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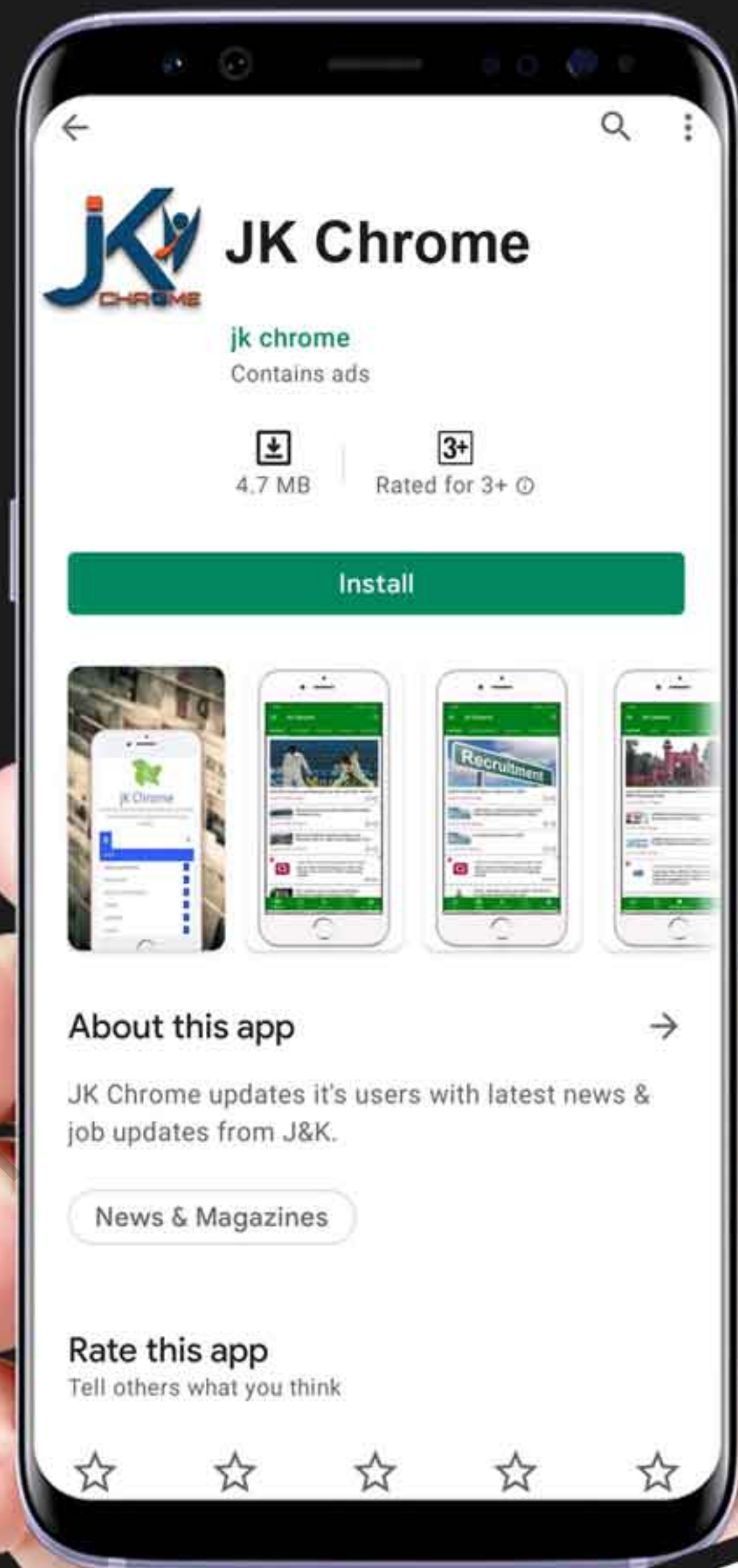
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# SSC CPO

## Quant

### Instructions

For the following questions answer them individually.

#### Question 1

If  $N = \left(\frac{\sqrt{7}}{\sqrt{7}} \frac{\sqrt{5}}{\sqrt{5}}\right)$ , then what is the value of  $\frac{1}{N}$ ?

A  $6 - \sqrt{35}$

B  $6 + \sqrt{35}$

C  $7 + \sqrt{35}$

D  $7 - \sqrt{35}$

Answer: B

#### Explanation:

Given:  $N = \frac{\sqrt{7}}{\sqrt{7}} \frac{\sqrt{5}}{\sqrt{5}}$

$\Rightarrow \frac{1}{N} = \frac{\sqrt{7}}{\sqrt{7}} \frac{\sqrt{5}}{\sqrt{5}}$

Rationalizing the denominator, we get:

$$\frac{\sqrt{7}}{\sqrt{7}} \frac{\sqrt{5}}{\sqrt{5}} \times \frac{\sqrt{7}}{\sqrt{7}} \frac{\sqrt{5}}{\sqrt{5}}$$

$$\frac{(\sqrt{7} \sqrt{5})^2}{(\sqrt{7} \sqrt{5})(\sqrt{7} \sqrt{5})}$$

$$\frac{7 \times 5}{7 \times 5} = \frac{2(\sqrt{7})(\sqrt{5})}{7 \times 5}$$

$$\frac{12}{2} = 6 + \sqrt{35}$$

$\Rightarrow$  Ans - (B)

#### Question 2

The sum of three consecutive even numbers is always divisible by \_\_\_\_.

A 12

B 6

C 18

D 24

Answer: B

#### Explanation:

Let the three consecutive even numbers be  $(2n - 2), (2n), (2n + 2)$

$\Rightarrow$  Sum of numbers  $(2n - 2) + (2n) + (2n + 2) = 6n$

Thus, the sum is always divisible by '6'

$\Rightarrow$  Ans - (B)

#### Question 3

How many positive factors of 24 are there?

- A 3
- B 4
- C 6
- D 8

Answer: D

**Explanation:**

Prime factorization of  $24 = (2)^3 \times (3)^1$

> Number of positive factors  $(3 + 1) \times (1 + 1)$

$$4 \times 2 = 8$$

> Ans - (D)

**Question 4**

4/5 part of a tank is filled with oil. After taking out 42 litres of oil the tank is 3/4 part full. What is the capacity (in litres) of the tank?

- A 420
- B 630
- C 840
- D 1680

Answer: C

**Explanation:**

Let capacity of tank =  $x$  litres

According to ques,

$$> \frac{4x}{5} - 42 = \frac{3x}{4}$$

$$> \frac{4x}{5} - \frac{3x}{4} = 42$$

$$> \frac{16x - 15x}{20} = 42$$

$$> x = 42 \times 20 = 840$$

∴ Capacity (in litres) of the tank = **840 litres**

> Ans - (C)

**Question 5**

What is the largest four digit number which is a perfect square?

- A 9704
- B 9801
- C 9901
- D 9999

Answer: B

**Explanation:**

9999 is the largest 4 digit number and  $100^2 = 10000$

This means that the closest square root of the largest perfect square is most likely 99. So  $99^2 = 9801$  is the largest perfect square of four digits.

> Ans - (B)

**Question 6**

Two inlet pipes can fill a cistern in 20 and 24 hours respectively and an outlet pipe can empty 160 gallons of water per hour. All the three pipes working together can fill the empty cistern in 40 hours. What is the capacity (in gallons) of the tank?

A 1200

B 2400

C 3600

D 1800

**Answer: B**

**Explanation:**

Let capacity of tank = L.C.M.(20,24,40) =  $120x$  gallons

1st inlet pipe can fill in 20 hours, ∴ 1st pipe's efficiency =  $\frac{120x}{20} = 6x$  gallons/hr

Similarly, 2nd pipe's efficiency =  $\frac{120x}{24} = 5x$  gallons/hr

Also, efficiency of 3rd outlet pipe =  $-160$  gallons/hr

According to ques,

$$> (6x + 5x - 160) \times 40 = 120x$$

$$> 11x - 160 = \frac{120x}{40} = 3x$$

$$> 11x - 3x = 160$$

$$> x = \frac{160}{8} = 20$$

∴ Capacity of tank =  $120 \times 20 = 2400$  gallons

> Ans - (B)

**Question 7**

P alone can complete the work in 5 days, Q alone can do same work in 6 days and R alone can do the same work in 12 days. They jointly complete the work and earn Rs 5400. What is the share of R?

A 1000

B 1200

C 1500

D 1800

**Answer: A**

**Explanation:**

Ratio of efficiencies of P:Q:R =  $\frac{1}{5} : \frac{1}{6} : \frac{1}{12}$

$$\frac{60}{5} : \frac{60}{6} : \frac{60}{12} = 12 : 10 : 5$$

∴ Share of R =  $\left(\frac{5}{12+10+5}\right) \times 5400$

$$5 \times 200 = \text{Rs. } 1000$$

> Ans - (A)

### Question 8

After giving two successive discounts of 20% and 25% a cycle is sold for Rs 4200. What is the marked price (in Rs) of the cycle?

- A 7200
- B 7000
- C 6500
- D 6200

**Answer: B**

#### Explanation:

Let marked price = Rs.  $100x$

Selling price after first discount of 20% =  $100x - \left(\frac{20}{100} \times 100x\right)$

$$100x - 20x = \text{Rs. } 80x$$

Similarly, selling price after second discount of 25% =  $80x - \left(\frac{25}{100} \times 80x\right)$

$$80x - 20x = \text{Rs. } 60x$$

According to ques,  $60x = 4200$

$$x = \frac{4200}{60} = 70$$

∴ Marked price =  $100 \times 70 = \text{Rs. } 7,000$

> Ans - (B)

### Question 9

The marked price of an article is 60% more than its cost price. What should be the discount (in %) offered by the shopkeeper so that he earns a profit of 12%?

- A 12
- B 25
- C 30
- D 60

**Answer: C**

#### Explanation:

Let cost price = Rs. 100

> Marked price =  $100 + \left(\frac{60}{100} \times 100\right)$

$$100 + 60 = \text{Rs. } 160$$

Also, profit % = 12%

> Selling price =  $100 + \left(\frac{12}{100} \times 100\right)$

$$100 + 12 = \text{Rs. } 112$$

∴ Discount % =  $\frac{(160 - 112)}{160} \times 100$

$$\frac{48}{160} = 30\%$$

> Ans - (C)

#### Question 10

The ratio of the speed of P, Q and R is 10 : 12 : 15 respectively. What is the ratio of the time taken by P, Q and R respectively to cover the same distance?

A 10 : 12 : 15

B 15 : 12 : 10

C 6 : 5 : 4

D 4 : 5 : 6

Answer: C

#### Explanation:

Speed is inversely proportional to time.

> Ratio of time taken  $\frac{1}{10} : \frac{1}{12} : \frac{1}{15}$

L.C.M.(10,12,15) = 60

$\frac{60}{10} : \frac{60}{12} : \frac{60}{15}$

6 : 5 : 4

> Ans - (C)

#### Question 11

Three bottles of equal capacity are containing a mixture of milk and water in ratio 2 : 1, 3 : 7 and 4 : 11 respectively. These three bottles are emptied into a large bottle. What is the ratio of milk and water respectively in this large bottle?

A 37 : 53

B 37 : 90

C 37 : 30

D 7 : 30

Answer: A

#### Explanation:

Let capacity of each bottle = L.C.M.(3,10,15) = 30 litres

> Milk in first bottle =  $\frac{2}{2+1} \times 30 = 20$  litres

and water in first bottle =  $30 - 20 = 10$  litres

Similarly, in 2nd bottle, milk = 9 litres and water = 21 litres

In 3rd bottle, milk = 8 litres and water = 22 litres

> Total quantity of milk =  $20 + 9 + 8 = 37$  litres

and water =  $10 + 21 + 22 = 53$  litres

∴ Required ratio = **37 : 53**

> Ans - (A)

**Question 12**

The average of 11 results is 182. If the average of first 6 results is 199 and that of the last 6 results is 161, then what will be the 6th result?

- A 79
- B 118.5
- C 158
- D 237

**Answer:** C

**Explanation:**

Average of 11 results = 182

> Sum of 11 results =  $182 \times 11 = 2002$

Similarly, sum of first 6 results =  $199 \times 6 = 1194$

And sum of last 6 results =  $161 \times 6 = 966$

∴ 6th result =  $(1194 + 966) - 2002 = 158$

> Ans - (C)

**Question 13**

The average of 45 results was calculated as 27 but later it was found that while calculating 39 was taken as 93 by mistake, then what will be the correct average?

- A 25.8
- B 26.8
- C 27.2
- D 28.2

**Answer:** A

**Explanation:**

Average of 45 results = 27

> Sum of 45 results =  $27 \times 45 = 1215$

After correcting the mistake new sum =  $1215 - 93 + 39 = 1161$

> Correct average =  $\frac{1161}{45} = 25.8$

> Ans - (A)

**Question 14**

A shopkeeper professes to sell his goods at cost price but uses a 960 gm weight instead of 1 kilogram weight. What is the profit percentage of the shopkeeper?

- A  $\frac{1}{46}$
- B  $\frac{1}{64}$
- C  $\frac{1}{57}$

D  $5\frac{1}{6}$ 

Answer: A

**Explanation:**

Let cost price of shopkeeper = Rs. 1000/kg &gt; Re. 1/gm

Selling price = Rs. 1000/960gm

$$> \text{Profit \%} = \left( \frac{1000}{960} - 1 \right) \times 100$$

$$\frac{40}{960} \times 100 = \frac{100}{24}$$

$$4\frac{1}{6}\%$$

&gt; Ans - (A)

**Question 15**

A person sold a book for Rs 21 and got a loss percentage which was numerically equal to the cost price. What is the cost price (in Rs) of the book?

A 30

B 70

C Both 30 and 70

D Cannot be determined

Answer: C

**Explanation:**

Selling price of book = Rs. 21

Let cost price = Rs.  $x$ 

$$> \text{Loss \%} = x\%$$

According to ques,

$$> \frac{(x - 21)}{x} \times 100 = x$$

$$> 100x - 2100 = x^2$$

$$> x^2 - 100x + 2100 = 0$$

$$> x^2 - 30x - 70x + 2100 = 0$$

$$> x(x - 30) - 70(x - 30) = 0$$

$$> (x - 30)(x - 70) = 0$$

$$> x = 30, 70$$

∴ Cost price (in Rs) of the book = Rs. 30 or 70

&gt; Ans - (C)

**Question 16**

If length of a rectangle is increased by 10% and breadth is increased by 15%, then what will be the percentage increase in the area of rectangle?

A 25.5

B 25

C 28.4



D 26.5

Answer: D

**Explanation:**

Let the length and breadth of the rectangle be 10 cm

$$\text{Area of rectangle} = 10 \times 10 = 100 \text{ cm}^2$$

After increasing the length by 10%, > New length  $10 + \left(\frac{10}{100} \times 10\right)$

$$10 + 1 = 11 \text{ cm}$$

Similarly, new breadth  $10 + \left(\frac{15}{100} \times 10\right)$

$$10 + 1.5 = 11.5 \text{ cm}$$

$$\text{> New area} = 11 \times 11.5 = 126.5 \text{ cm}^2$$

$$\therefore \text{Increase in area} = \frac{(126.5 - 100)}{100} \times 100 = 26.5\%$$

> Ans - (D)

**Question 17**

If the base of triangle is increased by 10% and height is decreased by 20%, then what will be the percentage change in the area of a triangle?

A 30

B 20

C 22

D 12

Answer: D

**Explanation:**

Let the base and height of the triangle be 10 cm

$$\text{Area of triangle} = \frac{1}{2} \times 10 \times 10 = 50 \text{ cm}^2$$

After increasing the base by 10%, > New base  $10 + \left(\frac{10}{100} \times 10\right)$

$$10 + 1 = 11 \text{ cm}$$

Similarly, new height  $10 - \left(\frac{20}{100} \times 10\right)$

$$10 - 2 = 8 \text{ cm}$$

$$\text{> New area} = \frac{1}{2} \times 11 \times 8 = 44 \text{ cm}^2$$

$$\therefore \text{Decrease in area} = \frac{(50 - 44)}{50} \times 100 = 12\%$$

> Ans - (D)

**Question 18**

A bus starts running with some initial speed and its speed increases every hour by 9 km/hr. If it takes 11 hours to cover a distance of 572 km, then what was the initial speed (in km/hr) of the bus?

A 3.5

B 7

C 10.5

D 14

Answer: B

**Explanation:**

Let  $n$  be the speed of bus  $x$  km/hr. Distance travelled in 1st hour

Speed after 1 hour  $(x + 9)$  km/hr. Distance travelled in 2nd hour and so on.

