

**SSC CHSL 4 March 2018 Evening Shift**

## Quant

### Instructions

For the following questions answer them individually

### Question 1

**Simplify:**  $b - [b - (a + b) - b - (b - a - b) + 2b]$

A  $2b$

B  $1$

C  $0$

D  $3b$

**Answer:** C

### Explanation:

Expression :  $b - [b - (a + b) - b - (b - a - b) + 2b]$

$$= b - [(b - a - b) + (-b - b + a + b) + 2b]$$

$$= b - [-a - b + a + 2b]$$

$$= b - b = 0$$

$\Rightarrow$  Ans - (C)

### Question 2

**Simplify:**  $(213 \times 213 + 187 \times 187)$

A  $80338$

B  $80438$

C  $60338$

D  $60438$

**Answer:** A

### Explanation:

Expression :  $(213 \times 213 + 187 \times 187)$

$$= (200 + 13)^2 + (200 - 13)^2$$

$$\begin{aligned}
 &= [(200)^2 + (13)^2 + 2(200)(13)] + [(200)^2 + (13)^2 - 2(200)(13)] \\
 &= [2 \times (200)^2] + [2 \times (13)^2] \\
 &= 80000 + 338 = 80338
 \end{aligned}$$

=> Ans - (A)

### Question 3

What is the remainder, when  $4x^2 - 10x^2 - 20x^2 - 90$  is divided by  $(x - 2)$  ?

- A 0
- B 6
- C 45
- D 90

Answer: B

### Question 4

What will be the value of  $xy$ , if  $x^2 + y^2 = 45$  and  $x - y = 5$  ?

- A 10
- B 15
- C 20
- D 25

Answer: A

### Explanation:

Given :  $x^2 + y^2 = 45$ ----- (i)

Also,  $x - y = 5$

Squaring both sides, we get :

$$\Rightarrow (x - y)^2 = (5)^2$$

$$\Rightarrow x^2 + y^2 - 2xy = 25$$

Substituting value from equation (i),

$$\Rightarrow 45 - 2xy = 25$$

$$\Rightarrow 2xy = 45 - 25 = 20$$

$$\Rightarrow xy = \frac{20}{2} = 10$$

=> Ans - (A)

### Question 5

The smallest angle of a triangle is  $40^\circ$  less than the largest angle. If the largest angle is  $80^\circ$ , then find third angle of the triangle.

- A  $40^\circ$
- B  $90^\circ$
- C  $80^\circ$
- D  $60^\circ$

**Answer: D**

#### Explanation:

Largest angle of triangle =  $80^\circ$

=> Smallest angle =  $80^\circ - 40^\circ = 40^\circ$

Let third angle =  $\theta$

Thus, sum of the three angle =  $\theta + 80^\circ + 40^\circ = 180^\circ$

=>  $\theta = 180^\circ - 120^\circ = 60^\circ$

=> Ans - (D)

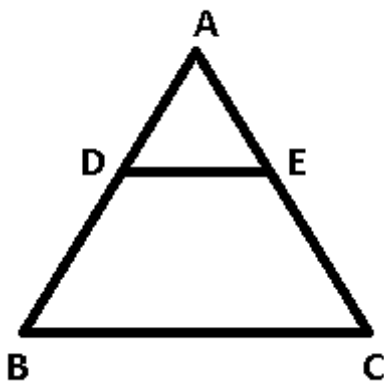
### Question 6

If the line DE is drawn parallel to the base BC of a triangle ABC by intersecting the other two sides, then which of the following is the CORRECT equation for this case.

- A  $AB/DB=AC/EC$
- B  $AD/AB=DB/EC$
- C  $AD/DB=EC/AE$
- D  $AD/DB=AE/EC$

**Answer: D**

#### Explanation:



Given : DE is parallel to BC

In  $\triangle ABC$  and  $\triangle ADE$ ,

$\angle ABC = \angle ADE$  (corresponding angles)

$\angle ACB = \angle AED$  (corresponding angles)

Thus,  $\triangle ABC \sim \triangle ADE$

$$\therefore \frac{AB}{AD} = \frac{AC}{AE}$$

Using componendo and dividendo, we have =  $\frac{AD}{DB} = \frac{AE}{EC}$

=> Ans - (D)

#### Question 7

Price of 1 kg of sugar is increased by 30% and the increase is of Rs 48. What is the new price (in Rs) of sugar per kg?

A 178

B 160

C 208

D 216

Answer: C

#### Explanation:

Let original price of sugar = Rs.  $100x$

Increase in price = 30%

$$\Rightarrow \text{New price} = 100x + \left( \frac{30}{100} \times 100x \right) = \text{Rs. } 130x$$

According to ques,

$$\Rightarrow 100x + 48 = 130x$$

$$\Rightarrow 130x - 100x = 30x = 48$$

$$\Rightarrow x = \frac{48}{30} = 1.6$$

$$\therefore \text{New price} = 130 \times 1.6 = \text{Rs. } 208$$

$\Rightarrow$  Ans - (C)

#### Question 8

The sum of three numbers is 67. If the ratio of the first number to the second number is 3 : 5 and that of second number to the third number is 4 : 7, then what is the second number?

A 20

B 24

C 18

D 16

**Answer:** A

#### Explanation:

Ratio of first number to second number = 3 : 5 and ratio of the second number to the third number = 4 : 7

Multiplying first equation by 4 and second equation by 5 to make the second (common) term equal.

Let first number be =  $12x$ , second number =  $20x$  and third number =  $35x$

$$\Rightarrow \text{Sum} = 12x + 20x + 35x = 67x = 67$$

$$\Rightarrow x = \frac{67}{67} = 1$$

$$\therefore \text{Second number} = 20 \times 1 = 20$$

$\Rightarrow$  Ans - (A)

#### Question 9

A started a business with the capital of Rs 1800. After 4 months B joined with Rs 3600. 6 months after business started C joined with Rs 1200. If the total profit earned at the end of the year is Rs 1760, then is the share (in Rs) of A?

