SSC CHSl 14 March 2018 Morning Shift

Quant

Instructions

For the following questions answer them individually

Question 1

What least number can be multiplied by 165375 to make it a perfect cube?

A 2

B 5

C 7

D 49

Answer: C

Explanation:

Prime factorisation of $165375 = 3^3 \times 5^3 \times 7^2$

Now, the exponents of 3 and 5 are divisible by 3 (for perfect cube) and we need one more '7' so that exponent of 7 can also get divisible by 3.

=> 165375 should be multiplied by **7** to make it a perfect cube.

=> Ans - (C)

Question 2

Find the sum of 0.99995 + 0.88885 + 0. 77775 + 0.66665 +0.55555

A 3.88875

B 2.88875

C 3.6875

D 2.9875

Answer: A

Explanation:

Expression : 0.99995 + 0.88885 + 0. 77775 + 0.66665 + 0.55555

= **3.88875**

=> Ans - (A)

Question 3

If $X + \frac{4}{X} = 4$, then find the value of $X^6 + 1$.

A   51

B   65

C   78

D   82

    Answer: B

Explanation:

Expression : $X + \frac{4}{X} = 4$

=> $\frac{x^2+4}{x} = 4$

=> $x^2 - 4x + 4 = 0$

=> $(x-2)^2 = 0$

=> $x - 2 = 0$

=> $x = 2$

$\therefore X^6 + 1 = (2)^6 + 1$

= $64 + 1 = 65$

=> Ans - (B)

Question 4

If Y:X:Z=4:5:6, then find the value of $\frac{X-Y+Z}{X+Y-Z}$.

A $\frac{3}{3}$

B $\frac{3}{7}$

C $\frac{5}{7}$

D $\frac{7}{3}$

    Answer: D

Explanation:

Given = $Y : X : Z = 4 : 5 : 6$

Let $X = 5, Y = 4$ and $Z = 6$

To find : $\frac{X-Y+Z}{X+Y-Z}$

= $\frac{5-4+6}{5+4-6} = \frac{7}{3}$

Question 5

If the length of the three sides of a triangle is 5 cm, 12 cm and 13 cm respectively, then calculate the length (in cm) of the median of side AC of the given triangle.

A 5

B 6

C 6.5

D 7

Answer: C

Explanation:

Sides of triangle = 5, 12 and 13 cm

Clearly, the given angle is a right angled triangle, $\because (13)^2 = (5)^2 + (12)^2$, where length of hypotenuse = 13 cm

Also, in a right angled triangle, length of median = half of hypotenuse

=> Median = $\frac{1}{2} \times 13 = 6.5$ cm

=> Ans - (C)

Question 6

What will be the value of the angle (in degrees) subtended by the chord in the minor segment of the circle, if the length of a chord is equal to the radius of the circle?
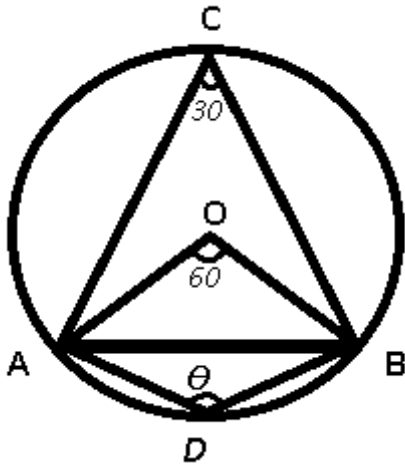
A $120°$

B $150°$

C $160°$

D $180°$

Answer: B

Explanation:

Given : Radius and the chord of the circle are equal in length.

To find : $\angle$ ADB = θ = ?

Solution : It is given that the radius and the chord of the circle are equal in length.

=> OA = OB = AB

=> AOB is an equilateral triangle, => $\angle$ AOB = $60°$

Now, the angle subtended by an arc at the centre is double the angle subtended by it at any point on the circle.

=> $\angle$ ACB = $\frac{60}{2} = 30°$

Quadrilateral ADBC is a cyclic quadrilateral where sum of opposite angles = $180°$

=> $\angle$ ACB + $\angle$ ADB = $180°$

=> $30° + \theta = 180°$

=> $\theta = 180° - 30° = 150°$

=> Ans - (B)

Question 7

What is the value of 30% of 125 + 45% of 300?