Similarly, distance travelled in 11th hour  $(x + 90)$  km

Total distance (using sum of an arithmetic series)  $\frac{11}{2} [(x) + (x + 90)] = 572$

$$> x + 45 = \frac{572}{11} = 52$$

$$> x = 52 - 45 = 7$$

$\therefore$  In the speed of bus **7 km/hr**

> Ans - (B)

**Question 19**

A boat goes 15 km upstream and 22 km downstream in 5 hours. It goes 20 km upstream and  $\frac{55}{2}$  km downstream in  $\frac{13}{2}$  hours. What is the speed (in km/hr) of stream?

A 3

B 5

C 8

D 11

Answer: A

**Explanation:**

Let speed of boat  $x$  km/hr and speed of stream  $y$  km/hr

> Downstream speed  $(x + y)$  km/hr and Upstream speed  $(x - y)$  km/hr

According to ques,

$$> \frac{15}{x - y} + \frac{22}{x + y} = 5$$

$$\text{and } \frac{20}{x - y} + \frac{27.5}{x + y} = 6.5$$

Let  $\frac{1}{x - y} = m$  and  $\frac{1}{x + y} = n$

$$> 15m + 22n = 5 \text{ and } 20m + 27.5n = 6.5$$

Solving above equations, we get:  $m = \frac{1}{5}$  and  $n = \frac{1}{11}$

Thus,  $x - y = 5$  and  $x + y = 11$

Subtracting both equations,  $> 2y = 11 - 5 = 6$

$$> y = \frac{6}{2} = 3$$

$\therefore$  Speed of stream **3 km/hr**

> Ans - (A)

**Question 20**

If a certain sum becomes 4 times in 4 years at compound interest, then in how many years, it will become 64 times?

- A 5
- B 12
- C 16
- D 24

**Answer: B**

**Explanation:**

Let principal sum be Rs.  $P$  and rate of interest  $r\%$

Amount under compound interest  $P(1 + \frac{r}{100})^T$

Thus, after 4 years

$$> P(1 + \frac{r}{100})^4 = 4P$$

$$> (1 + \frac{r}{100})^4 = 4$$

$$> (1 + \frac{r}{100}) = (4)^{\frac{1}{4}} \text{ ----- (1)}$$

Now, Let after  $t$  years sum becomes 64 times

$$> P(1 + \frac{r}{100})^t = 64P$$

$$> (4)^{\frac{t}{4}} = (4)^3$$

Comparing the exponents, we get :

$$> \frac{t}{4} = 3$$

$$> t = 4 \times 3 = 12 \text{ years}$$

> Ans - (B)

**Question 21**

What is the simple interest on Rs 7200 in 7 years at the rate of 14% per annum?

- A 6800
- B 6812
- C 7056
- D 7096

**Answer: C**

**Explanation:**

Principal sum Rs. 7200

Rate of interest 14% and time period 7 years

Simple interest  $\frac{P \times R \times T}{100}$

$$\frac{7200 \times 14 \times 7}{100}$$

$$72 \times 98 = \text{Rs. } 7056$$

> Ans - (C)

**Instructions**

The table given below shows the marks obtained by six students in five different subjects.

Student	Subject				
	P	Q	R	S	T
A	72	75	80	82	93
B	87	94	78	87	95
C	68	79	55	91	72
D	55	69	74	81	76
E	74	88	83	93	87
F	86	92	95	81	82

## Question 22

What are the total marks obtained by student D in all subjects?

- A 343
- B 355
- C 338
- D 362

Answer: B

## Explanation:

Total marks obtained by student D in all subjects

$$55 + 69 + 74 + 81 + 76 = 355$$

> Ans - (B)

## Question 23

What is the average of total marks obtained by all six students in subject R?

- A 77.5
- B 76.2
- C 93
- D 83.4

Answer: A

## Explanation:

Total marks obtained by all six students in subject R

$$80 + 78 + 55 + 74 + 83 + 95 = 465$$

$$> \text{Required average} = \frac{465}{6} = 77.5$$

> Ans - (A)

**Question 24**

What is the aggregate percentage of marks obtained by student C in all the five subjects?

- A 71
- B 75
- C 76
- D 73

**Answer:** D

**Explanation:**

Total marks obtained by student C

$$68 + 79 + 55 + 91 + 72 = 365$$

$$\text{Average marks} = \frac{365}{5} = 73$$

> Ans - (D)

**Question 25**

Marks obtained by student B is how much percent more than the marks obtained by A?

- A 8.3
- B 7.4
- C 9.7
- D 11.1

**Answer:** C

**Explanation:**

Total marks obtained by student A

$$72 + 75 + 80 + 82 + 93 = 402$$

Total marks obtained by student B

$$87 + 94 + 78 + 87 + 95 = 441$$

$$\text{Required \%} = \frac{(441 - 402)}{402} \times 100$$

$$\approx \frac{39}{4} = 9.7\%$$

> Ans - (C)

**Instructions**

For the following questions answer them individually

**Question 26**

The perimeter of base of a right circular cone is 88 cm. If the height of the cone is 48 cm, then what is the total surface area (in  $\text{cm}^2$ ) of the cone?

- A 2200
- B 1100

C 2354

D 2816

**Answer: D**

**Explanation:**

Let radius of cone =  $r$  cm and height  $h = 48$  cm

Perimeter of base  $2\pi r = 88$

$$> 2 \times \frac{22}{7} \times r = 88$$

$$> r = 88 \times \frac{7}{44} = 14 \text{ cm}$$

Slant height of cone  $l = \sqrt{r^2 + h^2}$

$$> l = \sqrt{196 + 2304} = \sqrt{2500}$$

$$> l = 50 \text{ cm}$$

$\therefore$  Total surface area of cone  $\pi r(r + l)$

$$\left(\frac{22}{7} \times 14\right)(14 + 50)$$

$$44 \times 64 = 2816 \text{ cm}^2$$

> Ans - (D)

**Question 27**

What is the length of the longest rod that can be placed in a room which is 3 metres long, 4 metres broad and 5 metres high?

A 5

B 12

C  $5\sqrt{2}$

D  $6\sqrt{2}$

**Answer: C**

**Explanation:**

Length  $l = 3$  m, Breadth  $b = 4$  m and Height  $h = 5$  m

Length (in metres) of the longest rod that can be placed in the room is its diagonal.

$$> \text{Diagonal } d = \sqrt{l^2 + b^2 + h^2}$$

$$> d = \sqrt{(3)^2 + (4)^2 + (5)^2}$$

$$> d = \sqrt{9 + 16 + 25} = \sqrt{50}$$

$$> d = 5\sqrt{2} \text{ m}$$

> Ans - (C)

**Question 28**

If the area of a square is 48, then what is the diagonal of the square?

A  $4\sqrt{6}$

B  $4\sqrt{3}$

C  $4\sqrt{2}$

D  $3\sqrt{6}$

Answer: A

**Explanation:**

Let side of square be  $s$  units and diagonal be  $d$  units

> Area  $s^2 = 48$

As so,  $d = \sqrt{s^2 + s^2} = \sqrt{2s^2}$

>  $d = \sqrt{2 \times 48} = \sqrt{96}$

>  $d = 4\sqrt{6}$

> Ans - (A)

**Question 29**

A cylindrical well of height 20 metres and radius 14 metres is dug in a field 72 metres long and 44 metres wide. The earth taken out is spread evenly on the field. What is the increase (in metre) in the level of the field?

A 6.67

B 3.56

C 5.61

D 4.83

Answer: D

**Explanation:**

Increase in the level of the field is the height of field (cuboidal shape) when volume of well (cylinder) is equal to the volume of field (cuboidal).

Radius of well  $R = 14$  m and height  $H = 20$  m

Length of field  $l = 72$  m and width  $b = 44$  m

Let height be  $h$  m

> Volume of cuboid = Volume of cylinder

Now, volume of cuboid = (Area of rectangle - Area of circle)  $\times$  height

>  $(lb - \pi R^2) \times h = \pi R^2 H$

>  $[(72 \times 44) - (\frac{22}{7} \times 14^2)] \times (h) = \frac{22}{7} \times (14)^2 \times 20$

>  $(3168 - 616)h = 44 \times 280$

>  $h = \frac{44 \times 280}{2552} \approx 4.83$  m

> Ans - (D)

**Question 30**

Radius of hemisphere is thrice than that of a sphere. What is the ratio of total surface area of hemisphere to that of sphere?

A 27 : 8

B 21 : 4

C 27 : 4

D 6 : 1

Answer: C

**Explanation:**

Let rad us of sphere  $r$  cm and rad us of hem sphere  $3r$  cm

$$\text{Rat o of surface area} = \frac{3\pi(3r)^2}{4\pi r^2}$$

$$\frac{27}{4}$$

> Ans - (C)

**Question 31**

If  $x + y = 4$ , then what is the value of  $x^3 + y^3 + 12xy$ ?

A 16

B 32

C 64

D 256

Answer: C

**Explanation:**

Given :  $x + y = 4$  -----()

Cub ng both sides, we get :

$$> (x + y)^3 = (4)^3$$

$$> x^3 + y^3 + 3xy(x + y) = 64$$

$$> x^3 + y^3 + 3xy(4) = 64$$

$$> x^3 + y^3 + 12xy = 64$$

> Ans - (C)

**Question 32**

If  $x^4 + \frac{1}{x^4} = 198$  and  $x > 0$ , then what is the value of  $x^2 - \frac{1}{x^2}$ ?

A 14

B  $2\sqrt{7}$

C  $10\sqrt{2}$

D 10

Answer: A

**Explanation:**

Given :  $x^4 + \frac{1}{x^4} = 198$

$$> (x^2 - \frac{1}{x^2})^2 + 2(x^2)(\frac{1}{x^2}) = 198$$

$$> (x^2 - \frac{1}{x^2})^2 = 198 - 2 = 196$$

$$> x^2 - \frac{1}{x^2} = \sqrt{196} = 14$$



> Ans - (A)

### Question 33

If  $3x - \frac{1}{3x} = 9$ , then what is the value of  $x^2 + \frac{x^2}{81}$ ?

A 7

B  $\frac{83}{9}$

C 11

D  $\frac{121}{9}$

Answer: B

### Explanation:

Given :  $3x - \frac{1}{3x} = 9$

Dividing both sides by 3,  $x - \frac{1}{9x} = 3$

Squaring both sides, we get :

$$\left(x - \frac{1}{9x}\right)^2 = (3)^2$$

$$x^2 + \frac{1}{81x^2} - 2\left(x\right)\left(\frac{1}{9x}\right) = 9$$

$$\left(x^2 + \frac{1}{81x^2}\right) - \frac{2}{9} = 9$$

$$\left(x^2 + \frac{1}{81x^2}\right) = 9 + \frac{2}{9}$$

$$\left(x^2 + \frac{1}{81x^2}\right) = \frac{83}{9}$$

> Ans - (B)

### Question 34

If  $x^3 - y^3 = 112$  and  $x - y = 4$ , then what is the value of  $x^2 + y^2$ ?

A 16

B 20

C 24

D 28

Answer: C

### Explanation:

Given :  $x^3 - y^3 = 112$  ----- (1)

Also,  $x - y = 4$  ----- (2)

Cubing both sides, we get :

$$(x - y)^3 = (4)^3$$

$$(x^3 - y^3) - 3(x)(y)(x - y) = 64$$

Substituting values from equations (1) and (2),

$$112 - 3xy(4) = 64$$

$$12xy = 112 - 64 = 48$$

$$xy = \frac{48}{12} = 4$$

Now, squaring equation (2), we get :

$$> x^2 + y^2 - 2xy = 16$$

$$> x^2 + y^2 = 16 + 8 = 24$$

> Ans - (C)

### Question 35

If  $x = 5 - \frac{1}{x}$ , then what is the value of  $x^5 + \frac{1}{x^5}$ ?

A 625

B 3125

C 2525

D 2500

Answer: C

Explanation:

Given :  $x = 5 - \frac{1}{x}$

$$> x + \frac{1}{x} = 5 = k$$

Now,  $x^5 + \frac{1}{x^5} = [(x^3 + \frac{1}{x^3}) \times (x^2 + \frac{1}{x^2})] - (x + \frac{1}{x})$

$$[(x + \frac{1}{x})^3 - 3(x + \frac{1}{x}) \times (x + \frac{1}{x})^2 - 2(x)(\frac{1}{x})] - (x + \frac{1}{x})$$

$$[(k^3 - 3k) \times (k^2 - 2)] - (k)$$

$$[(125 - 15) \times (25 - 2)] - (5)$$

$$(110 \times 23) - 5$$

$$2530 - 5 = 2525$$

> Ans - (C)

### Question 36

In  $\Delta ABC$ ,  $\angle A : \angle B : \angle C = 3 : 3 : 4$ . A line parallel to BC is drawn which touches AB and AC at P and Q respectively. What is the value of  $\angle AQP - \angle APQ$ ?

A 12

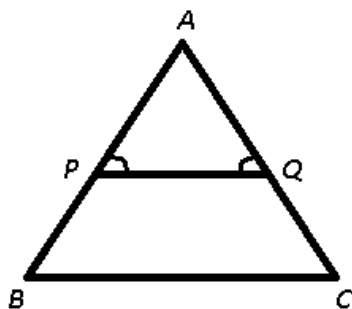
B 18

C 24

D 36

Answer: B

Explanation:



Given :  $\angle A : \angle B : \angle C = 3 : 3 : 4$  and  $PQ \parallel BC$

To find :  $\angle AQP - \angle APQ = ?$

Solution : Let  $\angle A = 3x$ ,  $\angle B = 3x$  and  $\angle C = 4x$

Thus, in  $\triangle ABC$ ,

$$\angle A + \angle B + \angle C = 180^\circ$$

$$3x + 3x + 4x = 180^\circ$$

$$x = \frac{180^\circ}{10} = 18^\circ$$

$\therefore PQ \parallel BC$ ,  $\angle APQ = \angle B$  and  $\angle AQP = \angle C$  (Corresponding angles)

$$\therefore \angle AQP - \angle APQ = 4x - 3x = x = 18^\circ$$

$\therefore$  Ans - (B)

### Question 37

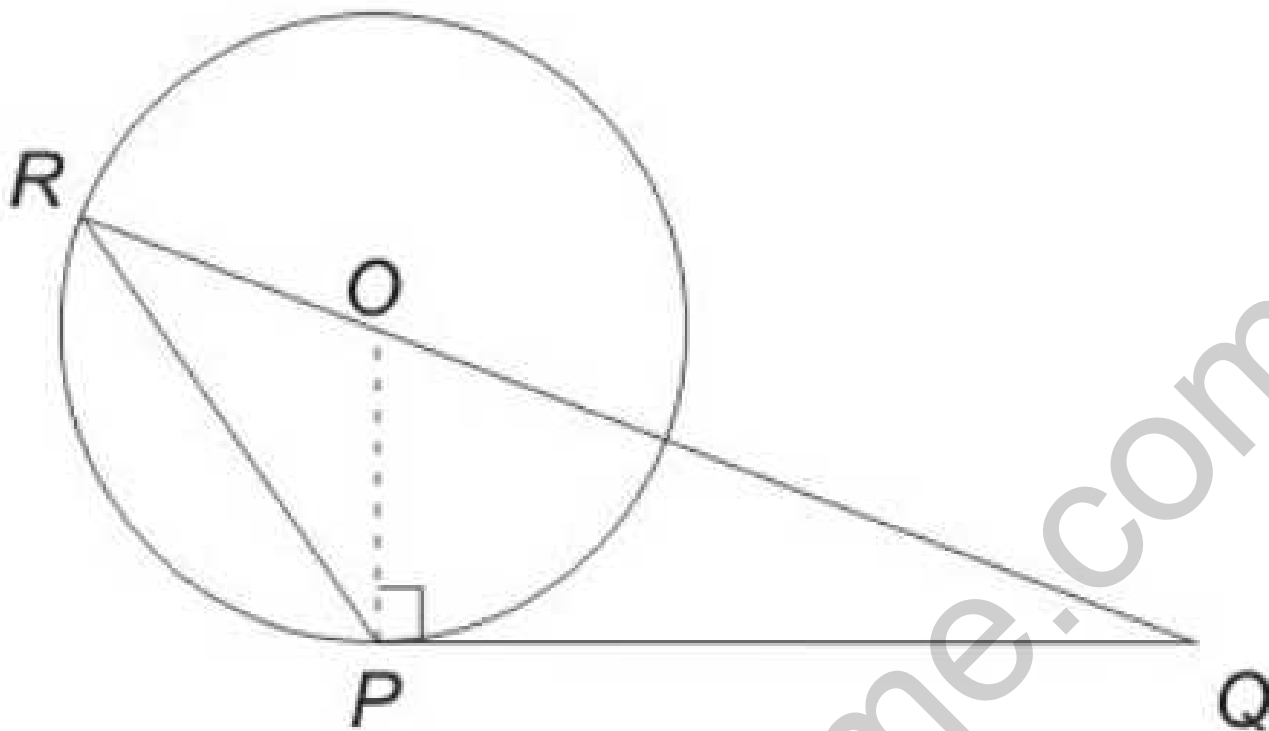
In the given figure, O is the center of the circle,  $\angle CAO = 35^\circ$ . What is the value (in degrees) of  $\angle AOB$ ?

