

## • Question No. 1

The selling price of one article after allowing a discount of 15% on its cost price, is the same as the selling price of another article after allowing a discount of 25%

**Options :**

1. 255
2. 250
3. 280
4. 340
- 5.

Answer : 255

## • Question No. 2

A conical tent has to accommodate 25 persons. Each person must have  $4 \text{ m}^2$  of space of the ground and  $80 \text{ m}^3$  of air to breathe. Find the height of the tent.

**Options :**

1. 40 m
2. 50 m
3. 45 m
4. 60 m
- 5.

Answer : 60 m

## • Question No. 3

If  $x - \frac{3}{x} = 6$ ,  $x \neq 0$ , then the value of  $(x^4 - \frac{27}{x^2}) / (x^2 - 3x - 3)$  is:

**Options :**

1. 54
2. 270
3. 90
4. 80
- 5.

Answer : 90

• Question No. 4

Ramesh started a business investing a sum of 40,000. Six months later, Kevin joined by investing 20,000. If they make a profit of 10,000 at the end of the year, how much is the share of Kevin?

Options :

1. 2,000
2. 3,000
3. 2,500
4. 4,000
- 5.

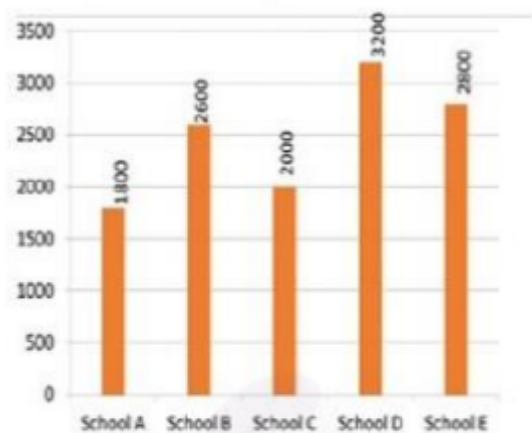
Answer : 2,000

• Question No. 5

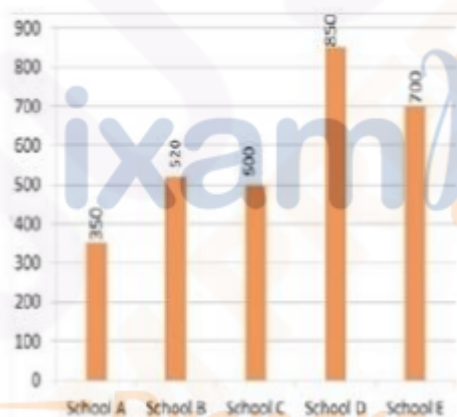
Study the following bar graph and answer the questions given below.

Total number of boys and girls in schools A, B, C, D and E.

**Section : Quantitative abilities**



**Difference between the number of boys and girls in schools A, B, C, D and E.**



What is the difference between the number of girls in school A and the number of girls in school C?

**Options :**

1. 25
2. 35
3. 30
4. 20
- 5.

Answer : 25

A and B can do a work together in 18 days. A is three times as efficient as B. In how many days can B alone complete the work?

**Options :**

1. 72 days
2. 64 days
3. 60 days
4. 54 days
- 5.

Answer : 72 days

• Question No. 7

A sum of 1,50,000 is distributed among three persons – A, B and C – so that they receive 20%, 30% and 50%, respectively. A receives the same amount from another sum of money which is distributed among them so that they receive 50%, 30% and 20%, respectively. Find the total amount received from both sums of money, by B.

**Options :**

1. 63,000
2. 55,000
3. 58,000
4. 58,000
- 5.

Answer : 63,000

• Question No. 8

If  $x^2 + 1/x^2 = 7$ , then the value of  $x^3 + 1/x^3$  where  $x > 0$  is equal to:

**Options :**

1. 18
2. 16

3. 12

4. 15

5.

Answer : 18

• Question No. 9

A and B together can do a piece of work in 12 days. A alone can do it in 18 days. In how many days B alone can do the work?

**Options :**

1. 32 days

2. 36 days

3. 30 days

4. 24 days

5.

Answer : 36 days

• Question No. 10

A container contains 20 L mixture in which there is 10% sulphuric acid. Find the quantity of sulphuric acid to be added in it to make the solution to contain 25% sulphuric acid.

**Options :**

1. 4L

2. 2L

3. 5L

4. 3L

5.

Answer : 4L

- Question No. 11

Find the number of prime factors in the product  $(30)^5 \times (24)^5$ .

**Options :**

1. 30
2. 45
3. 10
4. 35
- 5.

Answer : 35

- Question No. 12

A, B and C can do a work separately in 18, 36 and 54 days, respectively. They started the work together, but Band C left 5 days and 10 days, respectively, before the completion of the work. In how many days was the work finished?

**Options :**

1. 15 days
2. 12 days
3. 14 days
4. 13 days
- 5.

Answer : 13 days

- Question No. 13

An umbrella is marked for 150 and sold for 138. The rate of discount is:

**Options :**

1. 6%
2. 9%

3. 8%

4. 5%

5.

Answer : 8%

• Question No. 14

A man walks at a speed of 8 km/h. After every kilometer, he takes a rest for 4 minutes. How much time will he take to cover a distance of 6 km?

**Options :**

1. 70 minutes

2. 65 minutes

3. 60 minutes

4. 69 minutes

5.