A 540

B 660

C 840

D 720

**Answer:** B

**Explanation:**

Amount invested by A = Rs. 1800 for 12 months

Amount invested by B = Rs. 3600 for 8 months

Amount invested by C = Rs. 1200 for 6 months

$$\Rightarrow \text{Ratio of profit of A:B:C} = (1800 \times 12) : (3600 \times 8) : (1200 \times 6)$$

$$= 216 : 288 : 72 = 3 : 4 : 1$$

Total profit = Rs. 1760

$$\therefore \text{A's share} = \frac{3}{(3+4+1)} \times 1760$$

$$= 3 \times 220 = \text{Rs. } 660$$

$\Rightarrow$  Ans - (B)

**Question 10**

The average of 8 consecutive integers is  $23/2$ . What is the average of first three integers?

A 9

B  $19/2$

C 8

D 10

**Answer:** A

**Explanation:**

Let the 8 consecutive integers be =  $(x), (x + 1), (x + 2), (x + 3), (x + 4), (x + 5), (x + 6)$  and  $(x + 7)$

$$\text{Sum of integers} = (x) + (x + 1) + (x + 2) + (x + 3) + (x + 4) + (x + 5) + (x + 6) + (x + 7) = \frac{23}{2} \times 8$$

$$\Rightarrow 8x + 28 = 92$$

$$\Rightarrow 8x = 92 - 28 = 64$$

$$\Rightarrow x = \frac{64}{8} = 8$$

$$\therefore \text{Average of first three integers} = \frac{(8) + (8+1) + (8+2)}{3}$$

$$= \frac{27}{3} = 9$$

$\Rightarrow$  Ans - (A)

### Question 11

Simple interest on a sum for eight months at 6% per annum is Rs 340. What is the value (in Rs) of sum?

A 8500

B 9500

C 8000

D 6800

**Answer:** A

#### **Explanation:**

Let principal amount = Rs.  $x$

Rate of interest = 6% and time period =  $\frac{8}{12} = \frac{2}{3}$  years

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

$$\Rightarrow \frac{x \times 6 \times 2}{3 \times 100} = 340$$

$$\Rightarrow \frac{x}{25} = 340$$

$$\Rightarrow x = 340 \times 25 = \text{Rs. } 8,500$$

$\Rightarrow$  Ans - (A)

### Question 12

A trader sells wire and gains 60% on the cost price. What will be the profit percentage on selling price?

A 33.33

B 40

C 60

D 37.5

**Answer:** D

#### **Explanation:**

Let cost price = Rs. 100

$$\text{Profit} = \frac{60}{100} \times 100 = \text{Rs. } 60$$

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

$$\therefore \text{Profit percentage on selling price} = \frac{60}{160} \times 100$$

$$= \frac{3}{8} \times 100 = 37.5\%$$

$\Rightarrow$  Ans - (D)



### Question 13

Marked price of an article is Rs 520 and selling price is Rs 384.8. What is the discount percentage?

- A 26
- B 24.42
- C 35.13
- D 29

**Answer: A**

#### Explanation:

Marked price = Rs. 520

Selling price = Rs. 384.8

$$\Rightarrow \text{Discount \%} = \frac{(520 - 384.8)}{520} \times 100$$

$$= \frac{135.2}{520} = 26\%$$

$\Rightarrow$  Ans - (A)

### Question 14

What is the value of  $\frac{5}{\sqrt{2}+1} + \frac{5}{\sqrt{3}+\sqrt{2}} + \frac{5}{\sqrt{4}+\sqrt{3}} + \dots + \frac{5}{\sqrt{121}+\sqrt{120}}$ ?

- A 25
- B 50
- C 100
- D 75

**Answer: B**

#### Explanation:

$$\text{Expression : } \frac{5}{\sqrt{2}+1} + \frac{5}{\sqrt{3}+\sqrt{2}} + \frac{5}{\sqrt{4}+\sqrt{3}} + \dots + \frac{5}{\sqrt{121}+\sqrt{120}}$$

Rationalizing the denominator, we get :

$$= \left( \frac{5}{\sqrt{2}+1} \times \frac{\sqrt{2}-1}{\sqrt{2}-1} \right) + \left( \frac{5}{\sqrt{3}+\sqrt{2}} \times \frac{\sqrt{3}-\sqrt{2}}{\sqrt{3}-\sqrt{2}} \right) + \left( \frac{5}{\sqrt{4}+\sqrt{3}} \times \frac{\sqrt{4}-\sqrt{3}}{\sqrt{4}-\sqrt{3}} \right) + \dots + \left( \frac{5}{\sqrt{121}+\sqrt{120}} \times \frac{\sqrt{121}-\sqrt{120}}{\sqrt{121}-\sqrt{120}} \right)$$

Using,  $(a-b)(a+b) = a^2 - b^2$

$$= \frac{5 \times (\sqrt{2}-1)}{(2-1)} + \frac{5 \times (\sqrt{3}-\sqrt{2})}{(3-2)} + \frac{5 \times (\sqrt{4}-\sqrt{3})}{(4-3)} + \dots + \frac{5 \times (\sqrt{121}-\sqrt{120})}{(121-120)}$$

Thus, after cancelling the positive and negative terms alternatively, we are left with :

$$= -5 + 5(\sqrt{121}) = -5 + 55 = 50$$

=> Ans - (B)

#### Question 15

Ram and Shyam undertook a work for Rs 5600. Ram alone can do the work in 5 days and Shyam alone do the work in 9 days. If they work together, then what will be the difference (in Rs.) in the amount they receive?