- A 90
- B 110
- C 160
- D 130

Answer: C

Question 38

In the given figure,  $\triangle PQR$  is drawn such that  $PQ$  is tangent to a circle whose radius is 10 cm and  $QR$  passes through centre of the circle. Point  $R$  lies on the circle. If  $QR = 36$  cm, then what is the area (in  $\text{cm}^2$ ) of  $\triangle PQR$ ?



A 134.5

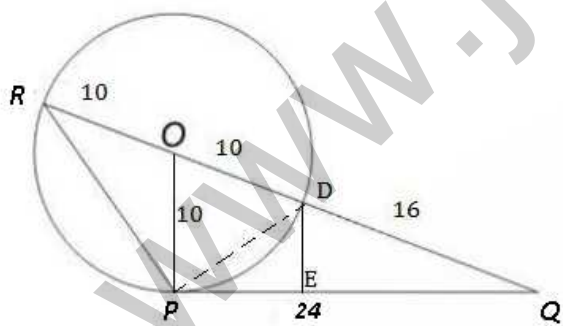
B 148

C 166.15

D 180

Answer: C

Explanation:



Given :  $OP = OR = 10$  cm and  $QR = 36$  cm

$\therefore OQ = 16$  cm and  $PQ = \sqrt{(26)^2 - (10)^2} = 24$  cm

Area of  $\triangle POQ = \frac{1}{2} \times (PQ) \times (OP)$

$$\frac{1}{2} \times 24 \times 10 = 120 \text{ cm}^2 \text{ -----}()$$

Now, draw  $DE \parallel OP$ , such that  $\triangle DEQ \sim \triangle OPQ$

$$\therefore \frac{DQ}{OQ} = \frac{DE}{OP}$$

$$\therefore DE = \frac{16}{26} \times 10 = \frac{80}{13} \text{ cm}$$

Thus, area of  $\triangle PDQ = \frac{1}{2} \times \frac{80}{13} \times 24 \approx 74 \text{ cm}^2$  -----( )

As so, in  $\triangle PRD$ ,  $OP$  is the median, thus  $ar(\triangle OPR) = ar(\triangle ODP)$

$$ar(\triangle POQ) - ar(\triangle PDQ)$$

Subtracting equation ( ) from ( ), we get :

$$> \text{Area of } \triangle DOP = 120 - 74 = 46 \text{ cm}^2 \text{ -----( )}$$

$\therefore$  Area of  $\triangle PQR = 120 + 46 \approx 166 \text{ cm}^2$  [ Adding equation ( ) and ( ) ]

> Ans - (C)

### Question 39

The side  $QR$  of  $\triangle PQR$  is produced to  $S$ . If  $\angle PRS = 105^\circ$  and  $\angle Q = \frac{1}{2}\angle P$ , then what is the value of  $\angle P$ ?

A 45

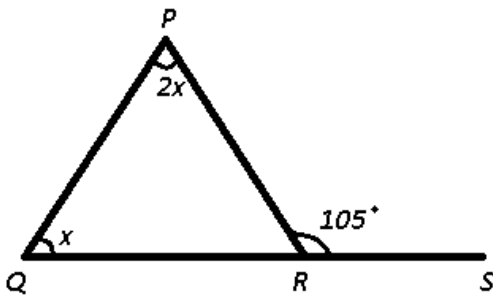
B 60

C 70

D 75

Answer: C

Explanation:



Let  $\angle Q = x$ ,  $\therefore \angle P = 2x$

Using exterior angle property in  $\triangle PQR$ ,

$$> \angle P + \angle Q = \angle PRS$$

$$> 2x + x = 105^\circ$$

$$> x = \frac{105^\circ}{3} = 35^\circ$$

$\therefore \angle P = 2 \times 35^\circ = 70^\circ$

> Ans - (C)

### Question 40

The perimeter of an isosceles triangle is 64 cm and each of the equal sides is  $\frac{5}{6}$  times the base. What is the area (in  $\text{cm}^2$ ) of the triangle?

A 169

B 192

C 196

D 184

Answer: B

**Explanation:**

Let the length of base =  $6x$  cm

> Length of each equal side =  $\frac{5}{6} \times 6x = 5x$  cm

> Perimeter =  $6x + 5x + 5x = 16x = 64$

>  $x = \frac{64}{16} = 4$

> Base  $b = 24$  cm and side  $a = 20$  cm

Now, height of an isosceles triangle  $h = \sqrt{(a)^2 - \left(\frac{b}{2}\right)^2}$

>  $h = \sqrt{(20)^2 - (12)^2}$

>  $h = \sqrt{400 - 144} = \sqrt{256} = 16$  cm

∴ Area of isosceles triangle =  $\frac{1}{2} \times (b) \times (h)$

$\frac{1}{2} \times 24 \times 16 = 192 \text{ cm}^2$

> Ans - (B)

**Question 41**

What is the simplified value of  $\sqrt{\frac{\sec^2\theta \operatorname{cosec}^2\theta}{4}}$  ?

A  $\operatorname{cosec} 2\theta$

B  $\sec 2\theta$

C  $\operatorname{cosec} \theta \sec \theta$

D  $\tan \theta$

**Answer: A**

**Explanation:**

Express on  $\sqrt{\frac{\sec^2\theta \operatorname{cosec}^2\theta}{4}}$

$$\sqrt{\frac{1}{(\cos^2\theta)} \cdot \frac{1}{(\sin^2\theta)}}$$

$$\sqrt{\frac{\sin^2\theta \cdot \cos^2\theta}{\sin^2\theta \cdot \cos^2\theta}}$$

$$\sqrt{\frac{1}{4\sin^2\theta \cos^2\theta}}$$

$$\sqrt{(2\sin\theta \cos\theta)^2}$$

$$\frac{1}{\sin 2\theta} = \operatorname{cosec} 2\theta$$

> Ans - (A)

**Question 42**

If  $\frac{x \tan^2 15^\circ}{1 + \tan^2 15^\circ} = \sin 60^\circ + \cos 30^\circ$ , then what is the value of  $x$ ?

A 2

B -1

C -2

D 1

Answer: A

Explanation:

$$\tan 15^\circ = \frac{\sqrt{3} - 1}{\sqrt{3} + 1}$$

Express on  $\frac{x \tan^2 15^\circ}{1 + \tan^2 15^\circ} = \sin 60^\circ + \cos 30^\circ$

$$> \frac{x(1 - \tan^2 15^\circ)}{1 + \tan^2 15^\circ} = \frac{\sqrt{3}}{2} + \frac{\sqrt{3}}{2}$$

$$> x \times \frac{1 - \left(\frac{\sqrt{3}-1}{\sqrt{3}+1}\right)^2}{1 + \left(\frac{\sqrt{3}-1}{\sqrt{3}+1}\right)^2} = \sqrt{3}$$

$$> x \times \frac{(\sqrt{3}-1)^2 - (\sqrt{3}+1)^2}{(\sqrt{3}-1)^2 + (\sqrt{3}+1)^2} = \sqrt{3}$$

$$> x \times \frac{(3 - 2\sqrt{3}) - (3 + 2\sqrt{3})}{(3 - 2\sqrt{3}) + (3 + 2\sqrt{3})} = \sqrt{3}$$

$$> x \times \frac{4\sqrt{3}}{8} = \sqrt{3}$$

$$> x = \frac{8}{4} = 2$$

&gt; Ans - (A)

Question 43

What is the simplified value of  $\frac{2\sin^3 \theta \sin \theta}{\cos \theta \cdot 2\cos^3 \theta}$ ?

A  $\tan \theta$ B  $\sin \theta$ C  $\cos \theta$ D  $\cot \theta$ 

Answer: A

Explanation:

Express on :  $\frac{2\sin^3 \theta \sin \theta}{\cos \theta \cdot 2\cos^3 \theta}$

$$\frac{\sin \theta (2\sin^2 \theta - 1)}{\cos \theta (2 - 2\cos^2 \theta)}$$

$$\frac{\sin \theta (\cos 2\theta)}{\cos \theta (\cos 2\theta)}$$

$$\frac{\sin \theta}{\cos \theta} = \tan \theta$$

&gt; Ans - (A)

Question 44

If  $\tan(\theta)\tan(5\theta) = 1$ , then what is the value of  $\sin 2\theta$ ?

A 0

B  $\frac{1}{2}$

C  $1\sqrt{2}$

D  $\frac{\sqrt{3}}{2}$

Answer: B

Explanation:

Given :  $\tan(\theta)\tan(5\theta) = 1$

Using,  $\tan(A + B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$

$$\tan(\theta + 5\theta) = \frac{\tan(\theta) + \tan(5\theta)}{1 - \tan(\theta)\tan(5\theta)}$$

$$> \tan(6\theta) = \frac{\tan(\theta) + \tan(5\theta)}{1 - 1}$$

$$> \tan(6\theta) = \infty$$

$$> \tan(6\theta) = \tan(90^\circ)$$

$$> 6\theta = 90^\circ$$

$$> \theta = \frac{90^\circ}{6} = 15^\circ$$

$$\therefore \sin(2\theta) = \sin(2 \times 15^\circ)$$

$$\sin(30^\circ) = \frac{1}{2}$$

> Ans - (B)

Question 45

The angles of elevation of the top of a building from the top and bottom of a tree are  $30^\circ$  and  $60^\circ$  respectively. If the height of the tree is  $50\text{m}$ , then what is the height of the building?

A  $50\sqrt{3}$

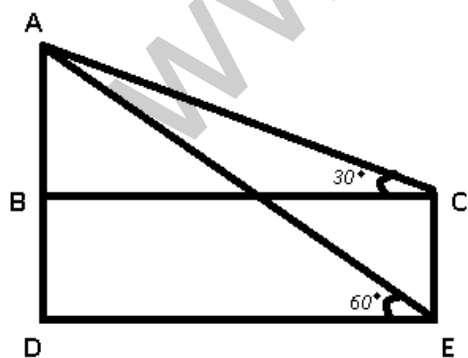
B 75

C  $50(\sqrt{3} + 1)$

D  $75\sqrt{3}$

Answer: B

Explanation:



AD is the building and CE is the tree, thus  $CE = BD = 50\text{ m}$

Let AB =  $x\text{ m}$  and DE = BC =  $y\text{ m}$

Also,  $\angle AED = 60^\circ$  and  $\angle ACB = 30^\circ$



$$\text{In } \triangle ADE, > \tan(\angle AED) = \frac{AD}{DE}$$

$$> \tan(60) = \sqrt{3} = \frac{x + 50}{y}$$

$$> y\sqrt{3} = x + 50$$

$$> y = \frac{x + 50}{\sqrt{3}} \text{ ----- (1)}$$

$$\text{In } \triangle ABC, > \tan(\angle ACB) = \frac{AB}{BC}$$

$$> \tan(30) = \frac{1}{\sqrt{3}} = \frac{x}{y}$$

$$> y = x\sqrt{3}$$

$$> \frac{x + 50}{\sqrt{3}} = x\sqrt{3} \quad \text{Using equation (1)}$$

$$> x + 50 = 3x$$

$$> 3x - x = 2x = 50$$

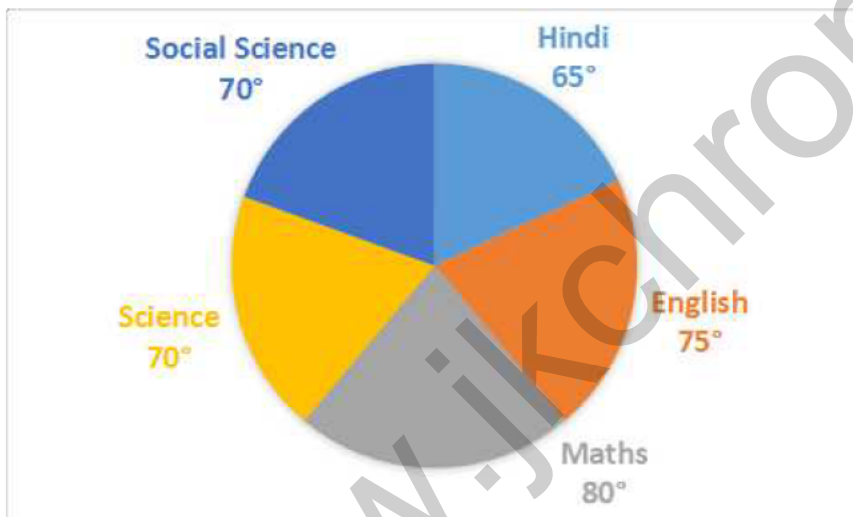
$$> x = \frac{50}{2} = 25$$

$$\therefore AD = AB + BD \quad x + y = 25 + 50 = 75 \text{ m}$$

> Ans - (B)

#### Instructions

The given pie chart shows the marks obtained (in degrees) by a student in different subjects. The total marks obtained by the student in the examination is 432.



#### Question 46

What is the total of marks obtained in Hindi and Maths?

- A 178
- B 172
- C 174
- D 182

Answer: C

#### Explanation:

Total marks in the examination = 432

Marks (in degree) obtained in Maths and Hindi together =  $80 + 65 = 145^\circ$

Marks obtained in Maths and Hindi together  $\frac{145}{360} \times 432$

$$145 \times 1.2 = 174$$

> Ans - (C)

#### Question 47

The marks obtained in science is what percentage of the total marks?

A 20.14

B 18.12

C 17.16

D 19.44

Answer: D

#### Explanation:

Marks (in degrees) obtained in Science  $70^\circ$

Total marks (in degrees)  $360^\circ$

$$> \text{Required \%} = \frac{70}{360} \times 100$$

$$\frac{700}{36} = 19.44\%$$

> Ans - (D)

#### Question 48

The marks obtained in Maths is how much percent more than the marks obtained in Social Science?

A 7.14

B 14.28

C 9.13

D 10.41

Answer: B

#### Explanation:

Marks (in degrees) obtained in Maths  $80^\circ$

Marks (in degrees) obtained in Social Science  $70^\circ$

$$> \text{Required \%} = \frac{(80 - 70)}{70} \times 100$$

$$\frac{100}{7} = 14.28\%$$

> Ans - (B)

#### Question 49

In how many subjects marks obtained are more than the average marks per subject?

A 3

B 1

C 2

D 4

Answer: C

**Explanation:**

Total marks in the exam = 432

Average marks per subject =  $\frac{432}{5} = 86.4$ 

Marks obtained in :

Hindi =  $\frac{65^\circ}{360^\circ} \times 432 = 78$ English =  $\frac{75^\circ}{360^\circ} \times 432 = 90$ Maths =  $\frac{80^\circ}{360^\circ} \times 432 = 96$ Science =  $\frac{70^\circ}{360^\circ} \times 432 = 84$ Social Science =  $\frac{70^\circ}{360^\circ} \times 432 = 84$ 

Thus, only in 2 subjects (English and Maths), marks obtained are more than the average marks per subject

&gt; Ans - (C)

**Question 50**

If the maximum marks per subject is 100, then what is the total marks (in percentage) obtained in English and Hindi together?

A 168

B 68

C 76

D 84

Answer: D

**Explanation:**

Total marks in the exam = 432

Marks (in degree) obtained in English and Hindi together =  $75 + 65 = 140^\circ$ Marks obtained in English and Hindi together =  $\frac{140^\circ}{360^\circ} \times 432 = 168$ ∴ Total marks (in percentage) obtained in English and Hindi together =  $\frac{168}{200} \times 100 = 84\%$ 

&gt; Ans - (D)

**Reasoning****Instructions**

In the following question, select the related word from the given alternatives.

**Question 51**

Tailor : Needle :: Woodcutter : ?

A Sword

B Ch se

C Axe

D P ough

**Answer: C**

**Explanation:**

Second s the pr mary too of f rst, a ta or uses a need e to st tch, s m ar y a woodcutter uses **axe** to cut wood.

