In a race of 600 m, A can beat B by 30 m and in a race of 500 m, B can beat C by 25 m. By how many metres will A beat C in a race of of 400 m ?

- ⦿ 59 m
- ◯ 39 m
- ◯ 49 m
- ◯ 55 m

Question 2   1 Point

A boat moves upstream at the rate of 1 km in 10 minutes and downstream at the rate of 1 km in 6 minutes. The speed of the current is ?

- ◯ 1 km/hr
- ◯ 1.5 km/hr
- ◯ 2.5 km/hr
- ⦿ 2 km/hr

Question 3*

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Question 4

1 Point

A can cover a certain distance in 84 min by covering 2/3rd of distance at 4 km/h and the rest at 5 km/h. Find the total distance.

- ○ 8 km
- ○ 9 km
- ● 6 km
- ○ 15 km

Question 5

1 Point

A sum of Rs. 12000 deposited at compound interest becomes doubles after 5 years. After 20 years it will become ?

- ○ 124000
- ● 96000
- ○ 192000
- ○ 120000

Question 6

1 Point

The distance between two station A and B is 220 km. A train leaves A toward B at an average speed of 80 km/hr. after half an hour another train leaves B toward A at an average speed at 100 km/hr. the distance of the point of two train meet, from A is ?

○ 140 km

○ 150 km

○ 130 km

◉ 120 km

Question 7   1 Point

A certain distance is covered at a certain speed. If half of this distance is covered in double the time, the ratio of the two speed is ?

○ 2 : 1

◉ 1 : 4

○ 1 : 2

○ 4 : 1

Question 8   1 Point

For every 4 leaps taken by a dog, a cat takes 5 leaps in the same time. But distance covered in 3 leaps of dog is same as that of 4 leaps of cat. Then what is the ratio of speed of dog and cat ?

○ 12 : 11

◉ 15 : 14

○ 16 : 15

○ 10 : 9

Question 9   1 Point 🔖 ↻

The simple interest on a sum of money at 10% per annum for 6 year is half the sum. Then, the sum is ?

○ Rs.4000

◉ Not possible

○ Rs.5000

○ Rs.6000

Question 10   1 Point 🔖 ↻

A car is moving with the speed of 47.52km/hr and the radius of the wheel of car is 21 cm. Calculate the approximate number of revolutions made by the wheel in one minute.

○ 300 rpm

○ 200 rpm

○ 250 rpm

◉ 600 rpm

Question 11   1 Point

The radius of a wheel is 22.4 cm. What is the distance covered by the wheel in making 500 resolutions.

○ 807

○ 754

○ 787

● 704

Question 12   1 Point

A runs 1% times as fast as B. If A gives B a start of 30 m, how far must the winning post be, so that A and B reach it at the same time ?

○ 25 m

○ 45 m

● 30 m

○ 15 m

Question 13   1 Point

The difference between simple interest and compound interest on Rs. 600 for 1 years at 10% per annum, reckoned half yearly is ?

○ nil

○ Rs.1.50

○ Rs.4.40

● Rs.6.60

Question 14   1 Point

150 meter long train takes 10 second two pass a man who is going in same direction at the speed of 2 km/hr . What is the speed of the train ?

○ 84 km/hr

● 56 km/hr

○ 52 km/hr

○ None

Question 15   1 Point

The difference between simple interest and compound interest at the same rate for Rs. 5000 for 2 years is Rs. 72.The rate of interest is ?

○ 8%

○ 10%

● 12%

○ 5%

Question 16   1 Point

The side of a rhombus is 13m. If one of its diagonal is 24m. Find the area of the rhombus.

● 120 m^2

○ 200 m^2

○ 125 m^2

○ 130 m^2

Question 17   1 Point

Two stations A and B are 110 kms apart on a straight line. One train start from A at 7 a.m. and travels towards B at 20 km per hour speed. Another train starts from B at 8 a.m. and travels towards A at a speed of 25 km per hour. At what time will they meet ?

○ 9 am

○ None

● 10 am

○ 8 am

Question 18   1 Point

A runs 1% times as fast as B. If A gives B a start of 30 m, how far must the winning post be, so that A and B reach it at the same time ?

○ 75 m

◉ 69 m

○ 70 m

○ 52 m

Question 19   1 Point

If the perimeter of a semi-circle is 72 cm. What will be the area of that semi-circle?