A 1800

B 2400

C 2200

D 1600

Answer: D

#### Explanation:

Ram alone can do the work in 5 days and Shyam alone can do the work in 9 days.

=> Efficiency of work done by Ram : Shyam = 9 : 5

Thus, difference in amount received by them =  $\frac{(9-5)}{9+5} \times 5600$

$$= 4 \times 400 = \text{Rs. } 1600$$

=> Ans - (D)

#### Question 16

A man covered a certain distance by a train at the speed of 40 km/hr and covers the same distance back walking at the speed of 8 km/hr. If the whole journey took 12 hours, then what is the one side distance (km)?

A 80

B 60

C 90

D 100

Answer: A

#### Explanation:

Let total distance covered (both sides) =  $2d$  km

Speed of train = 40 km/hr and walking speed = 8 km/hr

Using, time = distance/speed

$$\Rightarrow \frac{d}{40} + \frac{d}{8} = 12$$

$$\Rightarrow \frac{6d}{40} = 12$$

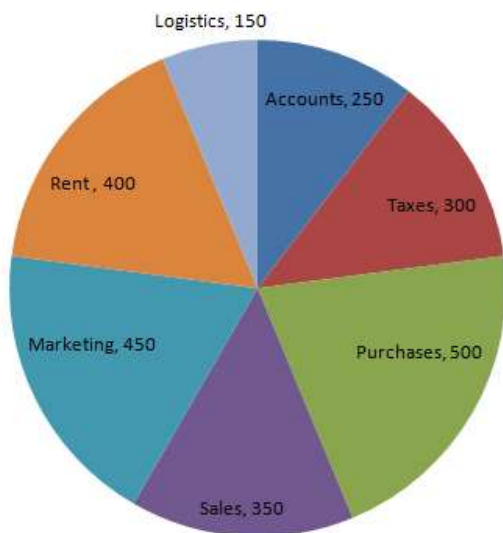
$$\Rightarrow d = 12 \times \frac{40}{6} = 80\text{km}$$

$\Rightarrow$  Ans - (A)

### Instructions

The pie chart shows the breakup of expenditure of a trading company for the year 2017. Study the diagram and answer the following questions.

### Expenditure (in lakhs)



### Question 17

The second highest expenditure is for which item?

- A Rent
- B Marketing
- C Logistics
- D Accounts

**Answer:** B

### Explanation:

The second highest expenditure is for **Marketing** = Rs. 450 lakhs

$\Rightarrow$  Ans - (B)

### Question 18

What is the total expenditure (in Rs lakhs) ?

- A 2200
- B 2400
- C 2100
- D 2000

**Answer:** B

#### **Explanation:**

Total expenditure (in Rs lakhs)

$$= 250 + 300 + 500 + 350 + 450 + 400 + 150$$

$$= 2400$$

=> Ans - (B)

### Question 19

The measure of the central angle of the sector representing Rent is \_\_\_\_\_ degrees.

- A 50
- B 60
- C 75
- D 40

**Answer:** B

#### **Explanation:**

Expenditure in rent (in Rs lakhs) = 400

Total expenditure (in Rs lakhs)

$$= 250 + 300 + 500 + 350 + 450 + 400 + 150 = 2400$$

$$\Rightarrow \text{Required central angle} = \frac{400}{2400} \times 360^\circ$$

$$= \frac{360^\circ}{6} = 60^\circ$$

=> Ans - (B)

### Question 20

Expenditure on Sales and Marketing constitute what percent of total expenditure?

- A 30%
- B 36%
- C 27.5%
- D 33.33%

**Answer: D**

#### Explanation:

Expenditure on Sales and Marketing (in Rs lakhs) =  $350 + 450 = 800$

Total expenditure (in Rs lakhs)

$$= 250 + 300 + 500 + 350 + 450 + 400 + 150 = 2400$$

$$\Rightarrow \text{Required \%} = \frac{800}{2400} \times 100$$

$$= \frac{100}{3} = 33.33\%$$

$\Rightarrow$  Ans - (D)

#### Instructions

For the following questions answer them individually

### Question 21

The side of an equilateral triangle is 8 cm. Find its area (in cm)

- A  $25\sqrt{3}$
- B  $16\sqrt{2}$
- C  $25\sqrt{2}$
- D  $16\sqrt{3}$

**Answer: D**

#### Explanation:

Side of equilateral triangle =  $s = 8$  cm

$$\Rightarrow \text{Area} = \frac{\sqrt{3}}{4} s^2$$

$$= \frac{\sqrt{3}}{4} \times (8)^2$$

$$= \sqrt{3} \times 16 = 16\sqrt{3} \text{ cm}^2$$

$\Rightarrow$  Ans - (D)

### Question 22

The area of a circle is  $346.5 \text{ cm}^2$ . Find its circumference (in cm).

A 132

B 38

C 66

D 76

**Answer: C**

#### Explanation:

Let the radius of circle =  $r \text{ cm}$

$$\Rightarrow \text{Area} = \pi r^2 = 346.5$$

$$\Rightarrow \frac{22}{7} \times r^2 = 346.5$$

$$\Rightarrow r^2 = 346.5 \times \frac{7}{22} = 110.25$$

$$\Rightarrow r = \sqrt{110.25} = 10.5 \text{ cm}$$

$$\therefore \text{Circumference} = 2\pi r$$

$$= 2 \times \frac{22}{7} \times 10.5$$

$$= 44 \times 1.5 = 66 \text{ cm}$$

$$\Rightarrow \text{Ans} - (\text{C})$$

### Question 23

Find the total surface area ( $\text{in cm}^2$ ) of a cube of side 7.5 cm.