Answer : 65 minutes

• Question No. 15

A divisor is 15 times the quotient and 3 times the remainder. If the remainder is 40, find the dividend.

**Options :**

1. 750

2. 600

3. 1000

4. 900

5.

Answer : 1000

• Question No. 16

The ratio of boys and girls in a school is 27 : 23. If the difference between the number of boys and girls is 200, then find the number of boys.

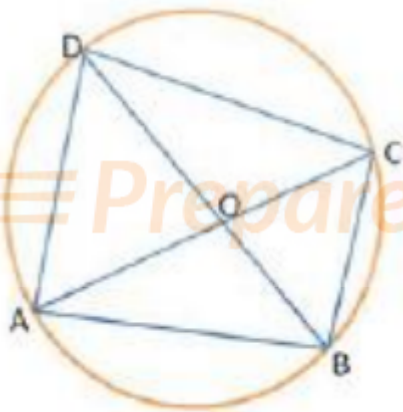
**Options :**

1. 1350
2. 1300
3. 1250
4. 1200
- 5.

Answer : 1350

• Question No. 17

A cyclic quadrilateral ABCD is such that  $AB = BC$ ,  $AD = DC$  and AC and BD intersect at O. If  $\angle CAD = 46^\circ$ , then the measure of  $\angle AOB$  is equal to:



**Options :**

1.  $80^\circ$
2.  $84^\circ$
3.  $86^\circ$
4.  $90^\circ$
- 5.

Answer :  $90^\circ$



- Question No. 18

The radius and height of a cylinder are in the ratio 4 : 7 and its volume is 2816 cm<sup>3</sup>. Find its radius. (Take  $\pi = 22/7$ )

**Options :**

1. 5 cm
2. 8 cm
3. 6 cm
4. 7 cm
- 5.

Answer : 8 cm

- Question No. 19

An athlete runs an 800 m race in 96 seconds. His speed (in km/h) is:

**Options :**

1. 25 km/h
2. 40 km/h
3. 40 km/h
4. 20 km/h
- 5.

Answer : 40 km/h

- Question No. 20

If  $\sin(x + y) = \cos(x - y)$ , then the value of  $\cos^2 x$  is:

**Options :**

1.  $\frac{1}{2}$
2. 5
3.  $\frac{1}{4}$

4. 3

5.

Answer :  $\frac{1}{2}$ 

## • Question No. 21

In a triangle ABC, D is a point on BC such that  $\frac{AB}{AC} = \frac{BD}{DC}$ . If  $\angle B = 68^\circ$  and  $\angle C = 52^\circ$ , then measure of  $\angle BAD$  is equal to:

**Options :**1.  $30^\circ$ 2.  $40^\circ$ 3.  $50^\circ$ 4.  $60^\circ$ 

5.

Answer :  $30^\circ$ 

## • Question No. 22

If  $a + b = 90^\circ$  and  $a = 2b$ , then the value of  $3 \cos 2a - 2 \sin 2b$  is equal to:

**Options :**1.  $\frac{4}{3}$ 2.  $\frac{3}{4}$ 3.  $\frac{3}{2}$ 4.  $\frac{1}{4}$ 

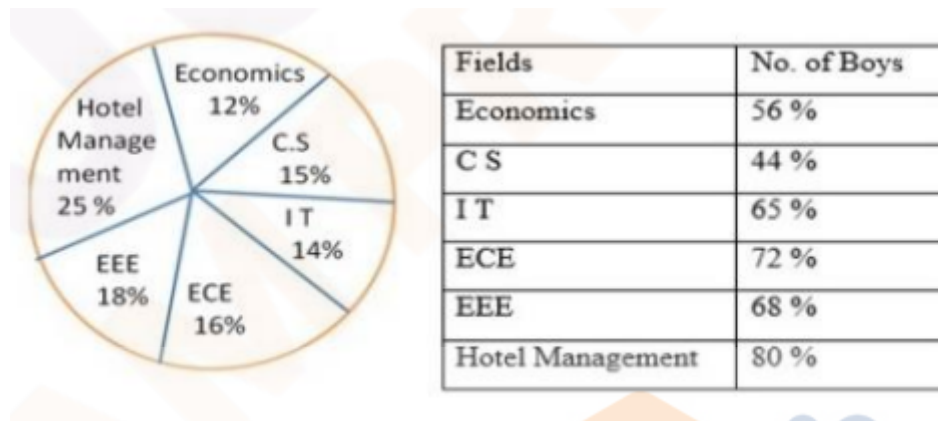
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Answer :  $\frac{1}{4}$ 

## • Question No. 23

Study the following pie-chart and table to answer the questions numbered 95 to 97. Total number of students admitted in a university in various fields = 5000

Distribution of the number of students into various fields:



What is the average number of boys in CS, ECE and EEE fields?

Options :

1. 506
2. 514
3. 516
4. 406
- 5.

Answer : 506

• Question No. 24

In an examination, 92% of the students passed and 480 students failed. If so, how many students appeared in the examination?

Options :

1. 6200
2. 5000
3. 5800
4. 6000

5.