A 165

B 172.5

C 155

D 163.5

   Answer: B

Explanation:

Expression : 30% of 125 + 45% of 300

= $\left(\frac{30}{100} \times 125\right) + \left(\frac{45}{100} \times 300\right)$

= $37.5 + 135 = 172.5$

Question 8

If A : B = 5 : 3, then what is the value of (A + B) : (A - B)?

A   4 : 1

B   2 : 1

C   4 : 3

D   8 : 3

Answer: A

Explanation:

Given = A : B = 5 : 3

Let $A = 5$ and $B = 3$

To find = (A + B) : (A - B)

= $\frac{(5+3)}{(5-3)}$

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

$\therefore (A + B) : (A - B) = 4 : 1$

=> Ans - (A)

Question 9

How many kg of rice at Rs 54 per kg must be mixed with 30 kg of rice at Rs 40 per kg, so that on selling the mixture at Rs 48.4 per kg, there will be a profit of 10%?

A   22

B   18

C   15

D   12

Answer: D

Explanation:

Let x kg of rice at Rs 54 per kg must be mixed.

Selling price of final mixture = Rs. 48.4/kg at 10% profit

=> Cost price of final mixture = $\frac{48.4}{(100+10)} \times 100 = Rs.\ 44$

According to ques,

=> $(54 \times x) + (30 \times 40) = 44 \times (x + 30)$

=> $54x + 1200 = 44x + 1320$

=> $54x - 44x = 1320 - 1200$

=> $10x = 120$

=> $x = \frac{120}{10} = 12$ kg

=> Ans - (D)

Question 10

The average weight of X, Y and Z is 35 kg. If the average weight of X and Y is 33 kg and that of Y and Z is 29 kg, then what is the weight (in kg) of Y?

A 19

B 23.5

C 27

D 37

Answer: A

Explanation:
Let weight of X, Y and Z be x, y, z kg respectively.

Average weight of X, Y and Z = $\frac{(x+y+z)}{3} = 35$

=> $x + y + z = 35 \times 3 = 105$ -----------(i)

Also, average weight of X and Y = $\frac{(x+y)}{2} = 33$

=> $x + y = 66$ -----------(ii)

Similarly, $y + z = 58$ ----------(iii)

Adding equations (ii) and (iii), => $x + 2y + z = 124$ ---------(iv)

Subtracting equation (i) from (iv), we get :

=> $y = 124 - 105 = 19$

∴ Weight of Y = **19** kg

=> Ans - (B)

Question 11

Some part of Rs.9500 was lent at the rate of 15% per annum simple interest and the remaining part at the rate of 20% per annum simple interest. The total interest received after $\frac{3}{2}$ years is Rs.2565. What is the ratio of money lent at the rate of 15% and 20%?

A 11 : 8

B 12 : 7

C 2 : 3

D 5 : 4

Answer: C

Explanation:

Let sum lent for 15% = Rs. $100x$ and sum lent for 20% = Rs. $(9500 - 100x)$

Time period = $\frac{3}{2} = 1.5$ years

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

According to ques,

=> $\frac{100x \times 15 \times 1.5}{100} + \frac{(9500 - 100x) \times 20 \times 1.5}{100} = 2565$

=> $22.5x + (95 - x) \times 30 = 2565$

=> $22.5x + (95 \times 30) - 30x = (95 \times 27)$

=> $-7.5x = 95(27 - 30)$

=> $x = \frac{95 \times 3}{7.5} = 38$

$\therefore$ Required ratio = $\frac{100 \times 38}{9500 - (100 \times 38)}$

= $\frac{3800}{5700} = 2 : 3$

=> Ans - (C)

Question 12

If 80% of total articles are sold at a loss of 15% and remaining articles are sold at a profit of 15%, then what will be the overall loss percentage?