> Ans - (C)

**Question 52**

**Scissors : Cloth :: Axe : ?**

A Stone

B Wood

C Hunt

D Vegetab es

**Answer: B**

**Explanation:**

F rst s used to cut second, a c oth s cut us ng a pa r of sc ssors, s m ar y **wood** s cut v a axe.

> Ans - (B)

**Instructions**

In the fo ow ng quest on, se ect the re ated etters from the g ven a ternat ves.

**Question 53**

**PQRS : QSUW :: ABCD : ?**

A BCDE

B BDHF

C BDGI

D BDFH

**Answer: D**

**Explanation:**

Express on PQRS : QSUW :: ABCD : ?

The pattern fo owed s :

P	Q	R	S
{+1}	{+2}	{+3}	{+4}
Q	S	U	W

S m ar y, for ABCD : **BDFH**

A	B	C	D
(+1)	(+2)	(+3)	(+4)
B	D	F	H

> Ans - (D)

#### Question 54

REKM : UHNP :: PKDL : ?

- A SNGO
- B SGNO
- C SNOG
- D MHAG

Answer: A

#### Explanation:

Express on REKM : UHNP :: PKDL : ?

The pattern followed is :

R	E	K	M
(+3)	(+3)	(+3)	(+3)
U	H	N	P

Similarly, for PKDL : **SNGO**

P	K	D	L
(+3)	(+3)	(+3)	(+3)
S	N	G	O

> Ans - (A)

#### Instructions

In the following question, select the related number from the given alternatives.

#### Question 55

5 : 26 :: 8 : ?

- A 63
- B 64
- C 65
- D 72

Answer: C

#### Explanation:

Express on 5 : 26 :: 8 : ?

The pattern followed is  $n : n^2 + 1$

Eg :-  $(5)^2 + 1 = 26$

Similarly,  $(8)^2 + 1 = 65$

> Ans - (C)

**Question 56**

5 : 125 :: 11 : ?

- A 1231
- B 1331
- C 1441
- D 1551

**Answer: B**

**Explanation:**

Express on 5 : 125 :: 11 : ?

The pattern followed is  $n : n^3$

Eg :-  $(5)^3 = 125$

Similarly,  $(11)^3 = 1331$

> Ans - (B)

**Instructions**

For the following questions answer them individually.

**Question 57**

In the following question, select the odd word from the given alternatives.

- A Almonds
- B Cashewnut
- C Walnut
- D Potato

**Answer: D**

**Explanation:**

Almonds, cashewnut and walnut are dry fruits, while **potato** is a vegetable, hence it is the odd one.

> Ans - (D)

**Question 58**

In the following question, select the odd word pair from the given alternatives.

- A Time : Seconds
- B Km/hr : Speed
- C Electric Current : Ampere
- D Temperature : Kelvin

**Answer: B**

**Explanation:**

Seconds is the S.I. unit of time, seconds is the unit of time, ampere of electric current and kelvin is the unit of Temperature, but **Km/hr** :

**Speed** s wr tten n reverse order, hence t s the odd one.

> Ans - (B)

**Instructions**

In the fo ow ng quest on, se ect the odd etters from the g ven a ternat ves.

**Question 59**

**A** BDGK

**B** XZCG

**C** TVYB

**D** NPSW

**Answer:** C

**Explanation:**

(A) : B (+2) D (+3) G (+4) K

(B) : X (+2) Z (+3) C (+4) G

(C) : T (+2) V (+3) Y (+3) B

(D) : N (+2) P (+3) S (+4) W

> Ans - (C)

**Question 60**

**A** RS

**B** VW

**C** CD

**D** TV

**Answer:** D

**Explanation:**

Apart from **TV**, a other pa rs are consecut ve etters from Eng sh a phabet ca ser es.

> Ans - (D)

**Instructions**

For the fo ow ng quest ons answer them nd v dua y

**Question 61**

In the following question, select the odd number from the given alternatives.

**A** 347

**B** 124

**C** 782

**D** 479

**Answer:** C

**Explanation:**

(A) :  $347 ; 3 + 7 = 10 - 4 = 6$

(B) :  $124 ; 1 + 4 = 5 - 2 = 3$

(C) :  $782 ; 7 + 2 = 9 - 8 = 1$

(D) :  $479 ; 4 + 9 = 13 - 7 = 6$

Except the third option, rest all are divisible by 3.

> Ans - (C)

#### Question 62

In the following question, select the odd number pair from the given alternatives.

A 41 - 43

B 61 - 67

C 71 - 73

D 83 - 97

Answer: D

#### Explanation:

Apart from the last option, rest all are consecutive pairs of prime numbers, but there is one prime number between 83 and 97, i.e. 89, hence this is the odd one.

> Ans - (D)

#### Instructions

Arrange the given words in the sequence in which they occur in the dictionary.

#### Question 63

1. Brain

2. Brand

3. Beep

4. Boxer

5. Boxed

A 35412

B 45312

C 34512

D 43512

Answer: A

#### Explanation:

As per the order of dictionary,

Beep -> Boxed -> Boxer -> Brain -> Brand

≡ 35412

> Ans - (A)



**Question 64**

1. Wrong
2. Write
3. West
4. Wind
5. Walk

- A 53412
- B 53421
- C 43512
- D 54312

**Answer:** B

**Explanation:**

As per the order of dictionary,

Walk -> West -> Wind -> Write -> Wrong

≡ 53421

> Ans - (B)

**Instructions**

A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.

**Question 65**

A, D, G, J, ?

- A N
- B O
- C M
- D L

**Answer:** C

**Explanation:**

The pattern followed is :

A (+3 letters) D (+3 letters) G (+3 letters) J (+3 letters) **M**

> Ans - (C)

**Question 66**

AB10, DF101, GJ290, ?

- A DE80
- B JM580
- C JN577
- D JN359

**Answer:** C

**Explanation:**

The pattern followed in each letter of the terms is :

1st etter : A (+3) D (+3) G (+3) J

2nd etter : B (+4) F (+4) J (+4) N

Number : A(1) and B(2)  $\equiv (1 + 2)^2 + 1 = 9 + 1 = 10$

DF;  $(4 + 6)^2 + 1 = 101$

GJ;  $(7 + 10)^2 + 1 = 290$

S m ar y, JN;  $(10 + 14)^2 + 1 = 577$

Thus, m ss ng term **JN577**

> Ans - (C)

### Instructions

In the fo ow ng quest on, se ect the m ss ng number from the g ven ser es.

### Question 67

1, 4, 13, 40, 121, ?

A 284

B 286

C 364

D 396

**Answer: C**

### Explanation:

Numbers of the form  $3^n$  are added, where  $n$  s natura number.

$1 + (3)^1 = 4$

$4 + (3)^2 = 13$

$13 + (3)^3 = 40$

$40 + (3)^4 = 121$

$121 + (3)^5 = 364$

> Ans - (C)

### Question 68

84, 42, 44, 22, 24, 12, ?

A 20

B 14

C 24

D 28

**Answer: B**

### Explanation:

The numbers are a ternat ve y d v ded and added by '2'

$84 \div 2 = 42$

$42 + 2 = 44$

$$44 \div 2 = 22$$

$$22 + 2 = 24$$

$$24 \div 2 = 12$$

$$12 + 2 = 14$$

> Ans - (B)

### Instructions

For the following questions answer them individually.

### Question 69

Amit's present age is  $\frac{5}{4}$  of his age at time of his sister's marriage. If his sister's marriage happened 5 years ago and his father's age was twice of Amit's age at that time, then what is his father's present age (in years)?

A 55

B 45

C 50

D 40

Answer: B

### Explanation:

Let Amit's age 5 years ago (at his sister's marriage) =  $4x$  years

Thus, father's age at that time =  $2 \times 4x = 8x$  years

> Amit's present age =  $\frac{5}{4} \times 4x = 5x$  years

As so, present age =  $4x + 5$

Hence,  $5x = 4x + 5$

>  $5x - 4x = x = 5$

$\therefore$  His father's present age =  $8(5) + 5 = 45$  years

> Ans - (B)

### Question 70

Six games are kept one on top of the other. Uno is just above Snakes & Ladders. The Monopoly is between Ludo and Chess. Carrom is between Uno and Ludo. Which game is between the Carrom and Monopoly games?

A Uno

B Chess

C Carrom

D Ludo

Answer: D

### Explanation:

Uno is just above Snakes & Ladders and Carrom is between Uno and Ludo,  $\therefore$  Carrom is just below Ludo and just above Uno.

The Monopoly is between Ludo and Chess,  $\therefore$  Monopoly is just above Ludo and Chess is at the top.

Chess
Monopoly
Ludo
Carrom
Unj
Snakes & Ladders

Thus, Ludo is between the Carrom and Monopoly games.

> Ans - (D)

#### Question 71

Present age of a father is 3 times that of his son. After 10 years the son's age will be 5 times of Raman's present age. If Raman celebrated his third birthday 2 years ago, then what is the present age (in years) of father?

- A 45
- B 40
- C 36
- D 39

Answer: A

#### Explanation:

Raman celebrated his third birthday 2 years ago, > Raman's present age = 5 years

Son's age after 10 years  $5 \times 5 = 25$  years

> Son's present age = 15 years

> Father's present age  $3 \times 15 = 45$  years

> Ans - (A)

#### Instructions

In the following question, select the word which cannot be formed using the letters of the given word.

#### Question 72

#### Precipitation

- A React on
- B Patent
- C Reacts
- D Petition

Answer: C

#### Explanation:

The word PRECIPITATION does not contain any 'S', thus the term **Reacts** cannot be formed.

> Ans - (C)

#### Question 73

#### Imprisonment

- A Person
- B Sonnet
- C Impression
- D Moment

**Answer: C**

**Explanation:**

The word IMPRISONMENT does not contain two S's, thus the term **Impression** cannot be formed.

> Ans - (C)

**Instructions**

For the following questions answer them individually

**Question 74**

In a certain code language, "BALL" is written as "27" and "CANE" is written as "23". How is "YELL" written in that code language?

- A 50
- B 39
- C 54
- D 61

**Answer: C**

**Explanation:**

The sum of the numbers corresponding to the respective alphabets.

BALL ;  $2 + 1 + 12 + 12 = 27$

CANE ;  $3 + 1 + 14 + 5 = 23$

YELL ;  $25 + 5 + 12 + 12 = 54$

> Ans - (C)

**Question 75**

In a certain code language, "RENTED" is written as "718314" and "SCARF" is written as "92576". How is "CARTED" written in that code language?

- A 257314
- B 962514
- C 237614
- D 759613

**Answer: A**

**Explanation:**

Codes for each letter is given :

C -> 2

A -> 5

R -> 7

T -> 3

E -> 1

D -> 4

Thus, CARTED : 257314

> Ans - (A)

### Question 76

In the following question, by using which mathematical operators will the expression become correct?  
 $7 ? 4 ? 5 ? 165 ? 5$

A  $\times, +,$  and  $\div$

B  $\times, \times,$  and  $+$

C  $\times, \div,$  and  $\div$

D  $+, +, \div$  and

**Answer: A**

#### Explanation:

Express on :  $7 ? 4 ? 5 ? 165 ? 5$

(A) :  $\times, +,$  and  $\div$

$$\equiv 7 \times 4 + 5 = 165 \div 5$$

$$\text{L.H.S. } (7 \times 4) + 5 = 33$$

$$\text{R.H.S. } \frac{165}{5} = 33$$

Thus, L.H.S. = R.H.S.

> Ans - (A)

### Question 77

In the following question, correct the equation by interchanging two signs.  
 $24 \times 8 \div 9 + 9 - 10 = 26$

A  $\div$  and  $-$

B  $\div$  and  $\times$

C  $\times$  and  $-$

D  $\times$  and  $+$

**Answer: B**

#### Explanation:

Express on :  $24 \times 8 \div 9 + 9 - 10 = 26$

(A) :  $\div$  and  $-$

$$\text{L.H.S. } 24 \times 8 - 9 + 9 \div 10$$

$$192 - 9 + 0.9 = 183.9 \neq \text{R.H.S.}$$

(B) :  $\div$  and  $\times$

$$\text{L.H.S. } 24 \div 8 \times 9 + 9 - 10$$

$$(3 \times 9) - 1 = 26 = \text{R.H.S.}$$

> Ans - (B)

**Question 78**

If 21 (49) 14 and 159 (169) 146, then what is the value of 'A' in 56 (A) 44?

- A 144
- B 121
- C 225
- D 256

**Answer: A**

**Explanation:**

The number in the middle is the square of the difference of the remaining two numbers.

$$\text{Eg :- } (21 - 14)^2 = (7)^2 = 49$$

$$\text{and } (159 - 146)^2 = (13)^2 = 169$$

$$\text{Similarly, } (56 - 44)^2 = (12)^2 = 144$$

> Ans - (A)

**Question 79**

If  $2^3 \# 4^3 @ 3^3 = 45$  and  $3^3 \# 5^3 @ 4^3 = 88$ , then  $4^3 \# 2^3 @ 1^3 = ?$

- A 48
- B 71
- C 56
- D 65

**Answer: B**

**Explanation:**

If we replace # with '+' and @ with '-', then we get the desired result.

$$\text{Eg :- } [(2)^3 + (4)^3] - (3)^3 = (8 + 64 - 27) = 45$$

$$\text{and } [(3)^3 + (5)^3] - (4)^3 = (27 + 125 - 64) = 88$$

$$\text{Similarly, } [(4)^3 + (2)^3] - (1)^3 = (8 + 64 - 1) = 71$$

> Ans - (B)

## Question 80

In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.

2	7	6
4	1	4
3	2	3
5	4	?

A 1

B 2

C 3

D 4

Answer: A

## Question 81

In the following question, select the number which can be placed at the sign of question mark (?) from the given alternatives.

2	4	6	26
5	3	1	35
2	3	?	23

A 7

B 8

C 9

D 10

Answer: D

**Explanation:**

In each row, the sum of squares of first two numbers and the third number is equal to the last number.

$$\text{Eg :- } (2)^2 + (4)^2 + 6 = (4 + 16 + 6) = 26$$

$$\text{and } (5)^2 + (3)^2 + 1 = (25 + 9 + 1) = 35$$

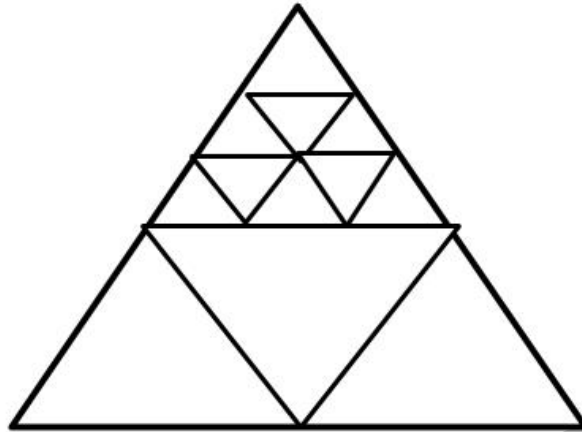
$$\text{Similarly, } (2)^2 + (3)^2 + x = 23$$

$$> x = 23 - 4 - 9 = 10$$

> Ans - (D)



Question 82



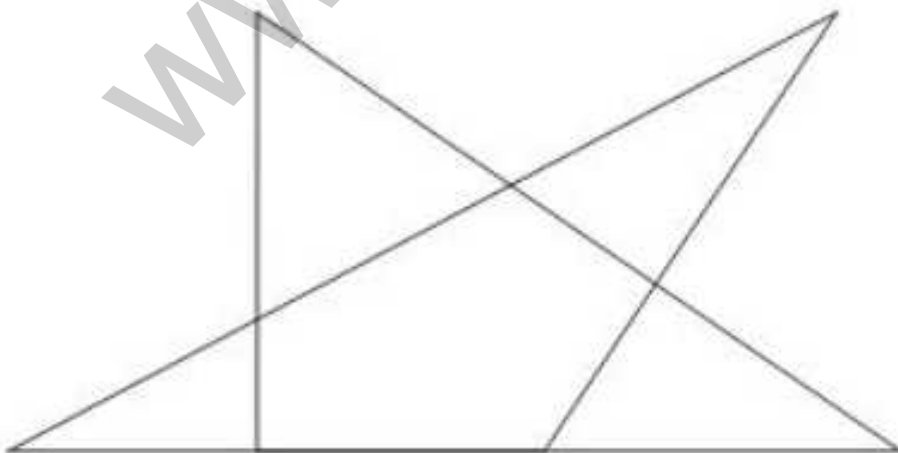
How many triangles are there in the given figure ?