○ 106 cm^2

◉ 308 cm^2

○ 206 cm^2

○ 300 cm^2

Question 20   1 Point

The radius of the circle is equal to seven - ninth of the side of the square. The area of the circle is 9856 sq cm. Find the perimeter of a square?

○ 298 cm

○ 288 cm

○ 208 cm

◉ 258 cm

Question 21   1 Point 🔖 ↻

Vandana invested an amount of ₹ 8000 in a fixed deposit scheme for 2 yr at the rate of 5% pa compound interest. How much amount will Vandana get on maturity of the fixed deposit?

○ 8000

○ 8800

◉ 8820

○ 8888

Question 22   1 Point 🔖 ↻

If the volume of two cubes are in the ratio 27 : 64 and then the ratio of their total surface area is?

○ 3 : 4

○ 3 : 8

◉ 9 : 16

○ 27 : 64

Question 23   1 Point 🔖 ↻

The length and breadth of a rectangle are in the ratio of 9:5. When the sides of the rectangle are extended on each side by 5 m the ratio of length to breadth becomes 5:3. What is the area of the original rectangle?

○ 1160 sq.cm

○ 1045 sq.cm

● 1125 sq.cm

○ 1565 sq.cm

Question 24   1 Point 🔖 ↻

If a train runs at 5/6 of its original speed, then it reaches the station 10 min late. Then find out the usual time taken by train to cover the distance.

○ 45 mins

○ 55 mins

○ 40 mins

● 50 mins

Question 25   1 Point
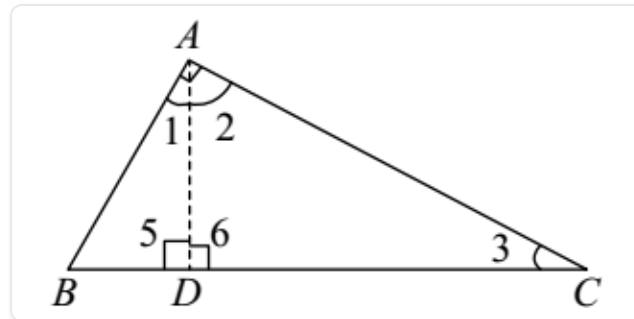
Area of a square is equal to the area of a rectangle. The ratio of length and breadth of the rectangle is 16 : 9 then find the perimeter of the square if the perimeter of the rectangle is 100 m.

○ 24 m

○ 48 m

● **96 m**

○ 144 m

Question 26   1 Point

In a right angled Δ ABC, Right angled at A, AD ⊥ BC. Then :

○ $AD^2 = BD \times AB$

● $AD^2 = BD \times CD$

○ $AD^2 = CD \times AC$

○ $AD^2 = AB \times AC$

Question 27   1 Point 🔖↻

A sum was put at simple interest at a certain rate for 2 years . Had it been put at 3% higher rate, it would have fetched Rs 300 more. The sum is

🔘 Rs.5000

○ Rs.6000

○ Rs.7000

○ None

Question 28   1 Point 🔖↻

ABCD is a square, F is mid point of AB and E is a point on BC such that BE is one-third of BC. If area of ΔFBE = 108 m2, then the length of AC is:

🔘 36√2 m

○ 63√2 m

○ 63 m

○ 72√2 m

Question 29

1 Point

X and Y are two station 500 km apart. A train start from X and moves toward Y at 20 km/hr another train station from Y at the same times and moves toward X at 30 km/hr. How far from X will they cross each other ?

○ 30 km

● 200 km

○ 120 km

○ 40 km

Question 30

1 Point

If the interest of a certain sum for the first year at 8% p.a. compound interest is Rs. 48. What will be the interest for the second years ?

○ Rs.58.60

○ Rs.53.04

○ Rs.52.55

● Rs.51.84

Question 31

1 Point

The current of a stream runs at the rate of 4 km/hr. A boat goes 6 km and back to the starting point in 2 hours. The speed of the boat in still water is ?

○ 6 km/hr

○ 6.8 km/hr

● 8 km/hr

○ 7.5 km/hr

Question 32

1 Point

A bullock cart has to cover a distance of 80 km in 10 h. If it covers half of the journey in 3/5th time, what should be its speed to cover the remaining distance in the left time?