A 15

B 6

C 9

D 12

Answer: C

Explanation:

Let total number of articles be 100 and price of each article = Re. 1

=> Total cost price of 100 articles = Rs. 100

Number of articles sold at 15% loss = $\frac{80}{100} \times 100 = 80$

Selling price of 80 articles = $80 - \left(\frac{15}{100} \times 80\right) = Rs.\,68$

=> Number of articles sold at 15% profit = $100 - 80 = 20$

Selling price of 20 articles = $20 + \left(\frac{15}{100} \times 20\right) = Rs.\,23$

Thus, total selling price of 100 articles = Rs. $(68 + 23) = Rs.\,91$

$\therefore$ Overall loss % = $\frac{(100-91)}{100} \times 100 = 9\%$

=> Ans - (C)

Question 13

If three successive discounts of 10%, 15% and 30% are given, then what will be the net discount (in percentage)?

A   53.15

B   55

C   46.45

D   43.45

Answer: C

Explanation:

Let marked price = Rs. 100

After 1st discount of 10%, price = $100 - \left(\frac{10}{100} \times 100\right)$

= $100 - 10 = 90$

After 2nd discount of 15% (on changed price), selling price = $90 - \left(\frac{15}{100} \times 90\right)$

= $90 - 13.5 = Rs.\,76.5$

After 3rd discount of 30%, net selling price = $76.5 - \left(\frac{30}{100} \times 76.5\right)$

= $76.5 - 22.95 = Rs.\,53.55$

$\therefore$ Net discount = $\frac{(100-53.55)}{100} \times 100 = 46.45\%$

=> Ans - (C)

Question 14

Which of the following statement(s) is/are TRUE ?

I. $\sqrt{324} + \sqrt{3.24} + \sqrt{0.0324} = 19.98$
II. $\sqrt{129 + \sqrt{121} + \sqrt{361} + \sqrt{100}} = 13$

A Only I

B Only II

C Neither I nor II

D Both I and II

Answer: D

Explanation:

I : $\sqrt{324} + \sqrt{3.24} + \sqrt{0.0324} = 19.98$

L.H.S. = $18 + 1.8 + 0.18 = 19.98 =$ R.H.S.

II : $\sqrt{129 + \sqrt{121} + \sqrt{361} + \sqrt{100}} = 13$

L.H.S. = $\sqrt{129 + 11 + 19 + 10} = \sqrt{169} = 13 =$ R.H.S.

Thus, both I and II are correct.

=> Ans - (D)

Question 15

A is 40% more efficient than B. If B alone can complete a work in 42 days, then A alone can complete the same work in how many days?

A 36

B 40

C 30

D 32

Answer: C

Explanation:

Let total work to be done = 42 units

B can complete the work in 42 days, => B's efficiency = $\frac{42}{42} = 1$ unit/day

A is 40% more efficient than B, => A's efficiency = $1 + \left(\frac{40}{100} \times 1\right) = 1.4$ units/day

$\therefore$ Time taken by A = $\frac{42}{1.4} = 30$ days

=> Ans - (C)

Question 16

A train of length 180 metres crosses a tree in 15 seconds and crosses another train of the same length travelling in opposite direction in 20 seconds. What is the speed (in km/hr) of the second train?

A 21.6

B 6

C 33.4

D 36.6

Answer: A

Explanation:

Let speed of first train = x m/s and speed of second train = y m/s

Length of both trains = 180 m

Using, time = distance/speed

=> $x = \frac{180}{15} = 12$ m/s

The trains are moving in opposite direction, thus relative speed = $(x + y) = (12 + y)$ m/s