- A 17
- B 15
- C 30
- D 19

Answer: B

Question 83

How many triangles are there in the given figure ?



- A 6

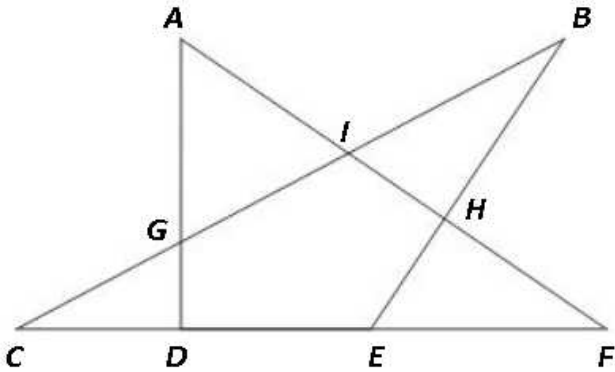
B 7

C 8

D 10

Answer: B

Explanation:



Small triangles:  $\triangle AGI$ ,  $\triangle CGD$ ,  $\triangle BIH$ ,  $\triangle HEF$

Big triangles:  $\triangle ADF$ ,  $\triangle BCE$ ,  $\triangle CFI$

Thus, total triangles = 7

> Ans - (B)

#### Instructions

In each of the following questions below are given some statements followed by some conclusions. Taking the given statements to be true even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusions logically follows the given statements.

#### Question 84

##### Statements:

I. All boys are smart.

II. All smart are thin.

##### Conclusions:

I. All boys are thin.

II. All smart are boys.

A Only conclusion (I) follows

B Only conclusion (II) follows

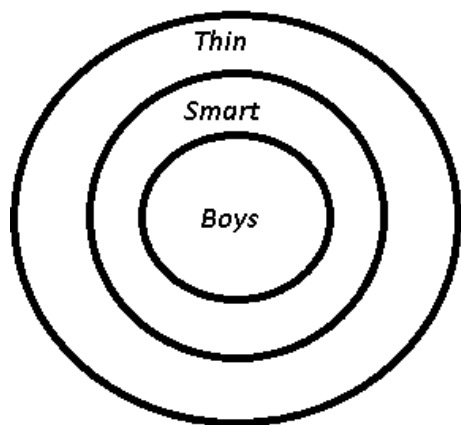
C Both conclusions follow

D Neither conclusion (I) nor conclusion (II) follows

Answer: A

#### Explanation:

The Venn diagram for above statements is:



Conclusions:

- I. All boys are thin true
- II. All smart are boys false

Thus, only conclusion (I) follows.

> Ans - (A)

#### Question 85

Statements:

- I. All cups are pencils.
- II. Some pencils are pens.

Conclusions:

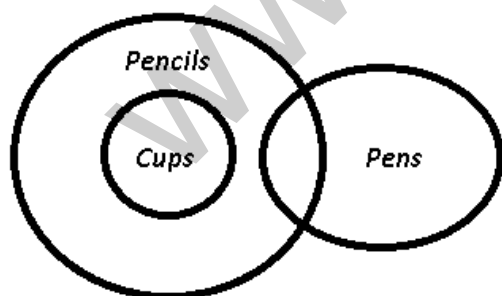
- I. Some pencils are cups.
- II. No pencil are cups.
- III. Some cups are pens.

- A Only conclusion (I) follows
- B Only conclusion (III) follows
- C Only conclusion (I) and (II) follow
- D Only conclusion (II) and (III) follow

Answer: A

Explanation:

The Venn diagram for above statements is:



Conclusions:

- I. Some pencils are cups true
- II. No pencil are cups false
- III. Some cups are pens false

Thus, only conclusion (I) follows.

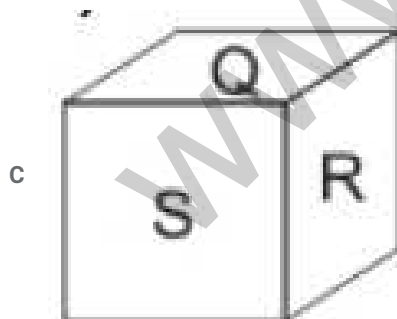
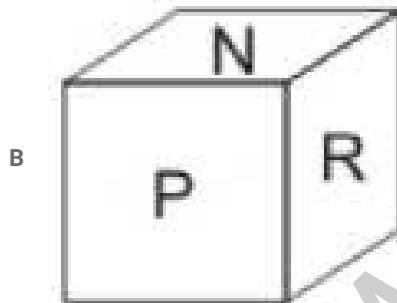
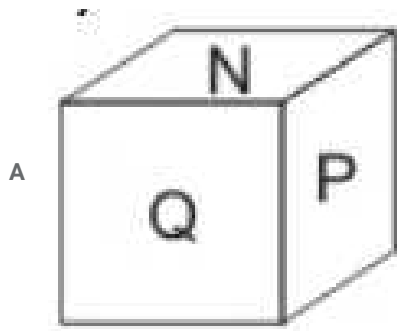
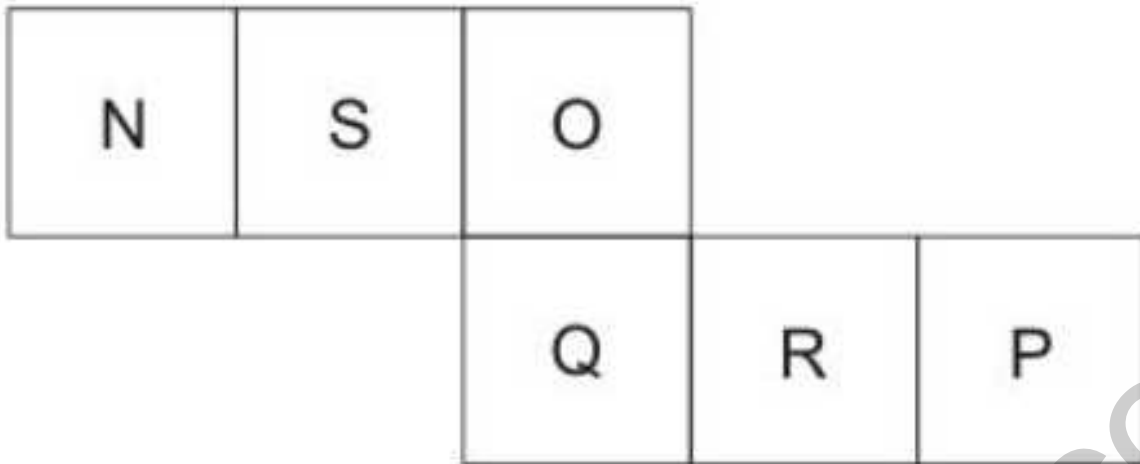
> Ans - (A)

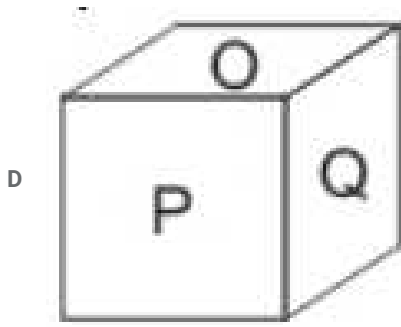
**Instructions**

For the following questions answer them individually.

**Question 86**

From the given options, which answer figure can be formed by folding the figure given in the question ?

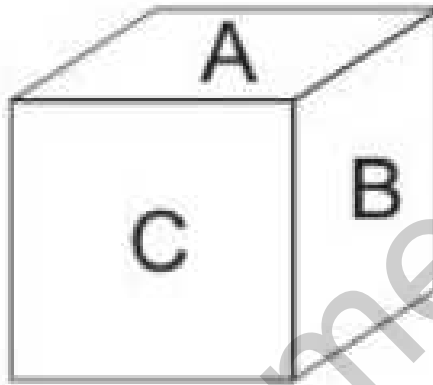
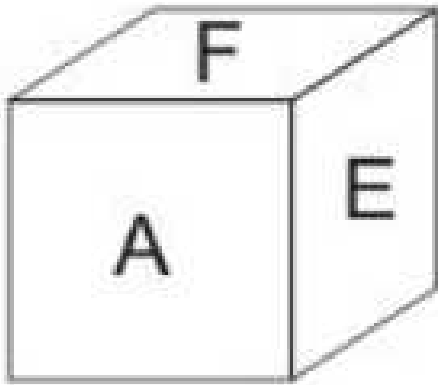




Answer: B

Question 87

Two position of a cube are shown below. What will come opposite to face containing 'B'?



A C

B E

C F

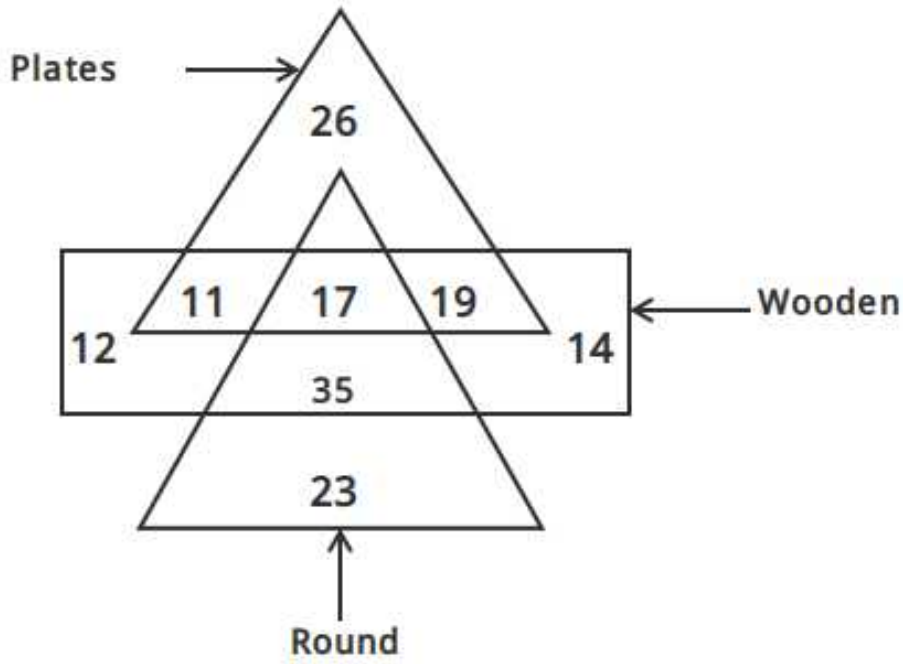
D A

Answer: C

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Question 88

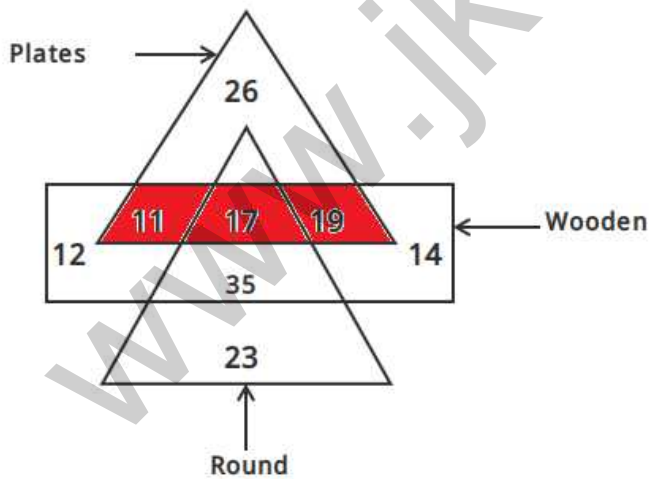
In the given figure, how many wooden plates are there ?



- A 30
- B 47
- C 36
- D 28

Answer: B

Explanation:

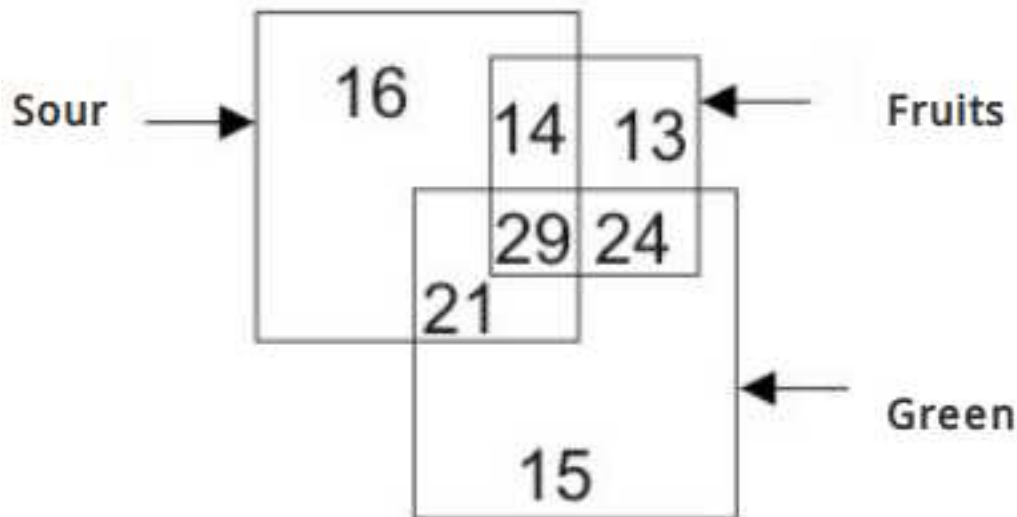


Number of wooden plates  $11 + 17 + 19 = 47$

> Ans - (B)

## Question 89

In the given figure, how many sour fruits are there ?



A 27

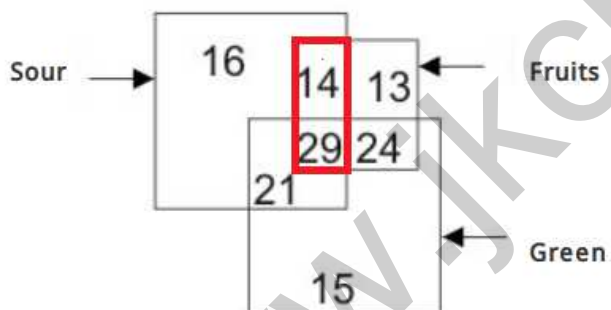
B 53

C 50

D 43

Answer: D

Explanation:

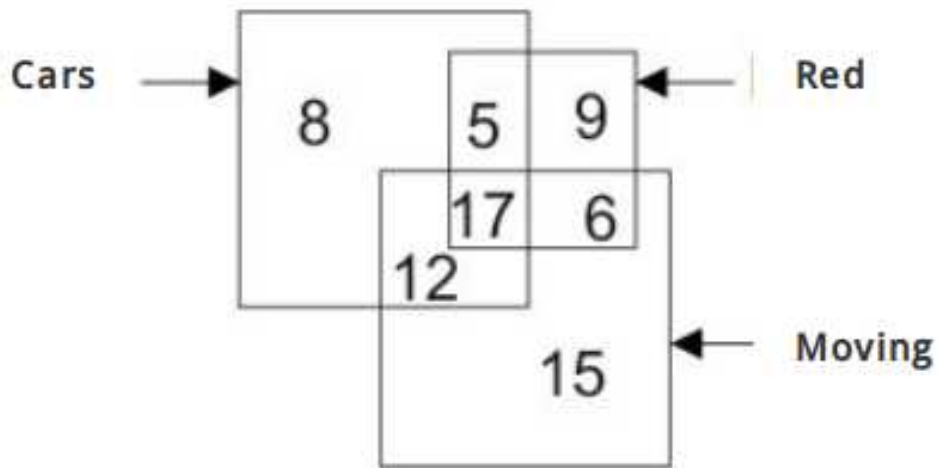


Number of sour fruits  $14 + 29 = 43$

> Ans - (D)

Question 90

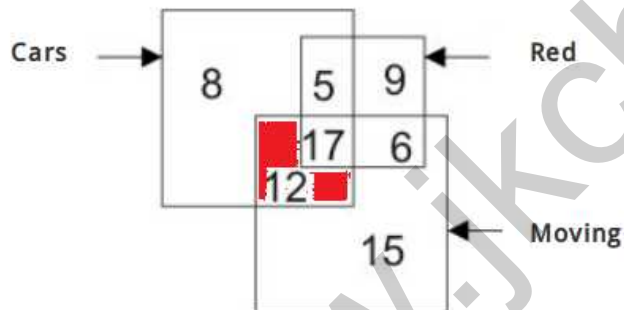
In the given figure, how many moving cars are not red ?