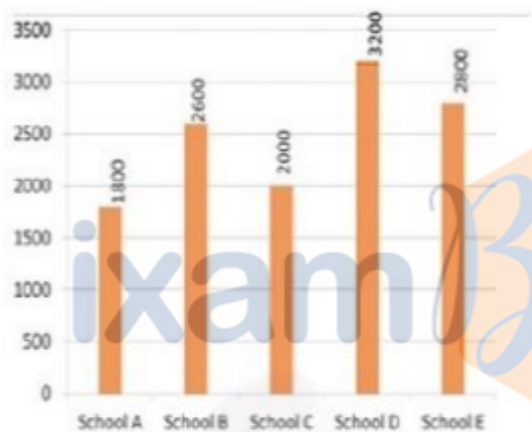
Answer : 6000

- Question No. 25

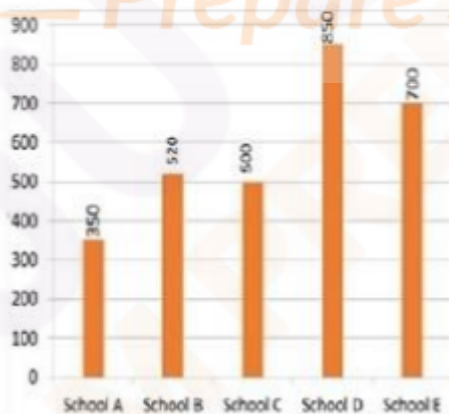
Study the following bar graph and answer the questions given below.

Total number of boys and girls in schools A, B, C, D and E.

**Section : Quantitative abilities**



**Difference between the number of boys and girls in schools A, B, C, D and E.**



What is the ratio of number of boys to the number of girls in school E?

**Options :**

1. 5 : 3

2. 4 : 3

3. 7 : 4

4. 5 : 4

5.

Answer : 5 : 3

• Question No. 26

The base of a pyramid is an equilateral triangle of side 10 m. If the height of the pyramid is  $40\sqrt{3}$  m, then the volume of the pyramid is:

Options :

1.  $1200 \text{ m}^3$

2.  $1000 \text{ m}^3$

3.  $900 \text{ m}^3$

4.  $800 \text{ m}^3$

5.

Answer :  $1000 \text{ m}^3$

• Question No. 27

At what rate of interest will a sum of 4,500 amount to 6,525 at simple interest for 5 years?

Options :

1. 9%

2. 8%

3. 12%

4. 10%

5.

Answer : 9%

• Question No. 28

If  $\sin q + \sin^2 q = 1$ , then the value of  $\cos^2 q + \cos^4 q$  is equal to:

**Options :**

1.  $\frac{1}{2}$
2. 5
3. 0
4. 1
- 5.

Answer : 1

• Question No. 29

If the radius of a cylinder is decreased by 20% and the height is increased by 20% to form a new cylinder, then the volume will be decreased by:

**Options :**

1. 22.3%
2. 20.5%
3. 32.2%
4. 23.2%
- 5.

Answer : 23.2%

• Question No. 30

If  $\sec q + \tan q = 3$ , then the value of  $\sec q$  is:

**Options :**

1.  $\frac{5}{3}$
2.  $\frac{3}{5}$

- 3.  $\frac{3}{4}$
- 4.  $\frac{4}{3}$
- 5.

Answer :  $\frac{5}{3}$

• Question No. 31

The numerator of a fraction is 6 less than its denominator. If the numerator is decreased by 1 and the denominator is increased by 5, then the denominator becomes 4 times the numerator. Find the fraction.

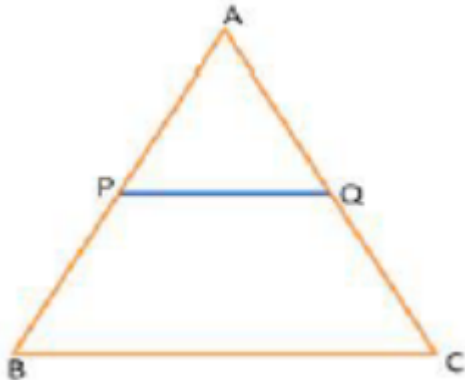
**Options :**

- 1.  $\frac{5}{11}$
- 2.  $\frac{4}{11}$
- 3.  $\frac{3}{11}$
- 4.  $\frac{7}{11}$
- 5.

Answer :  $\frac{5}{11}$

• Question No. 32

In a triangle ABC, P and Q are points on AB and AC, respectively, such that AP = 1 cm, PB = 3 cm, AQ = 1.5 cm, and CQ = 4.5 cm. If the area of  $\Delta$  APQ is  $12 \text{ cm}^2$ , then find the area of BPQC.



**Options :**

1.  $192 \text{ cm}^2$
2.  $182 \text{ cm}^2$
3.  $180 \text{ cm}^2$
4.  $190 \text{ cm}^2$
- 5.

Answer :  $180 \text{ cm}^2$

• Question No. 33

The value of  $5 - (8 + 2\sqrt{5})/4 - (1/8 + 2\sqrt{15})$  is equal to:

Options :

1.  $2/3$
2.  $1/4$
3.  $1/2$
4. 1
- 5.