and distance = $180 + 180 = 360$ m

=> $12 + y = \frac{360}{20} = 18$

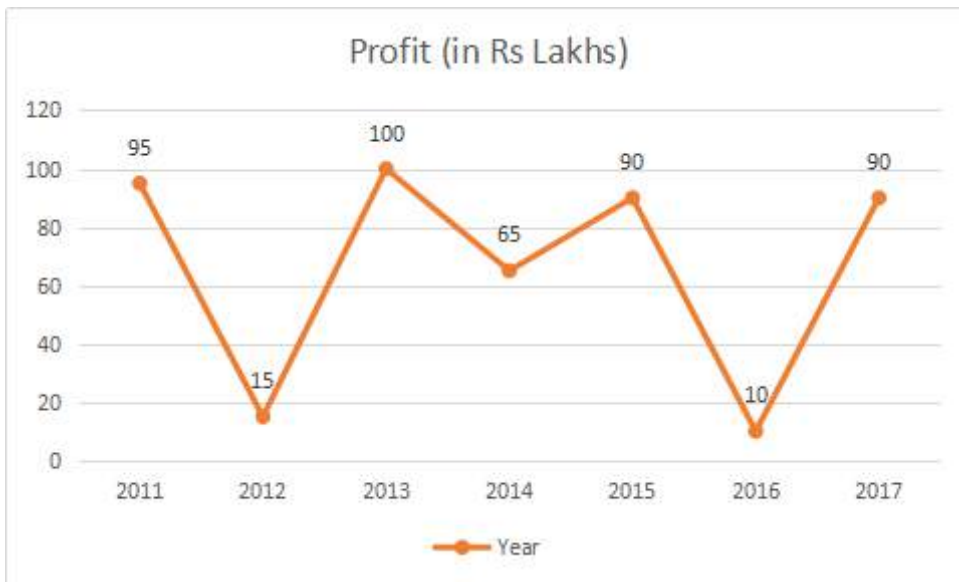=> $y = 18 - 12 = 6$ m/s

$\therefore$ Speed (in km/hr) of the second train = $6 \times \frac{18}{5} = 21.6$

=> Ans - (A)

Instructions

The line graph shows the profits of a certain company. Study the diagram and answer the following questions.

Profit (in Rs Lakhs)

Question 17

In which year were the profits greater than that of the previous year?

A 2013

B 2012

C 2014

D 2016

    Answer: A

Explanation:

In **2013**, 2015 and 2017, the profits were greater than that of the previous year.

=> Ans - (A)

Question 18

What was the difference in the profits (in Rs lakhs) between the years 2014 and 2013?

A 30

B 25

C 40

D 35

    Answer: D

Explanation:

Profits (in Rs lakhs) in 2013 = 100

Profits (in Rs lakhs) in 2014 = 65

=> Required difference = $100 - 65 = 35$

=> Ans - (D)

Question 19

The profits in 2012 were greater than that in 2016 by _____.

A   16.70%

B   5%

C   50%

D   33.30%

   Answer: C

Explanation:
Profits (in Rs lakhs) in 2012 = 15

Profits (in Rs lakhs) in 2016 = 10

=> Required % = $\frac{(15-10)}{10} \times 100$

= $5 \times 10 = 50\%$

=> Ans - (C)

Question 20

What were the total profits (in Rs lakhs) of the company in the last four years?

A   250

B   245

C   255

D   240

   Answer: C

Explanation:
Total profits (in Rs lakhs) of the company in the last four years (in 2014, 2015, 2016 and 2017)

= 65 + 90 + 10 + 90

= 255

=> Ans - (C)

Instructions

For the following questions answer them individually

Question 21

The length and breadth of a rectangle are 21 cm and 20 cm respectively. What must be the length of its diagonal (in cm)?

A 58

B 18

C 36

D 29

Answer: D

Explanation:
Length of rectangle, $l = 21$ cm and breadth, $b = 20$ cm

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

=> $d = \sqrt{(21)^2 + (20)^2}$

=> $d = \sqrt{441 + 400} = \sqrt{841}$

=> $d = 29$ cm

=> Ans - (D)

Question 22

If the measure of the interior angle of a regular polygon is $108°$ greater than the measure of its exterior angle then how many sides does it have?

A 10

B 12

C 15

D 18

Answer: A

Explanation:
Let the number of sides of the polygon = n

Sum of all interior angles = $(n - 2) \times 180°$

Sum of all exterior angles = $360°$

According to ques,

=> $\frac{(n-2) \times 180°}{n} - \frac{360°}{n} = 108°$

=> $180n - 360 - 360 = 108n$

=> $180n - 108n = 720$

=> $n = \frac{720}{72} = 10$

=> Ans - (A)

Question 23

Find the volume $\left(in\,cm^3\right)$ of a sphere of diameter 21 cm.