- A 22
- B 17
- C 12
- D 29

Answer: C

Explanation:



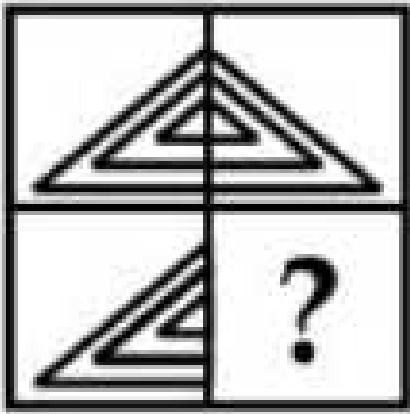
Moving cars which are not red = 12

> Ans - (C)

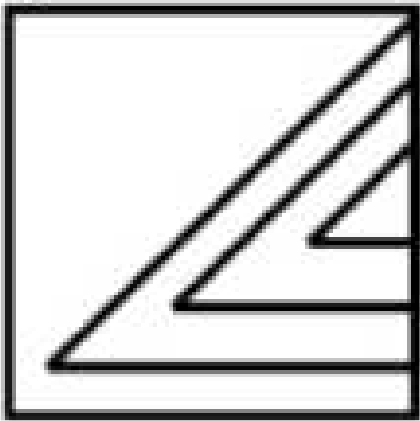


Question 91

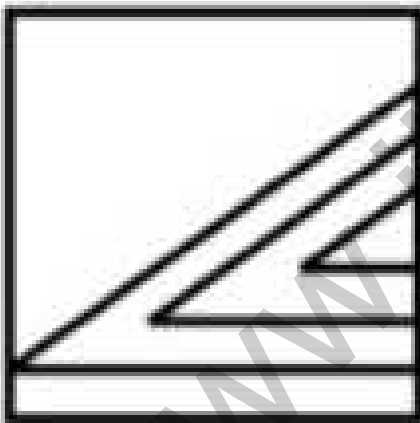
Which answer figure will complete the pattern in the question figure ?



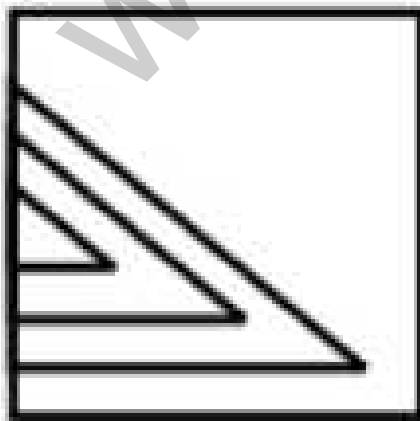
A



B



C



D



Answer: C

Explanation:

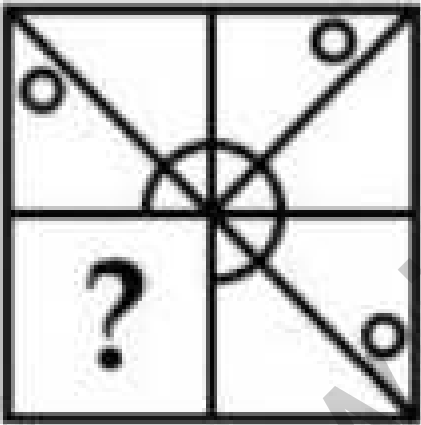
The question figure will be completed by :



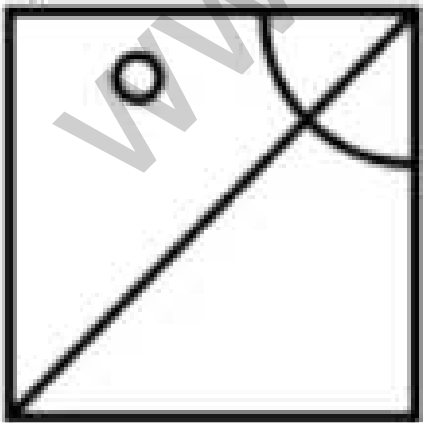
> Ans - (C)

Question 92

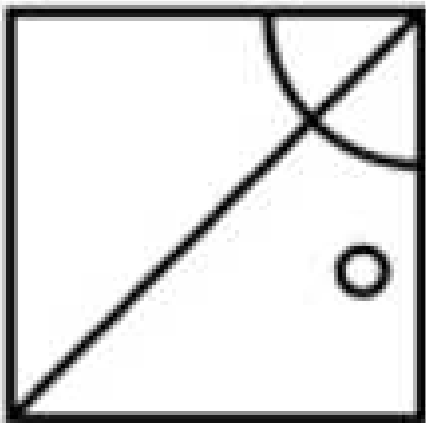
Which answer figure will complete the pattern in the question figure ?



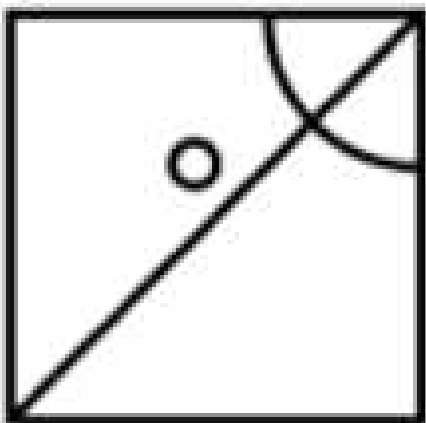
A



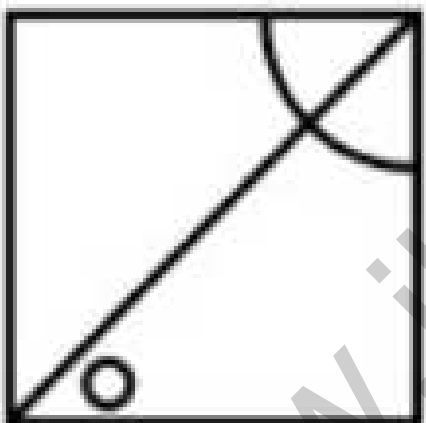
B



C



D



Answer: D

**Explanation:**

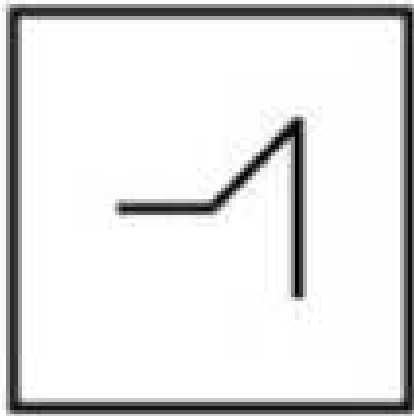
The question figure will be completed by :



> Ans - (D)

Question 93

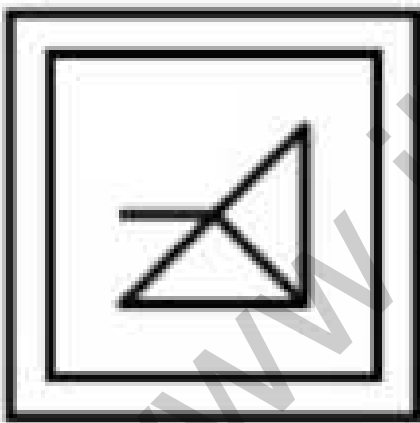
From the given answer figures, select the one in which the question figure is hidden/embedded.



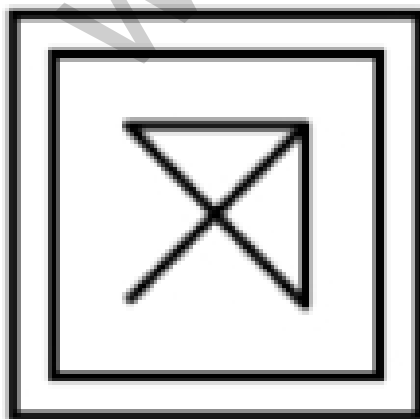
A



B



C



D



Answer: B

Explanation:

The above figure is represented by 'red' color and is hidden in :



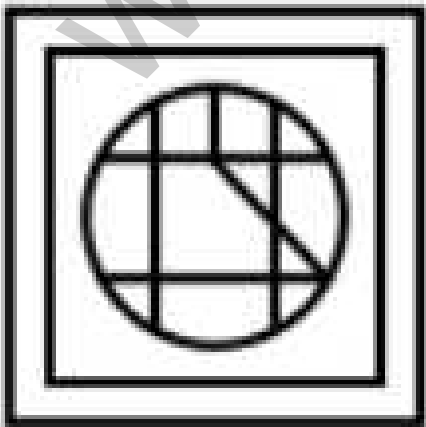
> Ans - (B)

Question 94

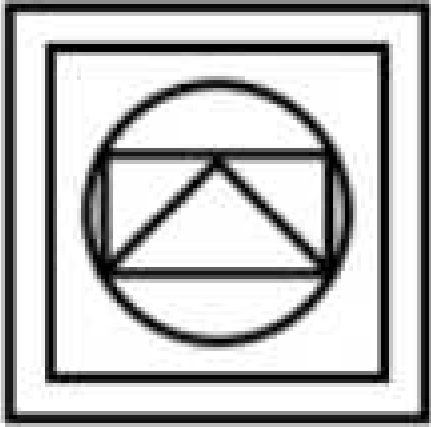
From the given answer figures, select the one in which the question figure is hidden/embedded.



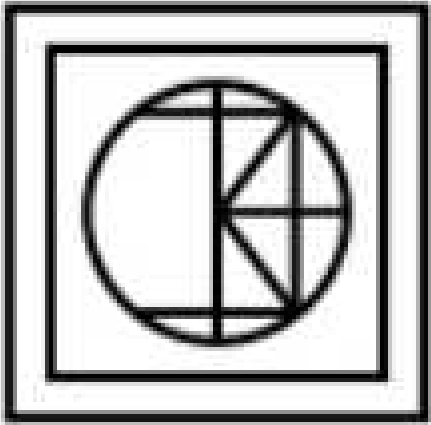
A



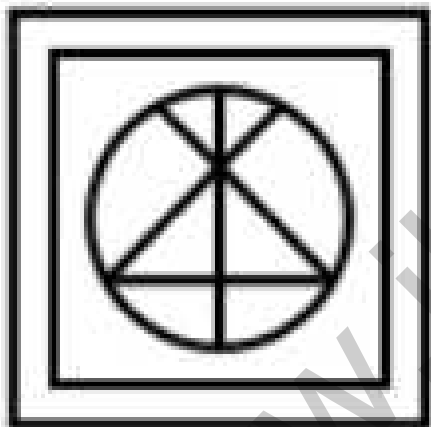
B



C



D



Answer: D

**Explanation:**

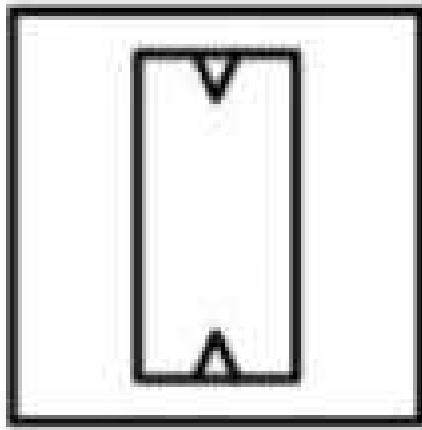
The above figure is represented by 'red' color and is hidden in :



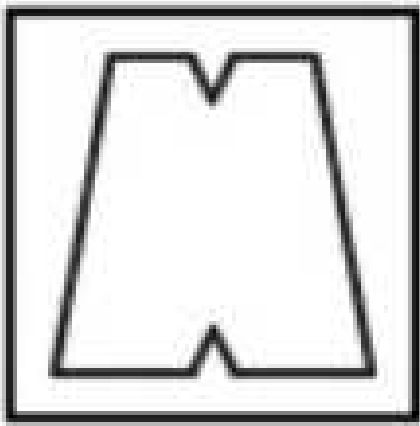
> Ans - (D)

Question 95

A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened ?



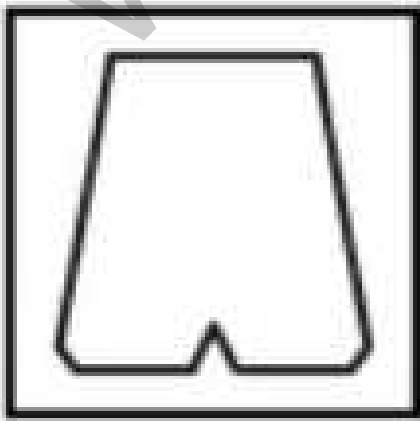
A



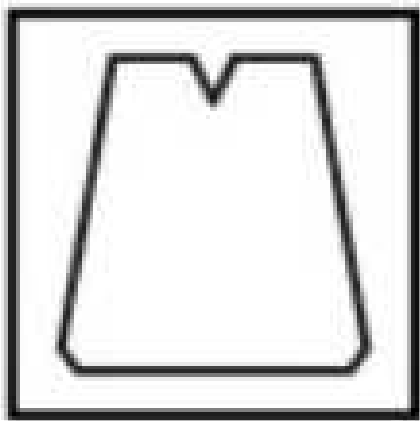
B



C



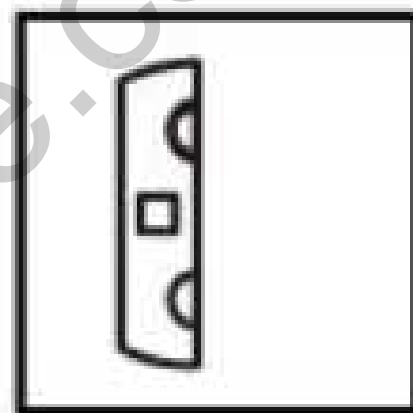
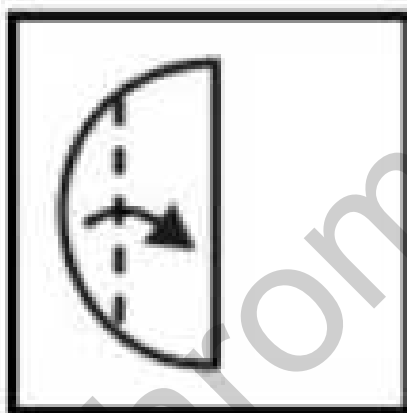
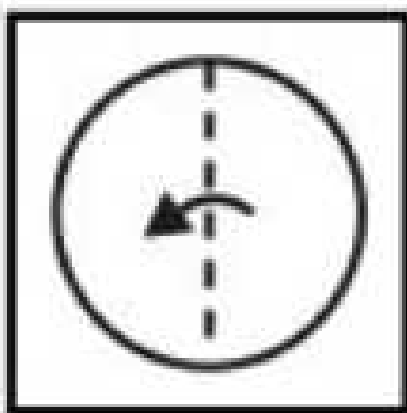
D



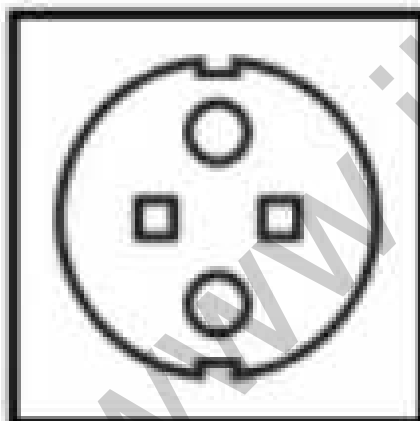
Answer: B

Question 96

A piece of paper is folded and punched as shown below in the question figures. From the given answer figures, indicate how it will appear when opened ?