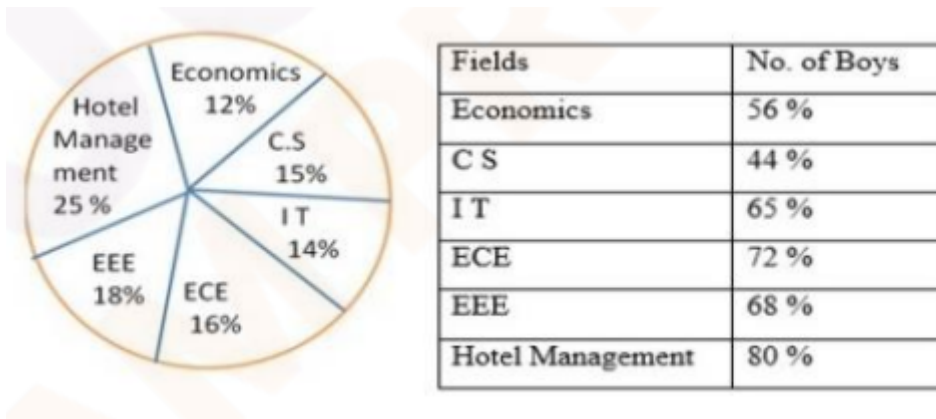
Answer : 1

• Question No. 34

Study the following pie-chart and table to answer the questions numbered 95 to 97. Total number of students admitted in a university in various fields = 5000

Distribution of the number of students into various fields:





What is the difference between the number of girls in IT and number of girls in ECE?

Options :

1. 21
2. 30
3. 25
4. 20
- 5.

Answer : 21

• Question No. 35

If  $a/b = 0.7$ , find the value of  $(a - b / a + b) + 11/34$ .

Options :

1. 0.5
2. 0.2
3. 0.3
4. 1
- 5.

Answer : 0.5

• Question No. 36

The curved surface area of a cylinder is five times the area of its base. Find the ratio of radius and height of the cylinder.

**Options :**

1. 3 : 4
2. 2 : 5
3. 2 : 3
4. 3 : 5
- 5.

Answer : 2 : 5

• Question No. 37

The ratio between the present ages of A and B is 3 : 5. If the ratio of their ages five years hence becomes 13 : 20, then the present age of B is:

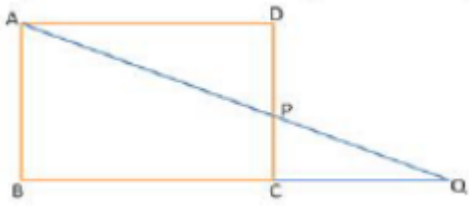
**Options :**

1. 40 years
2. 32 years
3. 35 years
4. 30 years
- 5.

Answer : 35 years

• Question No. 38

In the given figure, ABCD is a rectangle and P is a point on DC such that BC = 24 cm, DP = 10 cm, and CD = 15 cm. If AP produced intersects BC produced at Q, then find the length of AQ.



Options :

1. 24 cm
2. 39 cm
3. 35 cm
4. 26 cm
- 5.

Answer : 39 cm

• Question No. 39

If  $\sqrt{x} + (1/\sqrt{x}) = 3$ , then the value of  $x^3 + (1/x^3)$  is:

Options :

1. 322
2. 324
3. 326
4. 422
- 5.

Answer : 322

• Question No. 40

ABCD is a rhombus with  $\angle ABC = 52^\circ$ . The measure of  $\angle ACD$  is:

Options :

1.  $64^\circ$
2.  $54^\circ$

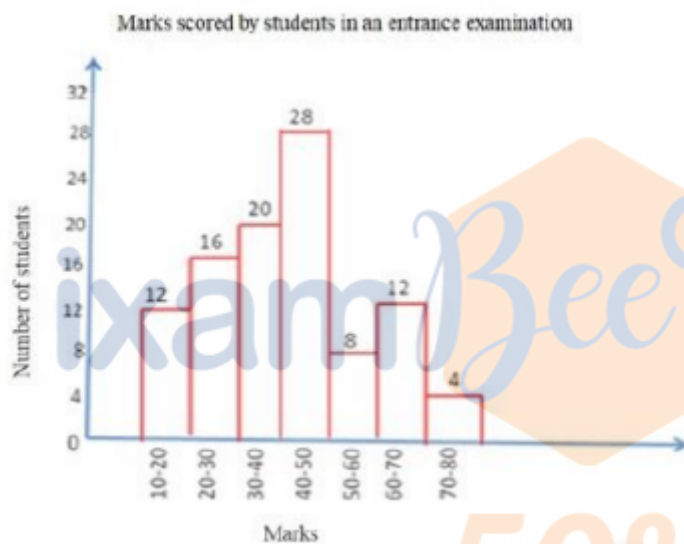
3.  $26^\circ$ 4.  $48^\circ$ 

5.

Answer :  $64^\circ$ 

## • Question No. 41

Study the following histogram and answer the given question.



What is the ratio of the number of students who scored 30 or more marks, but below 40 marks, to the total number of students in the entrance examination?

**Options :**

1. 1 : 5

2. 2 : 3

3. 3 : 5

4. 2 : 5

5.

Answer : 1 : 5

## • Question No. 42

If  $x + 16/x = 8$  then the value of  $x^2 + 32/x^2$  is :

**Options :**

1. 18
2. 20
3. 24
4. 16
- 5.

Answer : 18

• Question No. 43

The interior angle of a regular polygon exceeds its exterior angle by  $90^\circ$ . The number of sides of the polygon is:

**Options :**

1. 10
2. 8
3. 12
4. 6
- 5.

Answer : 8

• Question No. 44

The train ticket fare from places A to B in 2<sup>nd</sup> class AC and 3<sup>rd</sup> class AC is 2,500 and 2,000, respectively. If the fares of 2<sup>nd</sup> class AC and 3<sup>rd</sup> class AC are increased by 20% and 10%, respectively, then find the ratio of the new fares of 2<sup>nd</sup> class AC and 3<sup>rd</sup> class AC.