A 4851

B 3628

C 3071

D 3724

Answer: A

Explanation:

Diameter of sphere = 21 cm

Volume of sphere = $\frac{4}{3} \times \pi r^3$

= $\frac{4}{3} \times \frac{22}{7} \times \left(\frac{21}{2}\right)^3$

= $11 \times 441 = 4851\ cm^3$

=> Ans - (A)

Question 24

What is the value of $\left(\frac{1}{3} - sec45°\right)$?

A $\frac{(4-\sqrt{3})}{2}$

B $\frac{(\sqrt{6}-1)}{\sqrt{3}}$

C $\frac{(1-3\sqrt{2})}{3}$

D $\frac{(\sqrt{2}-1)}{\sqrt{2}}$

Answer: C

Explanation:

Expression : $\left(\frac{1}{3} - sec45°\right)$

= $\frac{1}{3} - \sqrt{2}$

$= \frac{(1-3\sqrt{2})}{3}$

=> Ans - (C)

Question 25

ΔABC is right angled at B. If $secA = \frac{5}{3}$, then what is the value of $cosecC$?
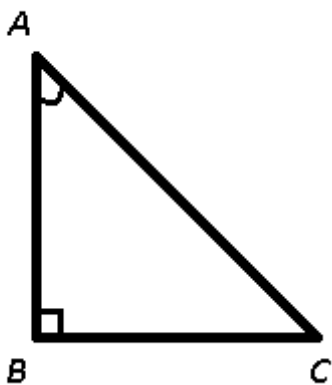
A $\frac{5}{3}$

B $\frac{3}{4}$

C $\frac{4}{5}$

D $\frac{4}{3}$

Answer: A

Explanation:

Given : $\sec A = \frac{5}{3}$

Also, $\sec A = \frac{AC}{AB} = \frac{5}{3}$

Let AC = 5 cm and AB = 3 cm

To find : $\operatorname{cosec} C = \frac{AC}{AB}$

$= \frac{5}{3}$

=> Ans - (A)

Reasoning

Instructions

For the following questions answer them individually

Question 26

In the following question, select the related word pair from the given alternatives.
Fatigue : Energy : : ? : ?

A   Tyre : Round

B   Car : Green

C   Fuel : Petrol

D   Drought : Flood

Answer: D

Explanation:
Expression = Fatigue : Energy : : ? : ?

The first and second words are opposite of each other, similarly only antonym pair given is *Drought : Flood*

=> Ans - (D)

Question 27

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

15 : 26 : : ? : ?

A   39 : 49

B   34 : 45

C   46 : 55

D   56 : 69

Answer: B

Explanation:
Expression = 15 : 26 : : ? : ?

The difference between the numbers = $26 - 15 = 11$

Similarly, only the difference between $45 - 34 = 11$

=> Ans - (B)

Question 28

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

HIK : KLN : : PQS : ?

A   TUW

B STV

C STU

D TUX

Answer: B

Explanation:
Expression = HIK : KLN : : PQS : ?

The pattern followed is :

H	I	K
(+3)	(+3)	(+3)
K	L	N

Similarly, for PQS : **STV**

P	Q	S
(+3)	(+3)	(+3)
S	T	V

=> Ans - (B)

Question 29

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

A Sorrow - Black

B Red - Danger

C Star - Rank

D Wheel - Progress

Answer: A

Question 30

In the following question, four number pairs are given. The number on left side of (-) is related to the number on 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 11 - 12

B 23 - 24

C 17 - 18

D 19 - 21

   Answer: D

Explanation:
The difference between each of the pair of numbers is 1.

But in the last option => $21 - 19 = 2$

Thus, (19 - 21) is the odd one out.

=> Ans - (D)

Question 31

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

A GMS

B LRX

C CIP

D EKQ

   Answer: C

Explanation:
(A) : G (+6 letters) = M (+6 letters) = S

(B) : L (+6 letters) = R (+6 letters) = X

(C) : C (+6 letters) = I (**+7** letters) = P

(D) : E (+6 letters) = K (+6 letters) = Q

=> Ans - (C)

Question 32

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

1. Friend
2. Fringe
3. Florist
4. Frighten
5. Future

A Friend

B Fringe

C Frighten

D Future

Answer: B

Explanation:

As per the order of dictionary :

= Florist -> Friend -> Frighten -> Fringe -> Future

Thus, the fourth word = **Fringe**

=> Ans - (B)

Question 33

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

9, 28, 86, 261, 787, ?