A 364.5

B 446

C 337.5

D 684

**Answer: C**

#### Explanation:

Side of cube,  $a = 7.5 \text{ cm}$

$$\Rightarrow \text{Total surface area} = 6a^2$$

$$= 6 \times (7.5)^2 = 337.5 \text{ cm}^2$$

=> Ans - (C)

#### Question 24

What is the value of  $45^\circ + \frac{1}{\sqrt{2}}$

A  $5\sqrt{3}$

B  $\frac{7}{2\sqrt{3}}$

C  $(\sqrt{2} + 1)\sqrt{2}$

D  $4/\sqrt{3}$

Answer: C

**Explanation:**

Expression :  $\tan(45^\circ) + \frac{1}{\sqrt{2}}$

$$= 1 + \frac{1}{\sqrt{2}}$$

$$= \frac{\sqrt{2}+1}{\sqrt{2}}$$

=> Ans - (C)

#### Question 25

$\Delta PQR$  is right angled at Q. If  $\operatorname{cosec} P = 17/15$ , then what is the value of  $\sin R$  ?

A  $15/17$

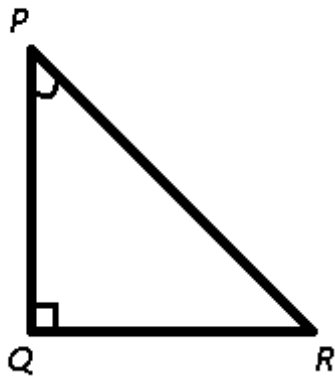
B  $8/17$

C  $17/8$

D  $17/15$

Answer: B

**Explanation:**



Given :  $\operatorname{cosec} P = \frac{17}{15}$

$$\Rightarrow \sin P = \frac{QR}{PR} = \frac{15}{17}$$

Let  $QR = 15$  cm and  $PR = 17$  cm

Thus, in  $\Delta PQR$ ,  $\Rightarrow (PQ)^2 = (PR)^2 - (QR)^2$

$$\Rightarrow (PQ)^2 = (17)^2 - (15)^2$$

$$\Rightarrow (PQ)^2 = 289 - 225 = 64$$

$$\Rightarrow PQ = \sqrt{64} = 8 \text{ cm}$$

To find :  $\sin R = \frac{PQ}{PR}$

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

$\Rightarrow$  Ans - (B)

## Reasoning

### Instructions

For the following questions answer them individually

### Question 26

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

**Lotus : Flower :: ? : ?**

- A** Rabbit : White
- B** Peacock : Bird
- C** Crow : Flies
- D** Krishna : Speak

**Answer:** B



**Explanation:**

Expression = Lotus : Flower :: ? : ?

The first comes under the category of second, i.e. Lotus is a flower, similarly peacock is a bird.

=> Ans - (B)

**Question 27**

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

13 : 167 :: 23 : ?

A 527

B 525

C 531

D 532

**Answer:** A

**Explanation:**

Expression = 13 : 167 :: 23 : ?

The pattern followed is =  $x : (x^2 - 2)$

Eg :-  $13 : (13^2 - 2) = 13 : 167$

Similarly,  $(23)^2 - 2 = 529 - 2 = 527$

=> Ans - (A)

**Question 28**

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

PIR : OHQ :: ? : ?

A KLO : MOR

B LNT : JLQ

C FAX : EZW

D KMN : LNO

**Answer:** C

**Explanation:**

Expression = PIR : OHQ :: ? : ?

The pattern followed is :

P	I	R
(-1)	(-1)	(-1)
O	H	Q

Similar pattern is observed only in :

F	A	X
(-1)	(-1)	(-1)
E	Z	W

=> Ans - (C)

### Question 29

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

- A Carnivorous - Tiger
- B Herbivorous - Cow
- C Rabbit - Herbivorous
- D Carnivorous - Dog

**Answer:** C

### Explanation:

First is the characteristic of the second.

Tiger and Dog are carnivorous and cow are herbivorous. Although, rabbit are also herbivorous, but the order is incorrect.

=> Ans - (C)

### Question 30

In the following question, four number pairs are given. The number on left side of (-) is related to the number of the right side of (-) with some Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

- A 8 - 64
- B 6 - 36
- C 4 - 16
- D 2 - 12

**Answer: D**

**Explanation:**

The second number is the square of the first number.

$$(8)^2 = 64$$

$$(6)^2 = 36$$

$$(4)^2 = 16$$

$$(2)^2 = 4 \neq 12$$

=> Ans - (D)

**Question 31**

In the following question, select the odd letter/letters from the given alternatives.

**A** SW

**B** GK

**C** FJ

**D** DG

**Answer: D**

**Explanation:**

(A) : S (+4 letters) = W

(B) : G (+4 letters) = K

(C) : F (+4 letters) = J

(D) : D (+3 letters) = G

=> Ans - (D)

**Question 32**

From the given alternatives, according to dictionary, which word will come at FIRST position?

1. Clause

2. Cigar

3. Clever

4. Cinema

5. Client

**A** Cinema

**B** Client

**C** Cigar

**D** Clause

**Answer: C**

**Explanation:**

As per the order of dictionary :

= Cigar -> Cinema -> Clause -> Clever -> Client

Thus, first word is **Cigar**

=> Ans - (C)

**Question 33**

In the following question, select the missing number from the given series.

34, 69, 140, 283, ?, 1145

**A** 440

**B** 545

**C** 570

**D** 625

**Answer: C**

**Explanation:**

The pattern followed is :

$$34 \times 2 + 1 = 69$$

$$69 \times 2 + 2 = 140$$

$$140 \times 2 + 3 = 283$$

$$283 \times 2 + 4 = \mathbf{570}$$

$$570 \times 2 + 5 = 1145$$

=> Ans - (C)

**Question 34**

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

CX, EV, GT, IR, ?

**A** LP

**B** LQ

**C** KP

**D** KQ

**Answer: C**

**Explanation:**

Series : CX, EV, GT, IR, ?