**Options :**

1. 15 : 13
2. 15 : 11
3. 13 : 11

4. 12 : 11

5.

Answer : 15 : 11

## • Question No. 45

Find the least number which when divided by 12, 18, 24 and 30 leaves 4 as remainder in each case, but when divided by 7 leaves to remainder.

**Options :**

1. 364

2. 634

3. 384

4. 366

5.

Answer : 364

## • Question No. 46

If  $\operatorname{cosec} 39^\circ = x$ , then the value of  $(1/\operatorname{cosec}^2 51^\circ) + \sin^2 39^\circ + \tan^2 51^\circ - (1/\sin^2 51^\circ \sec^2 39^\circ)$  is:

A.  $\sqrt{1-x^2}$

B.  $1-x^2$

C.  $x^2-1$

D.  $\sqrt{x^2-1}$

**Options :**

1. A

2. B

3. C

4. D

5.

Answer : C

## • Question No. 47

The average ages of Kishore, his wife and their child 6 years ago was 38 years and that of his wife and their child 8 years ago was 32 years. Find the present age of Kishore.

**Options :**

1. 52 years
2. 50 years
3. 55 years
4. 48 years
- 5.

Answer : 52 years

## • Question No. 48

The price of a variety of a commodity is 7/kg and that of another is 12/kg. Find the ratio in which two varieties should be mixed so that the price of the mixture is 10/kg.

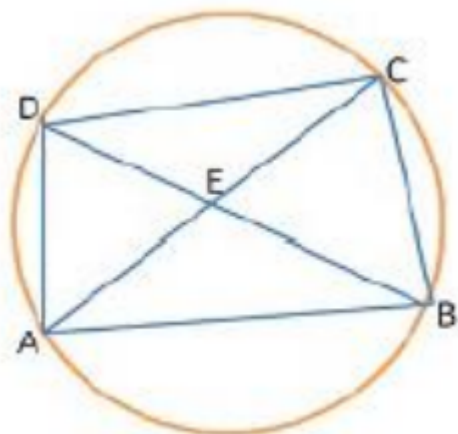
**Options :**

1. 4 : 5
2. 2 : 3
3. 2 : 5
4. 3 : 4
- 5.

Answer : 2 : 3

## • Question No. 49

In the given figure,  $\angle DBC = 65^\circ$ ,  $\angle BAC = 35^\circ$  and  $AB = BC$ , then the measure of  $\angle ECD$  is equal to:



Options :

1.  $65^\circ$
2.  $55^\circ$
3.  $50^\circ$
4.  $45^\circ$
- 5.

Answer :  $45^\circ$

• Question No. 50

If  $2 = x + \frac{1}{1 + \frac{1}{5 + \frac{1}{2}}}$ , then the value of x is

Options :

1.  $15/13$
2.  $13/15$
3.  $14/13$
4. 1
- 5.

Answer :  $15/13$



- Question No. 51

The average of five positive numbers is 56. If the first number is three-fourth of the sum of the last four numbers, then the average of the last four numbers is:

**Options :**

1. 40
2. 50
3. 30
4. 35
- 5.

Answer : 40

- Question No. 52

If  $x = \sqrt{(-\sqrt{3}) + \sqrt{(3+8)} - \sqrt{(7+4)} - \sqrt{3}}$  where  $x > 0$ , then the value of  $x$  is equal to:

**Options :**

1. 3
2. 2
3. 4
4. 1
- 5.

Answer : 2

- Question No. 53

A man sells two articles at 9,975 each. He gains 5% on one article and loses 5% on the other. Find his overall gain or loss.

**Options :**

1. Profit 50

2. Loss 50
3. Loss 60
4. Profit 60
- 5.

Answer : Loss 50

• Question No. 54

The graphs of the linear equations  $4x - 2y = 10$  and  $4x + ky = 2$  intersect at a point  $(a, 4)$ . The value of  $k$  is equal to:

**Options :**

1. 4
2. -3
3. -4
4. 3
- 5.

Answer : -4

• Question No. 55

A man travelled a distance of 42 km in 5 hours. He travelled partly on foot at the rate of 6 km/h and partly on bicycle at the rate of 10 km/h. The distance travelled on foot is:

**Options :**

1. 12 km
2. 15 km
3. 18 km
4. 10 km
- 5.

Answer : 12 km

- Question No. 56

Rahul invested equal sums of money at compound interest under two schemes A and B. Under scheme A, the interest rate was 10% per annum and under scheme B, the interest rate was 12% p.a. The compound interest after two years on the sum invested in scheme A was 1,050. How much is the interest earned under scheme B after two years, if the interest is compounded annually in both schemes?

**Options :**

1. 1,722
2. 1,272
3. 1,372
4. 1,270
- 5.

Answer : 1,272

- Question No. 57

What is to be added to 15% of 180 so that the sum is equal to 20% of 360?

**Options :**

1. 60
2. 50
3. 45
4. 40
- 5.

Answer : 45

- Question No. 58

In a triangle ABC,  $AB = AC$  and the perimeter of  $\triangle ABC$  is  $8(2 + \sqrt{2})$  cm. If the length of BC is  $\sqrt{2}$  times the length of AB, then find the area of  $\triangle ABC$ .

**Options :**

1.  $32 \text{ cm}^2$
2.  $28 \text{ cm}^2$
3.  $36 \text{ cm}^2$
4.  $16 \text{ cm}^2$
- 5.