A 2366

B 1795

C 2175

D 2285

Answer: A

Explanation:

The pattern followed is :

$9 \times 3 + 1$ = 28

$28 \times 3 + 2$ = 86

$86 \times 3 + 3$ = 261

$261 \times 3 + 4$ = 787

$787 \times 3 + 5$ = **2366**

=> Ans - (A)

Question 34

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

CG, KO, SW, AE, ?

A JN

B MJ

C IM

D JL

 Answer: C

Explanation:

Series : CG, KO, SW, AE, ?

The pattern followed in each letter of the terms is :

1st letter : C (+8 letters) = K (+8 letters) = S (+8 letters) = A (+8 letters) = I

2nd letter : G (+8 letters) = O (+8 letters) = W (+8 letters) = E (+8 letters) = M

Thus, missing term = **IM**

=> Ans - (C)

Question 35

Manoj walks 12 metres towards north. Then turns right and walk another 12 metres. Then turn right and walks for 7 metres to reach college R. He again turns to his right and walks for 12 metres. What is the straight line distance (in metres) between the starting point and college R?
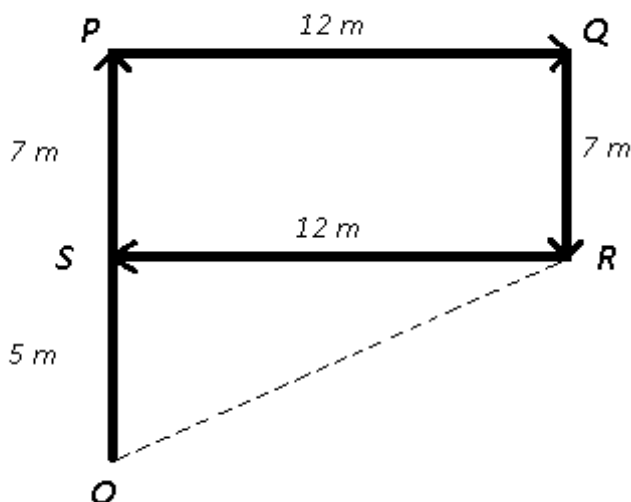
A $12\sqrt{2}$

B 13

C 14

D $14\sqrt{3}$

 Answer: B

Explanation:

Let Manoj start from point O and walks 12 metres towards north to reach P. Then turns right and walk another 12 metres eastwards to reach Q. Then turn right and walks for 7 metres southwards to reach college

R. He again turns to his right and walks for 12 metres.

Thus, $(OR)^2 = (OS)^2 + (SR)^2$

=> $(OR)^2 = (5)^2 + (12)^2$

=> $(OR)^2 = 25 + 144 = 169$

=> $OR = \sqrt{169} = 13$ m

=> Ans - (B)

Question 36

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

Xenophobia

A   Phone

B   Hope

C   Xerox

D   Open

   Answer: C

Explanation:
The word XENOPHOBIA does not contain any 'R', thus the term **Xerox** cannot be formed.

=> Ans - (C)

Question 37

In a certain code language, "REGAL" is written as "TCIYN". How is "FARMS" written in that code language?

A   RTHKU

B   HYTKU

C   GTHSR

D   NVKTH

   Answer: B

Explanation:
"REGAL" is written as "TCIYN"

The pattern followed is :

R	E	G	A	L
(+2)	(-2)	(+2)	(-2)	(+2)
T	C	I	Y	N

Similarly, for FARMS :

F	A	R	M	S
(+2)	(-2)	(+2)	(-2)	(+2)
H	Y	T	K	U

=> Ans - (B)

Question 38

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

$24 \div 14 - 5 + 10 \times 14 = ?$

A 39

B 45

C 27

D 17

Answer: D

Explanation:
Expression : $24 \div 14 - 5 + 10 \times 14 = ?$

$\equiv 24 + 14 \times 5 \div 10 - 14$

= $24 + \frac{70}{10} - 14$

= $10 + 7 = 17$

=> Ans - (D)

Question 39

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

$12 \times 4 - 6 \div 7 + 18 = 19$

A ÷ and -

B + and ÷

C   + and x

D   - and +

  Answer: A

Explanation:
Expression : $12 \times 4 - 6 \div 7 + 18 = 19$

(A) : ÷ and -

$\equiv 12 \times 4 \div 6 - 7 + 18 = 19$

L.H.S. = $\left(\frac{12}{6} \times 4\right) + 11$

= $(2 \times 4) + 11 = 19 =$ R.H.S.