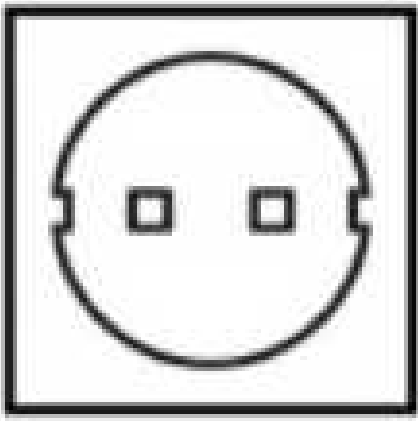


A

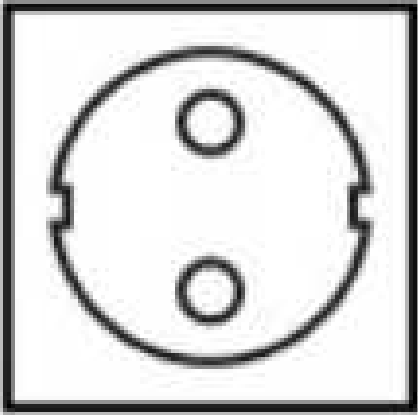




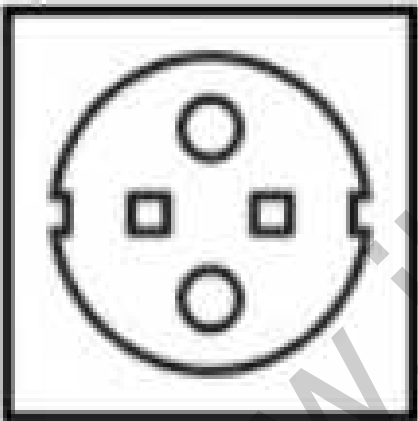
B



C



D

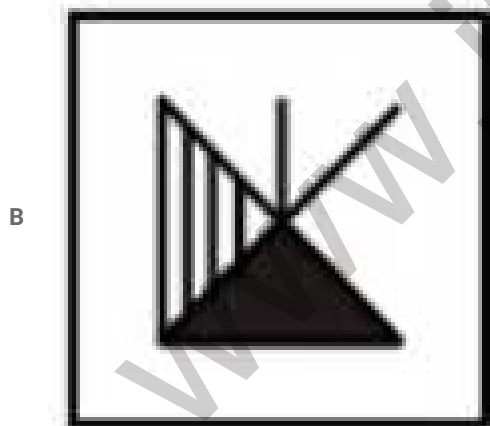
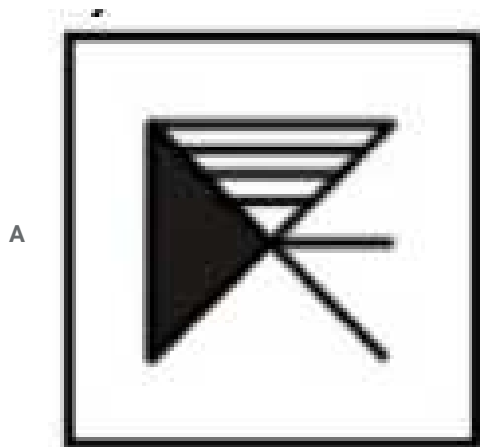
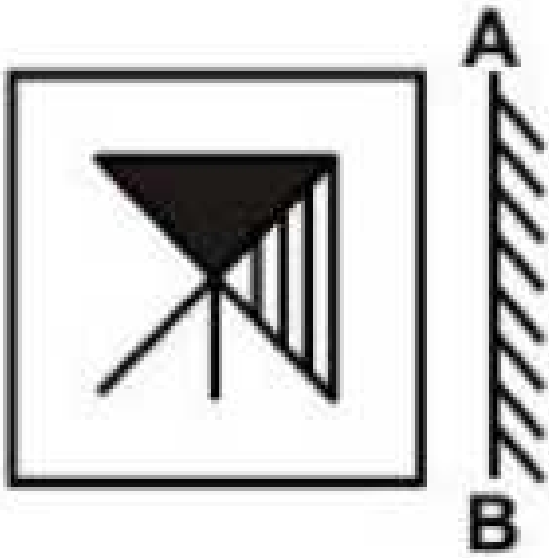


Answer: D

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Question 97

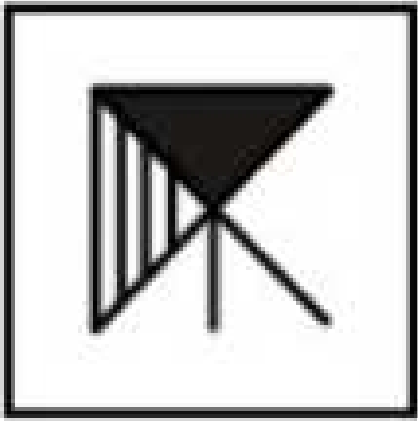
If a mirror is placed on the line AB, then which of the answer figures is the right image of the given figure ?



C



D



Answer: D

**Explanation:**

A vertical mirror is placed, so the object on the left will appear on the right in reverse position and vice-versa.

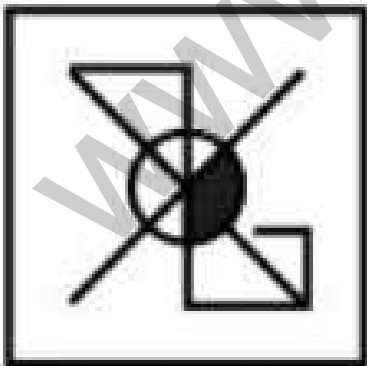
So the triangle at the right side (with vertical lines) will be reversed and now will appear at the left side, thus the first and third options will be eliminated.

Also, in the question figure, the back triangle at the top will stay at the top pointing downwards, hence the fourth option is the right image.

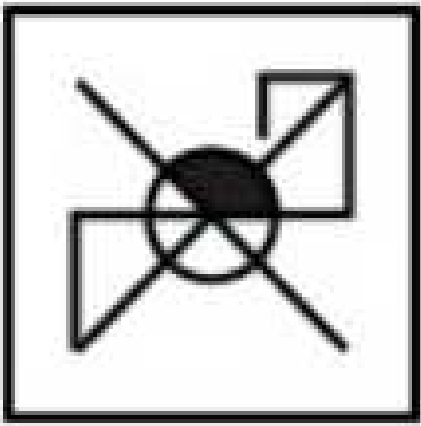
> Ans - (D)

**Question 98**

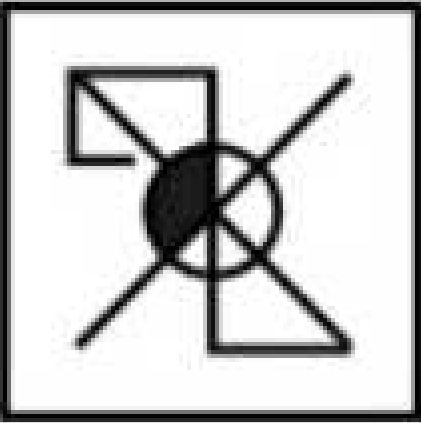
If a mirror is placed on the line AB, then which of the answer figures is the right image of the given figure ?



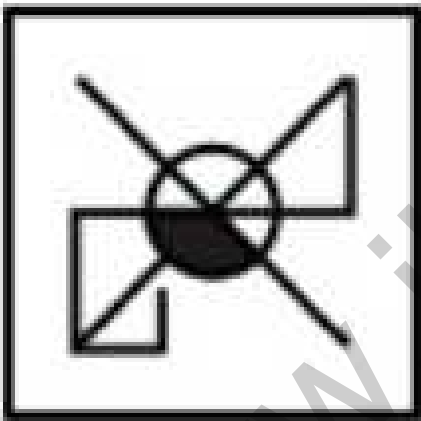
A



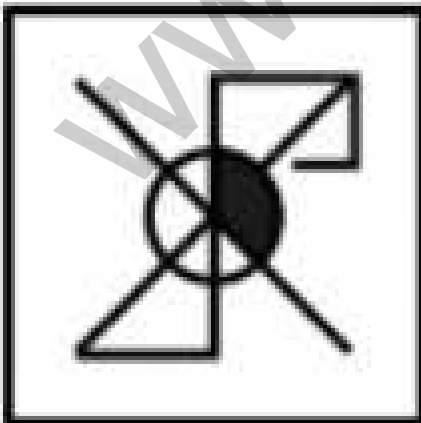
B



C



D



Answer: D

**Explanation:**

A horizontal mirror is placed, so the object on the top will appear at the bottom in reverse position and vice-versa.

So the triangle at top left will now appear at bottom left, thus the middle two options will be eliminated.

As so, in the question figure, the back parts of the circle will stay as they are on the right side, hence fourth option is the right image.

> Ans - (D)

#### Question 99

A word is represented by only set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The column and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented first by its row next by its column, for example, 'S' can be represented by 00, 24 etc., and 'N' can be represented by 66, 97, etc., Similarly, you have to identify the set for the word "SOIL".

**Matrix-I**

	0	1	2	3	4
0	S	Y	E	Q	O
1	Q	O	S	Y	E
2	Y	E	Q	O	S
3	O	S	Y	E	Q
4	E	Q	O	S	Y

**Matrix-II**

	5	6	7	8	9
5	T	I	L	A	N
6	A	N	T	I	L
7	I	L	A	N	T
8	N	T	I	L	A
9	L	A	N	T	I

- A 12, 42, 57, 95
- B 00, 30, 68, 58
- C 43, 04, 87, 69
- D 24, 11, 98, 76

**Answer:** C

#### Explanation:

(A) : 12, 42, 57, 95 : SOLL

(B) : 00, 30, 68, 58 : SOIA

(C) : 43, 04, 87, 69 : **SOIL**

(D) : 24, 11, 98, 76 : SOTL

> Ans - (C)

## Question 100

A word is represented by only set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The column and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be represented first by its row next by its column, for example, 'A' can be represented by 04, 22 etc., and 'O' can be represented by 59, 98, etc., Similarly, you have to identify the set for the word "TRUMP".

Matrix-I

	0	1	2	3	4
0	S	R	E	T	A
1	R	A	S	E	T
2	T	E	A	R	S
3	A	T	R	S	E
4	E	S	T	A	R

Matrix-II

	5	6	7	8	9
5	M	P	U	N	O
6	U	N	O	M	P
7	O	M	P	U	N
8	N	O	M	P	U
9	P	U	N	O	M

- A 20, 01, 57, 68, 58  
 B 42, 44, 89, 99, 88  
 C 03, 23, 96, 67, 69  
 D 31, 10, 65, 76, 79

Answer: B

## Explanation:

- (A) : 20, 01, 57, 68, 58 : TRUMN  
 (B) : 42, 44, 89, 99, 88 : **TRUMP**  
 (C) : 03, 23, 96, 67, 69 : TRUOP  
 (D) : 31, 10, 65, 76, 79 : TRUMN

> Ans - (B)

## General Awareness

## Instructions

For the following questions answer them individually

## Question 101

Which one of the following is true about mixed economy?

- A Existence of both developed and underdeveloped sectors  
 B Equal importance to agriculture and industry  
 C Existence of both public and private sectors in national economy  
 D Equal partnership of central and states in economic planning and development

**Answer: C**

**Question 102**

**Which among the following is the most appropriate measure of an economic growth of a country?**

- A Net Domestic c Product
- B Gross Domestic c Product
- C Per Cap ta Income
- D Net Nat ona Product

**Answer: C**

**Question 103**

**Green revolution was introduced in which Five Year Plan of India?**

- A Seventh
- B F th
- C Second
- D Th rd

**Answer: D**

**Question 104**

**Who among the following is the ex-officio chairman of the NITI Aayog in India?**

- A Pres dent
- B Pr me M n ster
- C V ce Pres dent
- D F nance M n ster

**Answer: B**

**Question 105**

**How many Miniratna companies are there in Category - I?**

- A 55
- B 56
- C 59
- D 47

**Answer: C**

**Question 106**

Who is the father of 'Utilitarian School of Thought'?

- A Hege
- B Bentham
- C James M
- D Locke

**Answer: B**

**Question 107**

Which of the following is not a good argument in favour of democracy?

- I. Democracy enhances the dignity of citizens
- II. Democracies are more prosperous than others
- III. Democracies resolve conflicts in a better way

- A I and II
- B Only III
- C Only II
- D II and III

**Answer: C**

**Question 108**

What is a voluntary union of sovereign and independent states called?

- A Federation
- B Unitary state
- C Confederation
- D None of these

**Answer: C**

**Question 109**

What is the minimum age required to become a member of Lok Sabha?

- A Twenty years
- B Thirty years
- C Twenty two years
- D Twenty five years

**Answer: D**



**Question 110****Who declares the National Emergency in India?**

- A President
- B Prime Minister
- C Central Council of Ministers
- D Supreme Court of India

**Answer: A****Question 111****Indian Constitution contains how many schedules?**

- A Ten Schedules
- B Twelve Schedules
- C Fourteen Schedules
- D Eight Schedules

**Answer: B****Question 112****Which of the following articles relates to 'abolition of titles'?**

- A Article 51
- B Article 50
- C Article 18
- D Article 32

**Answer: C****Question 113****How many members of Lok Sabha are nominated by the President?**

- A Two members
- B Three members
- C Five members
- D Twelve members

**Answer: A**

**Question 114**

Which of the following pair is INCORRECT?

- A H uen Tsang - Ch na
- B Ibn Battuta - Morocco
- C Magasthenes - Greece
- D Fa-H en - Ma ays a

**Answer: D**

**Question 115**

Who among the following started Bengal weekly newspaper 'Samvad Kaumudi' in year 1821?

- A Raja Ram Mohan Roy
- B Aurob ndo Ghosh
- C Ramkr shna Paramhans
- D Debendranath Tagore

**Answer: A**

**Question 116**

The Vijaynagar ruler Krishna Dev Raya's work 'Amuktamalayada' was written in which language?

- A Tam
- B Ma aya am
- C Kanada
- D Te ugu

**Answer: D**

**Question 117**

Idol of dancing girl (Bronze) is found in which of the following civilization?

- A Mesopotam an C v zat on
- B Indus Va ey C v zat on
- C Pers an C v zat on
- D Egypt an C v zat on

**Answer: B**

**Question 118**

Who is also known as 'Light of Asia'?

- A Gautam Buddha
- B Jesus Christ
- C Prophet Mohammad
- D Swami Vivekananda

**Answer: A**

**Question 119**

**What are the imaginary lines touching both the poles of earth called?**

- A Latitudes
- B Longitudes
- C Isobars
- D Isotherms

**Answer: B**

**Question 120**

**On which of the following date, summer solstice is observed in Northern Hemisphere?**

- A 21st June
- B 5th August
- C 18th July
- D 19th December

**Answer: A**

**Question 121**

**Which of the following pair is CORRECT?**

- A 49th parallel - United States of America and Canada
- B 38th parallel - China and North Korea
- C Durand Line - India and Afghanistan
- D Radcliffe Line - India and Sri Lanka

**Answer: A**

**Question 122**

**Near coastal areas, temperature on land in night time gets reduced due to \_\_\_\_.**

- A Land breeze
- B Sea breeze

- C Both land and sea breeze
- D Sparingly populated coasts

Answer: A

#### Question 123

Which of the following wind is also known as 'Snow Eater'?

- A Mistral
- B Chinook
- C Loo
- D Harmattan

Answer: B

#### Question 124

Turmeric is a modified \_\_\_\_\_.

- A Stem
- B Root
- C Leaves
- D Fruit

Answer: A

#### Question 125

Which of the following cell organelle is present in both plant and animal cell?

- A Centrioles
- B Lysosomes
- C Chloroplasts
- D Mitochondria

Answer: D

#### Question 126

What is the nature of cell membrane?

- A Permeable
- B Semi-permeable
- C Non-permeable

D Freely permeable

Answer: B

**Question 127**

Which of the following is the longest bone in human body?

A Forearm bone

B Chest bone

C Femur bone

D Shoulder bone

Answer: C

**Question 128**

What is the main function of white blood cells (WBC's)?

A To transport oxygen

B To fight against infection

C Blood clotting

D To provide red colour to blood

Answer: B

**Question 129**

Arrangement of leaves in a plant is called as \_\_\_\_.

A Phyllotaxy

B Phototaxy

C Phytotaxy

D Lanthotaxy

Answer: A

**Question 130**

Law of Inertia is also known as \_\_\_\_.

A Newton's first law of motion

B Newton's second law of motion

C Newton's third law of motion

D None of these

Answer: A

**Question 131**

Surface water of a lake is about to freeze. What will be the temperature (in 0C) of water at the bottom of the lake?

- A 0
- B -1
- C 1
- D 4

**Answer: C**

**Question 132**

By the use of photovoltaic cell while converting solar energy which of the following is produced?

- A Light energy
- B Electric energy
- C Chemical energy
- D Heat energy

**Answer: B**

**Question 133**

Hydraulic brakes used in automatic vehicles is direct virtual application of which law?

- A Pascal's law
- B Archimedes' principle
- C Newton's law
- D Boyle's law

**Answer: A**

**Question 134**

Which among the following is/are input devices?

- I. Keyboard
- II. Scanner
- III. Joy-stick

- A I and II
- B II and III
- C I and III
- D All options are correct.

**Answer: D**

**Question 135**

Which among the following is a light sensitive device used for converting images to their digital form?

- A Printer
- B Monitor
- C Scanner
- D RAM

Answer: C

**Question 136**

Which of the following elements are commonly found in most fertilizers?