Answer :  $32 \text{ cm}^2$

• Question No. 59

The sum of weights of A and B is 80 kg. 50% of A's weight is  $\frac{5}{6}$  times the weight of B. Find the difference between their weights.

**Options :**

1. 10 kg
2. 25 kg
3. 20 kg
4. 15 kg
- 5.

Answer : 20 kg

• Question No. 60

If A's income is 60% less than B's income, then B's income is what percentage more than that of A's income?

**Options :**

1. 80%
2. 120%
3. 150%
4. 40%
- 5.

Answer : 150%

• Question No. 61

What is the reflection of the point (5, -3) in the line  $y = 3$ ?

**Options :**

1. (-5, 3)
2. (5, 9)
3. (5, 3)
4. (5, -6)
- 5.

Answer : (5, 9)

• Question No. 62

If the surface area of a sphere is  $1386 \text{ cm}^2$ , then its volume is: (Take  $\pi = \frac{22}{7}$ )

**Options :**

1.  $8451 \text{ cm}^3$
2.  $4851 \text{ cm}^3$
3.  $5418 \text{ cm}^3$
4.  $4581 \text{ cm}^3$
- 5.

Answer :  $4851 \text{ cm}^3$

• Question No. 63

The number of lead balls, each 3 cm in diameter, that can be made from a solid lead sphere of diameter 42 cm is:

**Options :**

1. 7244

2. 2744
3. 2742
4. 4722
- 5.

Answer : 2744

• Question No. 64

A and B can do a piece of work in 18 days. B and C together can do it in 30 days. If A is twice as good a workman as C, find in how many days B alone can do the work?

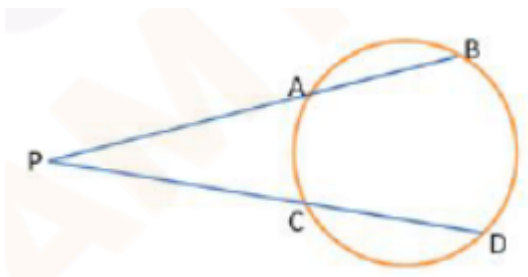
Options :

1. 100 days
2. 90 days
3. 80 days
4. 75 days
- 5.

Answer : 90 days

• Question No. 65

In the figure, chords AB and CD of a circle intersect externally at P. If  $AB = 4$  cm,  $CD = 11$  cm and  $PD = 15$  cm, then the length of PB is:



Options :

1. 8 cm

- 2. 12 cm
- 3. 14 cm
- 4. 10 cm
- 5.

Answer : 10 cm

• Question No. 66

Anil bought two articles A and B at a total cost of 10,000. He sold the article A at 15% profit and the article B at 10% loss. In the whole deal, he made no profit or no loss. Find the selling price of the article A.

Options :

- 1. 4,600
- 2. 5,400
- 3. 4,200
- 4. 4,500
- 5.

Answer : 4,600

• Question No. 67

The volume of a hemisphere is  $2425 \left(\frac{1}{2}\right) \text{ cm}^3$ . Find its radius (Take  $\pi = \frac{22}{7}$ )

Options :

- 1. 9.5 cm
- 2. 10 cm
- 3. 10.5 cm
- 4. 12 cm
- 5.

Answer : 10.5 cm

## • Question No. 68

In how much time will the simple interest on a certain sum of money be  $\frac{6}{3}$  times of the sum at 20% per annum?

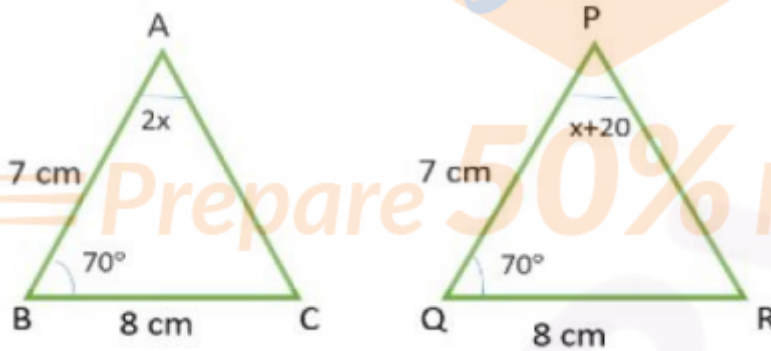
**Options :**

1. 6 years
2. 8 years
3. 7 years
4. 5 years
- 5.

Answer : 6 years

## • Question No. 69

In the given figure, the measure of  $\angle A$  is:



**Options :**

1.  $20^\circ$
2.  $40^\circ$
3.  $60^\circ$
4.  $50^\circ$
- 5.

Answer :  $40^\circ$



• Question No. 70

If  $(\sin q + \operatorname{cosec} q)^2 + (\cos q + \sec q)^2 = k + \tan^2 q + \cot^2 q$ , then the value of k is equal to:

**Options :**

1. 2
2. 7
3. 9
4. 5
- 5.

Answer : 7

• Question No. 71

A dealer sold an article at a loss of 2%. Had he sold it for 44 more, he would have gained 20%. Find the cost price of the article.

**Options :**

1. 200
2. 250
3. 400
4. 300
- 5.

Answer : 200

• Question No. 72

Find the sum of  $6 + 8 + 10 + 12 + 14 + \dots + 40$ .

**Options :**

1. 1600
2. 414

3. 424

4. 400

5.