○ 5 km/hr

○ 15 km/hr

● 10 km/hr

○ 18 km/hr

Question 33

1 Point

A loan was repaid in two annual instalment of ₹ 1089 each. If the rate of interest be 10% per annum compounded annually, the sum borrowed was ?

○ 1860

● 1890

○ 1850

○ 1840

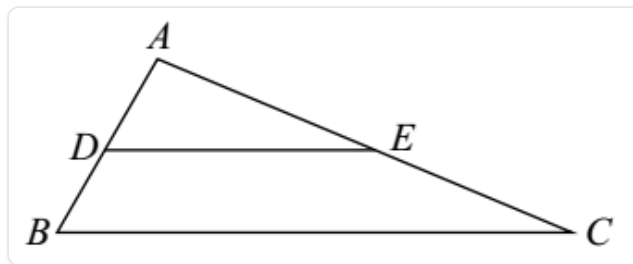Question 34   1 Point 🔖↻

A man invested 1/3 of his capital at 7%, 1/4 at 8% and remainder at 10%. If his annual income is Rs. 561, the capital is ?

🔵 Rs.5400

○ Rs.6000

○ Rs.7200

○ Rs.6600

Question 35   1 Point 🔖↻

In the given figure, DE ∥ BC and DE : BC = 3 : 5 the ratio of the areas of Δ ADE and the trapezium BCED.

🔵 9/25

○ 9/16

○ 3/4

○ 12/25

Question 36   1 Point

Volumes of two cubes are in the ratio 8 : 27. Ratio of their surface area is

● 4 : 9

○ 9 : 4

○ 3 : 2

○ 2 : 3

Question 37   1 Point

Yogesh can run 1km in 6 min 20 s and Vijay can cover the same distance in 6 min 40 s . By what distance can Yogesh beat Vijay?

○ 45 m

○ 50 m

○ 90 m

● 30 m

Question 38

1 Point

How many tiles whose length and breadth are 12 cm and 5 cm respectively will be needed to fit in a rectangular region whose length and breadth are respectively 144 cm and 100 cm?

- ○ 160
- ● 240
- ○ 360
- ○ 480

Question 39*

DEPARTMENT
Multiple options may be correct

- ☐ **EEE**
- ☐ **OTHERS**
- ☐ **CIVIL**
- ☐ **MECH**
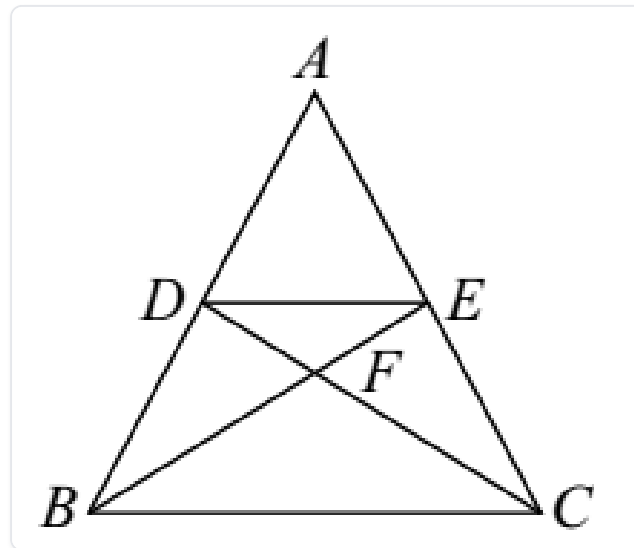- ☑ **ECE**

Question 40

1 Point

A loan was repaid in two annual instalments of Rs. 121 each. if the rate of interest be 10% per annum. compounded annually, the sum borrowed was ?

◉ Rs.210

○ Rs.280

○ Rs.200

○ Rs.217

Question 41   1 Point

In the given figure DE∥BC and AD : DB = 5 : 4,
Then ar(ΔDFE)/ar(ΔCFB)

◉ 25/16

○ 16/25

○ 25/81

○ 16/81

Question 42*

NAME

DHADATH K

Question 43   1 Point

A rectangular garden has a four-metre-wide road along all the four sides. The area of the road is 1104 sq metre. What is the sum of the length and the breadth of the garden?

● 130 m

○ 120 m

○ 125 m

○ 144 m

Question 44*

EMAIL ID

bharaththalavai171@gmail.com