The pattern followed in each letter of the terms is :

1st letter : C (+2 letters) = E (+2 letters) = G (+2 letters) = I (+2 letters) = K

2nd letter : X (-2 letters) = V (-2 letters) = T (-2 letters) = R (-2 letters) = P

Thus, missing term = **KP**

=> Ans - (C)

**Question 35**

In a row of boys, Rahul is 19th from top and Ajay is 21st from bottom. They interchange their position. now becomes 28th from bottom. How many total boys are there in the row?

**A** 47

**B** 46

**C** 45

**D** 48

**Answer: B**

**Explanation:**

Rahul's position from top = 19th

When Ajay goes to Rahul's position, Ajay's new position = 28th from bottom = Rahul's original position

=> Total number of boys =  $(19 + 28) - 1 = 46$

=> Ans - (B)

**Question 36**

From the given alternatives, select the word which CANNOT be formed using the letters of the given Liabilities

**A** Lite

**B** Able

**C** Like

**D** Table

**Answer: C**

**Explanation:**

The word LIABILITIES does not contain any 'K', thus the term **Like** cannot be formed.

=> Ans - (C)

**Question 37**

In a certain code language, "HARMS" is written as "81181319" and "FLUTE" is written as "61221205". is "WOUND" written in that code language?

**A** 21144152

**B** 21441514

**C** 231521144

**D** 171921415

**Answer: C**

**Explanation:**

The letters are numbered on the basis of their position according to the English alphabetical order. A=1 , B=2 , C=3 , D=4 and so on.

Eg :- HARMS = 8,1,18,13,19 -> 81181319

FLUTE = 6,12,21,20,5 -> 61221205

Similarly, WOUND = 23,15,21,14,4 -> **231521144**

=> Ans - (C)

**Question 38**

In a certain code language, '÷' represents '+', '-' represents 'x', '+' represents '÷' and 'x' represents '-'. Find the answer to the following question.

**$8 \div 14 - 20 + 5 \times 2 = ?$**

**A** 46

**B** 62

**C** 32

**D** 14

**Answer: B**

**Explanation:**

Expression :  $8 \div 14 - 20 + 5 \times 2 = ?$

$$\equiv 8 + 14 \times 20 \div 5 - 2$$

$$= 8 + (14 \times 4) - 2$$

$$= 6 + 56 = 62$$

$\Rightarrow$  Ans - (B)

**Question 39**

The following equation is incorrect. Which two signs should be interchanged to correct the equation?

$$6 \times 5 + 20 \div 4 = 31$$

A + and  $\div$

B + and  $\times$

C - and +

D  $\div$  and  $\times$

**Answer: B**

**Explanation:**

Expression :  $6 \times 5 + 20 \div 4 = 31$

(A) : + and  $\div$

$$\equiv 6 \times 5 \div 20 + 4 = 31$$

$$\text{L.H.S.} = \frac{30}{20} + 4 = 5.5 \neq \text{R.H.S.}$$

(B) : + and  $\times$

$$\equiv 6 + 5 \times 20 \div 4 = 31$$

$$\text{L.H.S.} = 6 + \frac{100}{4} = 6 + 25 = 31 = \text{R.H.S.}$$

$\Rightarrow$  Ans - (B)

**Question 40**

If  $70 \times 10 = 7$ ,  $50 \times 5 = 10$  and  $10 \times 5 = 2$ , then find the value of  $80 \times 1 = ?$

A 45

B 25

C 20

D 80

**Answer: D**

**Explanation:**

Given :  $70 \div 10 = 7$ ,  $50 \div 5 = 10$  and  $10 \div 5 = 2$

If we replace ' $\times$ ' with ' $\div$ ', then L.H.S. = R.H.S.

Eg :-  $\frac{70}{10} = 7$

and  $\frac{50}{5} = 10$

and  $\frac{10}{5} = 2$

Similarly,  $\frac{80}{1} = 80$

=> Ans - (D)

**Question 41**

Which of the following terms follows the trend of the given list?

XYXYXYxy, XYXYXyxY, XYXYxyXY, XYyxYXY, XYxyXYXY, \_\_\_\_\_.

A xyXYXYXY

B XYXYXYxy

C XYXYXyxY

D XyxYXYXY

**Answer: D**

**Explanation:**

Expression : XYXYXYxy, XYXYXyxY, XYXYxyXY, XYyxYXY, XYxyXYXY, \_\_\_\_\_.

The pattern followed is that in each term there are 4 combinations of 'XY' and in each term, the last two terms in decreasing order are small alphabets.

Thus, in the missing term, the second and third term will be small = **XyxYXYXY**

=> Ans - (D)

**Question 42**

Two trucks start from the same warehouse. Truck A goes 6 km North, then turns to its right and goes 4 km. In the meanwhile truck B goes 9 km East, then turns North and goes 6 km, then turns to its right and goes 4 km. Where is truck B with respect to truck A?



- A 17 km East
- B 9 km West
- C 17 km West
- D 9 km East

**Answer: D**

#### Question 43

In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

**Statement I: No mirrors are glass**

**Statement II: No reflective are mirrors**

**Conclusion I: All glass are reflective**

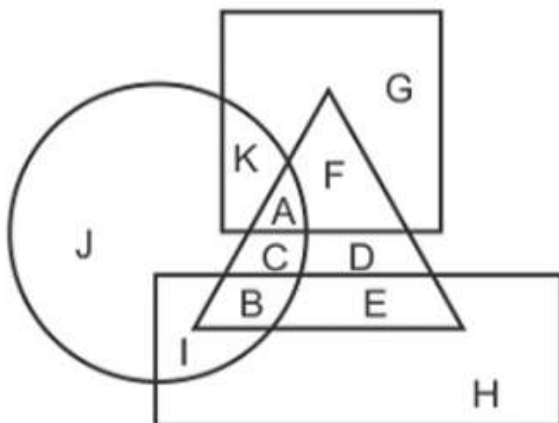
**Conclusion II: All reflective are glass**

- A Only conclusion I follows
- B Only conclusion II follows
- C Both conclusions I and II follow
- D Neither conclusion I nor conclusion II follows

**Answer: D**

#### Question 44

In the following figure, rectangle represents Copywriters, circle represents Cartoonists, triangle represents Comedians and square represents Mothers. Which set of letters represents Copywriters who are neither Comedians nor Mothers?