Answer : 414

• Question No. 73

If  $1/4.263 = 0.2346$ , find the value of  $1/0.0004263$

**Options :**

1. 2346

2. 4.263

3. 2.346

4. 4263

5.

Answer : 2346

• Question No. 74

The length of the shadow of a vertical tower on level ground increases by 10 m when the altitude of the sun changes from  $45^\circ$  to  $30^\circ$ . The height of the tower is:

**Options :**

1.  $5(\sqrt{3} + 1)$ m

2.  $5\sqrt{3}$  m

3.  $10(\sqrt{3} + 1)$ m

4.  $10\sqrt{3}$  m

5.

Answer :  $5(\sqrt{3} + 1)$ m

• Question No. 75

If  $(\sec q + \tan q)/(\sec q - \tan q) = 2(51/79)$ , then the value of  $\sin q$  is equal to:

**Options :**

1.  $39/72$
2.  $65/144$
3.  $91/144$
4.  $35/72$
- 5.

Answer :  $65/144$

• Question No. 76

The sum of three numbers is 280. If the ratio between the first and second numbers is 2 : 3 and the ratio between second and third numbers is 4 : 5, then find the second number.

**Options :**

1. 90
2. 86
3. 80
4. 96
- 5.

Answer : 96

• Question No. 77

The ratio of the height and the diameter of a right circular cone is 6 : 5 and its volume is  $2200/7 \text{ cm}^3$ . What is its slant height? (Take  $\pi = 22/7$ )

**Options :**

1. 26 cm
2. 25 cm
3. 13 cm

4. 5 cm

5.

Answer : 13 cm

• Question No. 78

If  $3\sin x + 4\cos x = 2$ , then the value of  $3\cos x - 4\sin x$  is equal to:

**Options :**

1.  $\sqrt{23}$

2.  $\sqrt{29}$

3.  $\sqrt{21}$

4. 21

5.

Answer :  $\sqrt{21}$

• Question No. 79

If  $x(3 - 2/x) = 3/x$ , then the value of  $x^3 - 1/x^3$  is equal to:

**Options :**

1.  $8/27$

2.  $61/27$

3.  $62/27$

4.  $52/27$

5.

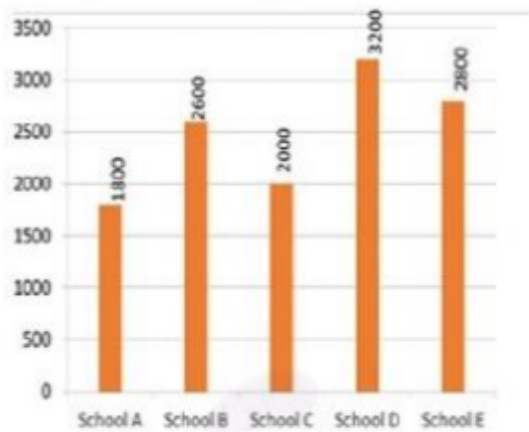
Answer :  $62/27$

• Question No. 80

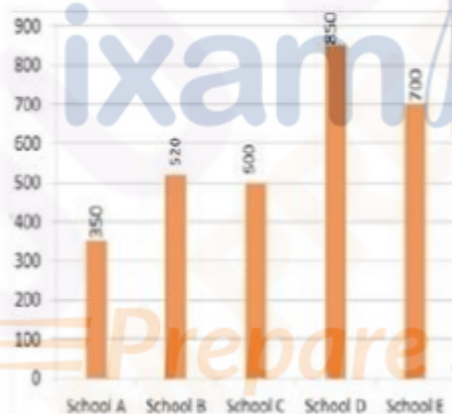
Study the following bar graph and answer the questions given below

Total number of boys and girls in schools A, B, C, D and E.

**Section : Quantitative abilities**



Difference between the number of boys and girls in schools A, B, C, D and E.



The number of boys in school B is what percentage of the total number of students in that school?

**Options :**

1. 60%
2. 40%
3. 50%
4. 55%
- 5.

Answer : 60%

- Question No. 81

An article is listed at 7,600 and the discount offered unit is 10%. What additional discount must be given to bring the net selling price to 5,814?

**Options :**

1. 10%
2. 8%
3. 15%
4. 12%
- 5.

Answer : 15%

- Question No. 82

The radii of two cylinders are in the ratio 3 : 4 and their heights are in the ratio 8 : 5. The ratio of their volumes is equal to:

**Options :**

1. 9 : 11
2. 9 : 10
3. 7 : 10
4. 8 : 9
- 5.

Answer : 9 : 10

- Question No. 83

A, B and C together invests 53,000 in a business. A invests 5,000 more than B and B invests 6,000 more than C. Out of a total profit of 31,800, find the share of A.

**Options :**

1. 12,800
2. 13,500
3. 13,800
4. 12,500
- 5.

Answer : 13,800

• Question No. 84

The sum of two positive numbers is 240 and their HCF is 15. Find the number of pairs of numbers satisfying the given condition.

Options :

1. 8
2. 2
3. 5
4. 4
- 5.

Answer : 4

• Question No. 85

The sum of length, breadth and height of a cuboid is 20 cm. If the length of the diagonal is 12 cm, then find the total surface area of cuboid.

Options :

1.  $364 \text{ cm}^2$
2.  $264 \text{ cm}^2$
3.  $356 \text{ cm}^2$
4.  $256 \text{ cm}^2$
- 5.