- A Sodium, Potassium, Phosphorus
- B Sodium, Potassium, Calcium
- C Nitrogen, Potassium, Phosphorus
- D Nitrogen, Potassium, Calcium

Answer: C

**Question 137**

Which of the following is used as moderator in atomic reactor?

- A Sodium
- B Uranium
- C Graphite
- D Boron

Answer: C

**Question 138**

'Oil of vitriol' is the common name of which of the following?

- A Nitric Acid
- B Carbonic Acid
- C Acetic Acid
- D Sulfuric Acid

Answer: D

**Question 139**

Which among the following acid is also known as 'Muriatic Acid'?

- A Hydrochloric Acid
- B Sulphuric Acid
- C Carbonic Acid
- D Nitric Acid

**Answer: A**

**Question 140**

What is a Vermicompost?

- A Organic fertilizer
- B Inorganic fertilizer
- C Toxic Substance
- D Type of soil

**Answer: A**

**Question 141**

Plants which can survive in very less water are called as \_\_\_\_\_.

- A Halophytes
- B Xerophytes
- C Helophytes
- D Saprophytes

**Answer: B**

**Question 142**

Which among the following represents plateau phase in population?

- A Birth rate and Death rate are equal
- B Birth rate and death rate are not equal
- C Birth rate is higher than death rate
- D Death rate is more than birth rate

**Answer: A**

**Question 143**

Programme for capacity building of Elected Women Representatives (EWRs) of panchayats has been launched at \_\_\_\_\_.



- A Nagaur, Rajasthan
- B Ranch , Jharkhand
- C Patna, Bihar
- D Lucknow, Uttar Pradesh

**Answer: B**

#### Question 144

**Who invented computer?**

- A Alexander Fleming
- B Charles Babbage
- C Bill Gates
- D Michael Faraday

**Answer: B**

#### Question 145

**Which of the following pair is CORRECT?**

- A Snooker - Cue
- B Golf - Poley
- C Rugby - Bat
- D Squash - Net

**Answer: A**

#### Question 146

**Match the following.**

	Festival		State
1	Onam	a	Maharashtra
2	Kuchipudi	b	Andhra Pradesh
3	Pongal	c	Tamil Nadu
4	Gudipadwa	d	Kerala

- A 1-c, 2-a, 3-b, 4-d
- B 1-d, 2-b, 3-c, 4-a
- C 1-b, 2-a, 3-d, 4-c
- D 1-d, 2-c, 3-d, 4-a

**Answer: B**

**Question 147**

Who among the following is not a recipient of Nobel Prize 2016 in the field of Chemistry?

- A Jean - P erre Sauvage
- B S r J. Fraser Stoddart
- C Bernard L. Fer nga
- D John M. Koster tz

**Answer: D**

**Question 148**

'Life on my terms: from the grassroots to the corridors of power' is an autobiography of \_\_\_\_.

- A P. Ch dambaram
- B Jaswant S ngh
- C Sharad Pawar
- D L.K. Advan

**Answer: C**

**Question 149**

The 'One belt, One road' summit was held in which of the following cities?

- A Shangha
- B Be j ng
- C Guangzhou
- D Hangzhou

**Answer: B**

**Question 150**

'Maitree Express' is an international train between India and \_\_\_\_.

- A Pak stan
- B Bhutan
- C Bang adesh
- D Nepa

**Answer: C**

## English

### Instructions

In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

#### Question 151

The CEO has decided to visit all the (a:/ departments of the office tomorrow (b:/ evening to review of the situation. (c:/ No Error (d:

A 1

B 2

C 3

D 4

Answer: C

#### Question 152

Neha is a very good fashion (a:/ designer but her designs are not (b:/ easily accessible with the public. (c:/ No Error (d:

A 1

B 2

C 3

D 4

Answer: C

#### Question 153

Dr. APJ Abdul Kalam's life was a (a:/ sage of dedication in the (b:/ cause of educational reforms in India. (c:/ No Error (d:

A 1

B 2

C 3

D 4

Answer: B

#### Question 154

Ashish was listening (a:/ to a radio when (b:/ Sunita arrived. (c:/ No Error (d:

A 1

B 2

C 3

D 4

Answer: B

#### Question 155

When the professors are on strike (a:/ and a notice of this effect is pasted on the university gate (b:/ there is no sense to go there. (c:/ No Error (d:

A 1

B 2

C 3

D 4

Answer: C

#### Instructions

In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option.

#### Question 156

\_\_\_\_\_ of the five persons will appear in the court.

A Any

B Neither

C Either

D Both

Answer: A

#### Question 157

\_\_\_\_\_ the child saw his parents, he became happy.

A Where

B Who

C When

D Where

Answer: C

#### Question 158

Ruhika was married \_\_\_\_\_ Akshay.

- A with
- B to
- C by
- D off

Answer: B

**Question 159**

Neha's pay is \_\_\_\_ of her work.

- A too high
- B high enough
- C much high
- D enough high

Answer: B

**Question 160**

Rahul can \_\_\_\_ the four candles in one breath.

- A put out
- B put down
- C put up
- D put away

Answer: A

**Instructions**

In the following question, out of the four alternatives, select the word synonymous meaning to the word given.

**Question 161**

**Imbecility**

- A dazzling
- B foolishness
- C desperate
- D fatty

Answer: B

**Question 162**

**Somnolent**

- A irrate
- B provoke
- C drowsy
- D enrage

**Answer: C**

#### Question 163

##### Invidious

- A mournful
- B sorry
- C indifferent
- D hateful

**Answer: D**

#### Question 164

##### Haughty

- A unborn
- B fearful
- C selfish
- D arrogant

**Answer: D**

#### Question 165

##### Lethal

- A stimulus
- B fatal
- C magsary
- D bliss

**Answer: B**

#### Instructions

In the following question, out of the four alternatives, select the word opposite in meaning to the word given.

#### Question 166

##### Festal

- A unpopular

- B so emn
- C merry
- D sharp

**Answer: B**

**Question 167**

**Slender**

- A stout
- B dece t
- C short
- D nadequate

**Answer: A**

**Question 168**

**Tardy**

- A m d
- B qu ck
- C hard
- D genu ne

**Answer: B**

**Question 169**

**Attenuate**

- A strong
- B sweet
- C fragrant
- D d ff cu t

**Answer: A**

**Question 170**

**Extant**

- A forsake
- B endorse

- C destroyed
- D recommend

**Answer: C**

#### Instructions

In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

#### Question 171

##### Lion's mouth

- A Strict rules
- B Harsh spoken
- C Brave
- D A dangerous situation

**Answer: D**

#### Question 172

##### A stiff-necked person

- A Honest and open
- B An obstinate person
- C A source of quarrel
- D Ordinary person

**Answer: B**

#### Question 173

##### Cross out

- A Interrupt
- B Summon up
- C Eminate
- D Infate

**Answer: C**

#### Question 174

##### Make away with

- A To compensate
- B To remove
- C To find out



D To understand

Answer: B

**Question 175**

To put one out of countenance

A To put a difficulty in the way of progress

B To provoke quarrel

C To make one feel ashamed

D To deceive someone

Answer: C

**Instructions**

Improve the bracketed part of the sentence.

**Question 176**

Practically (every part) of the papaya tree is used by man.

A either part

B each one

C every one

D no improvement

Answer: D

**Question 177**

Kanika shall be grateful to you if you (are of help) her now.

A help

B shall help

C would help

D no improvement

Answer: A

**Question 178**

Shweta unnecessarily (picked up) a quarrel with Kanishk and left the party hurriedly.

A picked on

B picked

C has picked up

D no improvement

**Answer: B**

**Question 179**

**Not a word (she spoke) to the unfortunate mother about it.**

- A did they speak
- B they would speak
- C they had spoken
- D no improvement

**Answer: A**

**Question 180**

**Shrey has got many friends because he has got (much money).**

- A a lot of money
- B bags of money
- C enough money
- D no improvement

**Answer: A**

**Instructions**

In the following question, out of the four alternatives, select the alternative which is best substitute of the phrase.

**Question 181**

**A state of mental weariness from lack of occupation**

- A hermit
- B ennu
- C heretic
- D indolent

**Answer: B**

**Question 182**

**A dabbler in the art and literature**

- A rapacious
- B bohemian
- C dabbler

D emer tus

Answer: C

**Question 183**

**Being able to pay one's debt**

A d ettante

B cred b e

C de b e

D so vent

Answer: D

**Question 184**

**One who is subject to failure or to committing mistakes**

A fa b e

B hyperbo e

C herm t

D ncorr g b e

Answer: A

**Question 185**

**A short stay in a place**

A excurs on

B dotage

C sojourn

D kne

Answer: C

**Instructions**

In the fo ow ng quest on, four words are g ven out of wh ch one word s ncorrect y spe t. Se ect the ncorrect y spe t word.

**Question 186**

A carn vorus

B courageous

C compu sory

D conce ve

Answer: A

**Question 187**

- A spontane ty
- B acqu nance
- C appr at on
- D qu f ab e

**Answer: D**

**Question 188**

- A bereavement
- B pa ad um
- C oathsome
- D dysentry

**Answer: D**

**Question 189**

- A aparthe d
- B exhorb tant
- C m sch evous
- D benef ted

**Answer: B**

**Question 190**

- A repercuss on
- B obso esc ng
- C s houtte
- D ud crous

**Answer: C**

**Instructions**

In the fo ow ng passage some of the words have been eft out. Read the passage carefu y and se ect the correct answer for the g ven b ank out of the four a ternat ves.

Sc ence s both a b ess ng and a \_\_\_\_\_. Wh e t has g ven us many th ngs wh ch have made fe better and \_\_\_\_\_, t has a so g ven terr b e nstruments of \_\_\_\_\_. Sc ence has d scovered and nvented many th ngs to \_\_\_\_ pa n and cure terr b e d seases. These d scover es have enab ed man to ve a onger and \_\_\_\_ fe.

**Question 191**

Science is both a blessing and a \_\_\_\_.

- A gift
- B curse
- C complement
- D source

**Answer: B**

**Question 192**

Many things which have made life better and \_\_\_\_\_,

- A terrible
- B challenging
- C happier
- D sophisticated

**Answer: C**

**Question 193**

It has also given terrible instruments of \_\_\_\_\_.

- A destruction
- B happiness
- C convenience
- D nature

**Answer: A**

**Question 194**

Discovered and invented many things to \_\_\_\_\_ pain and cure

- A aggravate
- B alleviate
- C nurture
- D intensity

**Answer: B**

**Question 195**

Enabled man to live a longer and \_\_\_\_\_ life.

- A tedious

- B hea th er
- C product ve
- D b gger

**Answer: B**

### Instructions

A passage s g ven w th f ve quest ons fo ow ng t. Read the passage carefu y and se ect the best answer to each quest on out of the g ven four a ternat ves.

Corrupt on s not a new phenomenon n Ind a. It has been preva ent n soc ety s nce anc ent t mes. H story revea s that t was present even n the Mauryan per od. Great scho ar, Kaut ya, ment ons the pressure of forty types of corrupt on n h s contemporary soc ety. It was pract sed even n Mugha and Su tanate per od. When the East Ind a Company took contro of the country, corrupt on reached new he ght. Corrupt on n Ind a has become so common that peop e now are averse to th nk ng of pub c fe w th t. Corrupt on has been def ned var ous y by scho ars. But the s mp e mean ng of t s that corrupt on mp es pervers on of mora ty, ntegr ty, character or duty out of mercenary mot ves, .e. br bery, w thout any regard to honour, r ght and just ce. In other words, undue favour for any one for some monetary or other ga ns s corrupt on. S mu taneous y, depr v ng the genu ne y deserv ng from the r r ght or pr v ege s a so a corrupt pract ce. Shr nk ng from one's duty or dere ct on of duty are a so forms of corrupt on. Bes des, thefts, wastage of pub c property const tute var et es of corrupt on. D shonesty, exp o tat on, ma pract ces, scams and scanda s are var ous man festat ons of corrupt on.

### Question 196

According to the passage, corruption is \_\_\_\_ .

- A new phenomenon n Ind a
- B ns gn f cant to Ind an soc ety
- C preva ent s nce anc ent t mes
- D preva ent on y n m dd e east countr es

**Answer: C**

### Question 197

Kautilya mentions the pressure of how many types of corruption in his contemporary society?

- A 20
- B 30
- C 40
- D 50

**Answer: C**

### Question 198

Perversion of what is not mentioned in the passage?

- A character
- B att tude
- C mora ty

D integrity

**Answer: B**

**Question 199**

**According to the passage, what all are the manifestation of corruption?**

A malpractices

B dishonesty

C scams and scandals

D All of these

**Answer: D**

**Question 200**

**What people are averse of due to corruption in India?**

A thinking of stardom

B thinking of public life

C thinking of monetary gains

D thinking of undue favours

**Answer: B**

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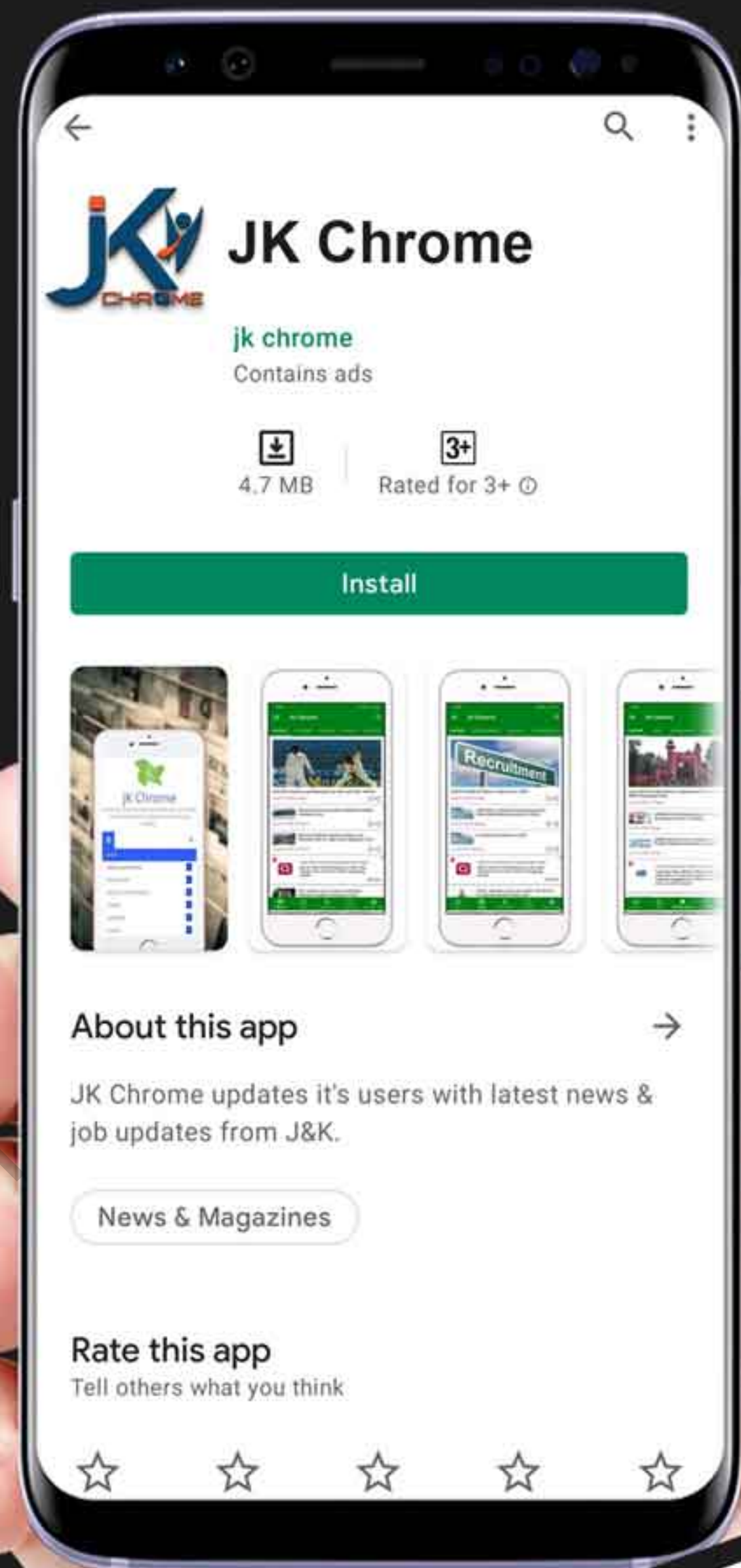
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