A BE

B CD

C AF

D IH

**Answer:** D

#### Question 45

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

NIP, KGO, HEN, ECM, ?

A CBM

B BAL

C CAL

D BBM

**Answer:** B

#### Explanation:

Series : NIP, KGO, HEN, ECM, ?

The pattern followed in each letter of the terms is :

1st letter : N (-3 letters) = K (-3 letters) = H (-3 letters) = E (-3 letters) = B

2nd letter : I (-2 letters) = G (-2 letters) = E (-2 letters) = C (-2 letters) = A

3rd letter : P (-1 letter) = O (-1 letter) = N (-1 letter) = M (-1 letter) = L

Thus, missing term = **BAL**

=> Ans - (B)

#### Question 46

In the following question, select the missing number from the given series.

146, 137, 128, ?, 110, 101

A 123

B 121

**C** 117

**D** 119

**Answer: D**

**Explanation:**

'9' is subtracted from all the numbers.

$$146 - 9 = 137$$

$$137 - 9 = 128$$

$$128 - 9 = \mathbf{119}$$

$$119 - 9 = 110$$

$$110 - 9 = 101$$

$\Rightarrow$  Ans - (D)

**Question 47**

In the following question, four groups of three numbers are given. In each group the second and third number are related to the first number by a Logic/Rule/Relation. Three are similar on basis of same Logic/Rule/Relation. Select the odd one out from the given alternatives.

**A** (44, 42, 36)

**B** (56, 54, 48)

**C** (38, 36, 32)

**D** (64, 62, 56)

**Answer: C**

**Explanation:**

The numbers are of the form :  $(x, x - 2, x - 8)$

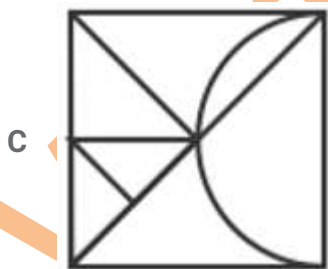
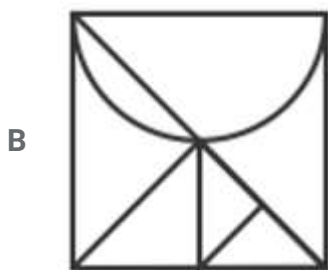
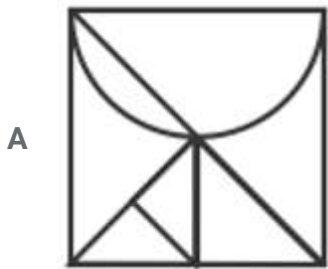
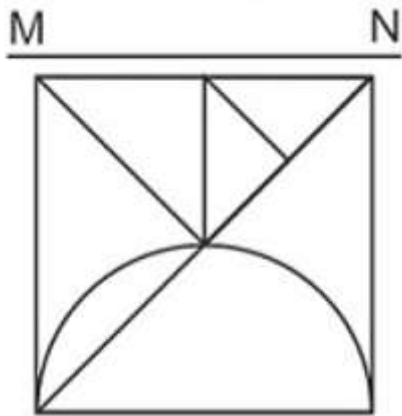
But in the third option, we have  $= 38 - 8 = 30 \neq 32$

Thus, (38, 36, 32) is the odd one out.

$\Rightarrow$  Ans - (C)

Question 48

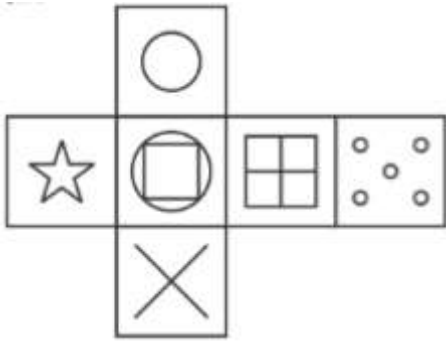
If a mirror is placed on the line MN, then which of the answer figures is the right image of the given figure?



Answer: B

Question 49

Which of the following cube in the answer figure cannot be made based on the unfolded cube in the question figure?



Answer: D

### Question 50

A word is represented by only one 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 columns 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 and next by its column, for example T can be represented by 21, 42 etc and can be represented by 69, 89 etc. Similarly, you have to identify the set for the word 'TENS'.

Matrix - I					
	0	1	2	3	4
0	L	G	J	G	B
1	F	M	H	B	E
2	E	I	D	F	H
3	J	K	B	M	D
4	L	M	I	A	N

Matrix - II					
	5	6	7	8	9
5	V	U	W	X	X
6	Q	S	P	V	Y
7	V	Q	V	S	O
8	N	P	U	N	Y
9	T	W	X	U	V

A 95,14,85,78

B 10,56,24,99

C 20,96,41,69

D 24,77,22,78

**Answer:** A

**Explanation:**

(A) : 95,14,85,78 = TENS

(B) : 10,56,24,99 = FUHV

(C) : 20,96,41,69 = EWMY

(D) : 24,77,22,78 = HVDS

=> Ans - (A)

## 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 51

She was (a)/ quite amusing (b)/ at that story. (c)/ No error (d)

- A She was
- B quite amusing
- C at that story
- D No error

**Answer: B**

#### Question 52

Money bills could only be introduced in the Lok Sabha, (a)/ and upon being passed, are sent to the Rajya Sabha, (b)/ where it can be deliberated upon for upto 14 days. (c)/ No error (d)

- A Money bills could only be introduced in the Lok Sabha
- B and upon being passed, are sent to the Rajya Sabha
- C where it can be deliberated upon for upto 14 days
- D No error

**Answer: A**

#### 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 53

I \_\_\_\_\_ not attend the party.