Answer :  $256 \text{ cm}^2$

- Question No. 86

In a triangle ABC, AB = 6 3 cm, AC = 12 cm and BC = 6 cm. Then measure Ð B is equal to:

**Options :**

1.  $70^\circ$
2.  $45^\circ$
3.  $90^\circ$
4.  $60^\circ$
- 5.

Answer :  $90^\circ$

- Question No. 87

If  $(8 + 2\sqrt{3}) / (3\sqrt{3} + 5) = a\sqrt{3} - b$ , then the value of  $a + b$  is equal to:

**Options :**

1. 16
2. 15
3. 18
4. 24
- 5.

Answer : 18

- Question No. 88

A delivery boy started from his office at 10 a.m. to deliver an article. He rode his scooter at a speed of 32 km/h. He delivered the article and waited for 15 minutes to get the payment. After the payment was made, he reached his office at 11.25 a.m., travelling at a speed of 24 km/h. Find the total distance travelled by the boy.

**Options :**

1. 32 km



- 2. 35 km
- 3. 40 km
- 4. 30 km
- 5.

Answer : 32 km

• Question No. 89

At what rate per cent per annum will a sum of 15,625 amount to 21,952 if the interest is compounded annually?

**Options :**

- 1. 8%
- 2. 9%
- 3. 10%
- 4. 12%
- 5.

Answer : 12%

• Question No. 90

Evaluate the following:

$$5 - [96 \div 4 \text{ of } 3 - (16 - 55 \div 5)]$$

**Options :**

- 1. 2
- 2. 3
- 3. 0
- 4. 4
- 5.

Answer : 2

- Question No. 91

The exterior angle obtained on producing the base of a triangle both the ways are  $121^\circ$  and  $104^\circ$ . What is the measure of the largest angle of the triangle?

**Options :**

1.  $74^\circ$
2.  $75^\circ$
3.  $66^\circ$
4.  $76^\circ$
- 5.

Answer :  $76^\circ$

- Question No. 92

The base of a right prism is a square having side of 15 cm. If its height is 8 cm, then find the total surface area.

**Options :**

1.  $900 \text{ cm}^2$
2.  $930 \text{ cm}^2$
3.  $920 \text{ cm}^2$
4.  $940 \text{ cm}^2$
- 5.

Answer :  $930 \text{ cm}^2$

- Question No. 93

Evaluate:  $\frac{1}{15} + \frac{1}{35} + \frac{1}{63} + \frac{1}{99} + \frac{1}{143}$ .

**Options :**

1.  $\frac{7}{39}$
2.  $\frac{10}{39}$

3.  $5/39$

4.  $4/39$

5.

Answer :  $5/39$

• Question No. 94

ABC is an equilateral triangle with side 12 cm and AD is the median. Find the length of GD if G is the centroid of D ABC.

**Options :**

1.  $3\sqrt{3}$  cm

2.  $4\sqrt{3}$  cm

3.  $6\sqrt{3}$  cm

4.  $2\sqrt{3}$  cm

5.

Answer :  $2\sqrt{3}$  cm

• Question No. 95

If  $(\cos^2 q) / (\cot^2 q - \cos^2 q) = 3$ , where  $0^\circ$

**Options :**

1.  $50^\circ$

2.  $60^\circ$

3.  $30^\circ$

4.  $45^\circ$

5.

Answer :  $60^\circ$

• Question No. 96

If the perimeter of an isosceles right triangle is  $8(\sqrt{2} + 1)$  cm, then the length of the hypotenuse of the triangle is:

**Options :**

1. 10 cm
2. 12 cm
3. 24 cm
4. 8 cm
- 5.

Answer : 8 cm

• Question No. 97

If  $\cos q = 5/13$ , then the value of  $\tan^2 q + \sec^2 q$  is equal to:

**Options :**

1. 233/25
2. 323/25
3. 313/25
4. 303/25
- 5.

Answer : 313/25

• Question No. 98

On selling 38 balls at 2,240, there is a loss equal to the cost price of 6 balls. The cost price of a ball is equal to:

**Options :**

1. 60
2. 70
3. 50
4. 80
- 5.

Answer : 70

• Question No. 99

In a two-digit number, its units digit exceeds its tens digit by 2 and that the product of the given number and the sum of its digits is equal to 460. The number is:

**Options :**

1. 48
2. 46
3. 36
4. 64
- 5.

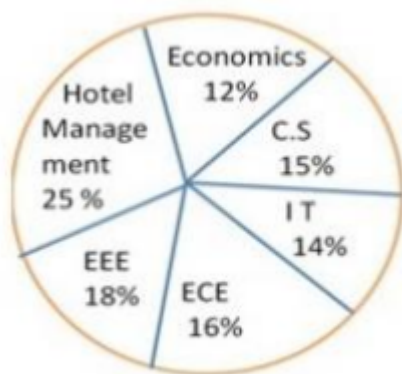
Answer : 46

• Question No. 100

Study the following pie-chart and table to answer the question

Total number of students admitted in a university in various fields = 5000

Distribution of the number of students into various fields:



Fields	No. of Boys
Economics	56 %
C S	44 %
I T	65 %
ECE	72 %
EEE	68 %
Hotel Management	80 %

The ratio of the number of boys in Economics to the number of students in Economics is:

**Options :**

1. 13 : 25

2. 12 : 25

3. 14 : 25

4. 17 : 25

5.

Answer : 14 : 25

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