- A probably be
- B will be
- C won't
- D shall

**Answer: D**

#### Question 54

Happy thoughts release hormones that work for our well-being and negative thoughts release hormones that make us \_\_\_\_.

- A ill
- B happy
- C excited
- D rejuvenated

**Answer: A**

#### Instructions

In the following question, out of the given four alternatives, select the one which best expresses the meaning of the given word.

#### Question 55

**Accolade**

- A Silence
- B Mediocrity
- C Laurels
- D Lowliness

**Answer: C**

#### Question 56

**Invective**

- A Invent
- B Expressive
- C Abusive
- D Invitation

**Answer: C**



### Instructions

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

#### Question 57

**Elated**

- A Inspired
- B Cheered
- C Disheartened
- D Encouraged

**Answer: C**

#### Question 58

**Baneful**

- A Harmful
- B Cruel
- C Disastrous
- D Lucky

**Answer: D**

### Instructions

For the following questions answer them individually

#### Question 59

- Rearrange the parts of the sentence in correct order.

To many women human rights are

P : foreign to their culture and

Q : of individual and community identity

R : challenge deeply held notions

- A PQR
- B RPQ

**C** QPR

**D** PRQ

**Answer: D**

**Question 60**

**A sentence has been given in Active/Passive Voice. Out of the four given alternatives, select the one which best expresses the same sentence in Passive/Active Voice.**

**Some girls were helping the wounded men.**

**A** The wounded men were helping some girls.

**B** The wounded men were being helped by some girls.

**C** The wounded men are being helped by some girls.

**D** The wounded men received help from some girls.

**Answer: B**

**Question 61**

**A sentence has been given in Direct/Indirect Speech. Out of the four given alternatives, select the one which best expresses the same sentence in Indirect/Direct Speech.**

**Shyam said, "My master is eating."**

**A** Shyam inform that his master is eating.

**B** Shyam say that his master is eating.

**C** Shyam and his master was eating.

**D** Shyam said that his master was eating.

**Answer: D**

**Question 62**

**In the following question, a word has been written in four different ways out of which only one is correctly spelt. Select the correctly spelt word.**

**A** Asassination

- B Assassination
- C Assassination
- D Assaissination

**Answer: C**

### Instructions

In the following passage, some of the words have been left out. Read the passage carefully and select the correct answer for the given blank out of the four alternatives.

A little thought will show you how vastly your own \_\_\_\_\_ depends on the way other people bear themselves toward you. The looks \_\_\_\_\_ tones at your breakfast-table, the conduct of \_\_\_\_\_ fellow-workers or employers, the \_\_\_\_\_ or unreliable men you deal with, what people say to you on the street, the way your cook and housemaid do their work, the letters you get, the friends or foes you meet,-- these things make \_\_\_\_\_ very much of the pleasure or misery of your day.

### Question 63

how vastly your own \_\_\_\_\_ depends on the way

- A happiness
- B happy
- C happily
- D happiest

**Answer: A**

### Question 64

The looks \_\_\_\_\_ tones at your breakfast-table

- A but
- B if
- C then
- D and

**Answer: D**

**Question 65**

the conduct of \_\_\_\_\_ fellow-workers

- A you
- B your
- C them
- D they

**Answer: B**

**Question 66**

employers, the \_\_\_\_\_ or unreliable men

- A faithful
- B faith
- C faithfully
- D faithfulness

**Answer: A**

**Question 67**

things make \_\_\_\_\_ very much of the pleasure

- A up
- B upon
- C above
- D on

**Answer: A**

**Instructions**

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

### Question 68

**At somebody's expense**

- A Paid for by someone.
- B To blame a crime on someone else.
- C The unlucky persons who lose a race.
- D If one person benefits it is always at the loss of another.

**Answer: A**

### Question 69

**Cock and bull story**

- A An implausible story used as an explanation or excuse.
- B A fairy tale told down generations.
- C A story of animals with hidden morals.
- D The meek can defeat the bully by being clever.

**Answer: A**

### Instructions

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

### Question 70

**An upright bar, post, or frame forming a support or barrier**

- A Repose
- B Stanchion
- C Recumbent
- D Supine

**Answer: B**

### Question 71

A routine task, especially a household one

- A Chore
- B Servitude
- C Moil
- D Travail

**Answer: A**

### Instructions

In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select "no improvement".

### Question 72

Opening the door to her each morning is like (lets) a breath of fresh air into my world.

- A let
- B to let
- C letting
- D no improvement

**Answer: C**

### Question 73

What seeds you (has sow) in the garden of your mind determine the quality of life you shall have.

- A sowing
- B sow
- C had sow
- D no improvement

**Answer: B**

**Instructions**

For the following questions answer them individually

**Question 74**

The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph.

If your ward talks

A-well to convince you, be

B-social and interpersonal creativity

C-proud that he or she has

**A** ABC

**B** ACB

**C** CBA

**D** CAB

**Answer: B**

**Question 75**

In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word.

**A** arbitrates

**B** arbitrates

**C** arbetrates

**D** arbettrates

**Answer: B**

## **General Awareness**

**Instructions**

For the following questions answer them individually

**Question 76**

**"Global Competitiveness Report" is released by which of the following organization?**

- A** WTO
- B** WEF
- C** SAARC
- D** EU

**Answer: B**

**Question 77**

**Economic planning in India is in\_\_\_\_\_.**

- A** Union List
- B** State list
- C** Concurrent List
- D** No option is correct.

**Answer: C**

**Question 78**

**Which of the following indicates the circle of the Saranath Pillar?**

- A** Law
- B** Revolution
- C** Progress
- D** Religion

**Answer: C**

**Question 79**

**Which of the following is related to the Tinkathiya Pratha?**



- A** Champaran
- B** Kheda
- C** Bardoli
- D** Darbhanga

**Answer: A**

**Question 80**

The distance between the two latitudes is approximately \_\_\_\_\_.

- A** 111 miles
- B** 121 miles
- C** 111 km
- D** 121 km

**Answer: C**

**Question 81**

Which place is now known as 'White Water' in India?

- A** Leh
- B** Ladakh
- C** Kargil
- D** Siachen

**Answer: D**

**Question 82**

Leela Samson is associated to which classical dance style?

- A** Bharatanatyam
- B** Kathakali

**C** Kuchipudi

**D** Odissi

**Answer: A**

**Question 83**

**At which place a joint military exercise 'Yudh Abhyas' was held in September 2017 between United States and Indian army?**

**A** Pune

**B** Newyork

**C** Vishakhapatnam

**D** Washington

**Answer: D**

**Question 84**

**Which Bollywood actor was honoured with the 24 th Crystal Award at the world Economic Forum meeting in January 2018?**

**A** Shahrukh Khan

**B** Aamir Khan

**C** Salman Khan

**D** Saif Ali Khan

**Answer: A**

**Question 85**

**The saffron orange colour of Bhutan's national flag symbolizes \_\_\_\_\_.**

**A** the authority of the king

**B** the secular power of the country

**C** the practice of religion

**D** the purity of the country

**Answer: C**

**Question 86**

**How CNG is a cleaner fuel?**

**I. It produces oxides of Sulphur and Nitrogen in very small amounts.**

**II. It makes environment less polluted.**

**III. It emits less greenhouse gases.**

**A** Only I and II

**B** Only II and III

**C** Only I and III

**D** All I, II and III

**Answer: D**

**Question 87**

**In a compound the elements are always present in definite proportions by**

**A** mass

**B** volume

**C** size

**D** No option is correct.

**Answer: A**

**Question 88**

**The Chief Election Commissioner of India holds the office for \_\_\_\_.**

**A** 60 years of age or for six years, whichever early

**B** 65 years of age or for six years, whichever early

**C** 70 year of age or for six years, whichever early

**D** 55 year of age or for five years, whichever early

**Answer: B**

**Question 89**

**The Attorney General of India is the \_\_\_\_\_ of the Government of India.**

- A** Chief Account Officer
- B** Chief Law Officer
- C** Chief Audit Officer
- D** Chief Election Officer

**Answer: B**

**Question 90**

**Which of the following is a CORRECT relation of length of small intestines of an herbivore and a carnivore?**

- A** Herbivore = Carnivore
- B** Herbivore < Carnivore
- C** Herbivore > Carnivore
- D** No option is correct.

**Answer: C**

**Question 91**

**Limbs of frog, lizard, bird and human are example of \_\_\_\_\_ organs.**

- A** Homogenous
- B** Heterogeneous
- C** Analogous
- D** Homologous

**Answer: D**

**Question 92**

**Energy Efficiency Services Limited (EESL) launched UJALA scheme in which country in September, 2017?**

- A** Indonesia
- B** Malaysia
- C** Maldives
- D** Australia

**Answer: B**

**Question 93**

**India's fastest and first multi - petaflops supercomputer named Pratyush was unveiled at \_\_\_\_.**

- A** Indian Institute of Science, Bangalore
- B** Indian Space Research Organisation, Bangalore
- C** Indian Institute of Tropical Meteorology, Pune
- D** Indian Institute of Technology, New Delhi

**Answer: C**

**Question 94**

**In December 2017, SEBI raised the investment limit for FPIs in central government securities to over from January 2018.**

- A** Rs 1.91 lakh crore
- B** Rs 3.91 lakh crore
- C** Rs 5.91 lakh crore
- D** Rs 0.91 lakh crore

**Answer: A**

**Question 95**

On 8 June 2017, Law Ministry cleared the Prevention of Cruelty to Animals (Karnataka Amendment) Bill, 2017. It will help in legislating\_\_\_\_\_.

- A Jalikattu
- B Cockfight
- C Bailgadi Shariat
- D Kambala

**Answer: D**

**Question 96**

What is the resistance (in  $\Omega$ ) of an electrical component if a current of 0.1 A passes through it on application of 5 V of potential difference across it?

- A 0.5
- B 100
- C 50
- D 1

**Answer: C**

**Question 97**

The motion of a freely falling body is an example of \_\_\_\_\_ accelerated motion.

- A non uniformly
- B uniformly
- C uniquely
- D specially

**Answer: B**

**Question 98**

Increased wind speed is accompanied by a reduced air \_\_\_\_\_.

- A humidity
- B pressure
- C density
- D aridity

**Answer: B**

**Question 99**

Which of the statements given below are correct?

- A) In 2017, Sebastian Vettel raced in Formula One for Ferrari.
- B) Grigor Dimitrov won the Tennis 2017 Cincinnati Masters Men's Singles.
- C) In 2017 Pro Kabaddi League, Nitin Tomar played for Jaipur Pink Panthers.

- A A and B
- B A and C
- C B and C
- D None of these

**Answer: A**

**Question 100**

In Microsoft Word, \_\_\_\_\_ are small dots, squares, dashes or graphics that are often seen before the text.

- A Indentation
- B Bullets
- C Numbering
- D Tabs

**Answer: B**

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