=> Ans - (A)

Question 40

If 2Δ5 = 5, 2Δ3 = 3 and 8Δ4 = 16, then find the value of 16Δ8 = ?

A   18

B   14

C   16

D   64

  Answer: D

Explanation:
Given : 2Δ5 = 5, 2Δ3 = 3 and 8Δ4 = 16

If we replace 'Δ' with 'x', and divide the product by 2, we get the desired result.

Eg :- $\frac{2 \times 5}{2} = 5$

and $\frac{2 \times 3}{2} = 2$ and $\frac{8 \times 4}{2} = 16$

Similarly, $\frac{16 \times 8}{2} = 64$

=> Ans - (D)

Question 41

Which of the following terms follows the trend of the given list?
XXXXXXY, XXXXXYX, XXXXYXX, XXXYXXX, XXYXXXX, _____.

A   XYXXXXX

B   YXXXXXX

C   XXXXXXY

D XXXXXYX

   Answer: A

Explanation:

Expression : XXXXXXY, XXXXXYX, XXXXYXX, XXXYXXX, XXYXXXX, _____.

The pattern followed is that in each term there are combinations of 'X' and 'Y' (7 letters) and in each term, the position of Y is shifted one place to the left.

Thus, in the missing term, Y will be at the second position = **XYXXXXX**

=> Ans - (A)

Question 42

Two vans X and Y start from the same point. X travels 5 km West, then turns to its left and travels 3 km. Y travels 13 km South, then turns West and travels 5 km, then turns to its left and travels 7 km. Where is Y with respect to X now?

A 11 km South

B 17 km South

C 17 km North

D 11 km North

   Answer: B

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 fruits are berries
Statement II: Some cherries are fruits

Conclusion I: All berries are cherries
Conclusion II: Some cherries are berries

A Only conclusion I follows

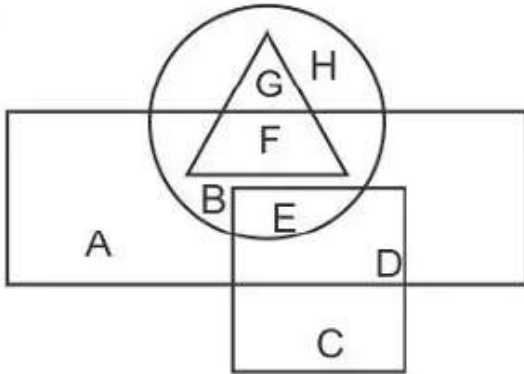**B** Only conclusion II follows

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 Dieticians, circle represents Racers, triangle represents Singers and square represents Cricketers. Which set of letters represents Dieticians who are either Racers or Singers?

A BED

B GH

C FBE

D ABC

Answer: C

Question 45

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

ARC, XOZ, ULW, ?, OFQ

A RIT

B KFT

C RAK

D SJQ

Answer: A

Explanation:
Series : ARC, XOZ, ULW, ?, OFQ

The pattern followed in each letter of the terms is :

1st letter : A (-3 letters) = X (-3 letters) = U (-3 letters) = R (-3 letters) = O

2nd letter : R(-3 letters) = O (-3 letters) = L (-3 letters) = I (-3 letters) = F

3rd letter : C(-3 letters) = Z (-3 letters) = W (-3 letters) = T (-3 letters) = Q

Thus, missing term = **RIT**

=> Ans - (A)

Question 46

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

152, 164, 176, 188, ?, 212

A 196

B 202

C 200

D 210

   Answer: C

Explanation:
'12' is added to all the numbers.

152 + 12 = 164

164 + 12 = 176

176 + 12 = 188

188 + 12 = **200**

200 + 12 = 212

=> Ans - (C)

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 (63, 74, 85)

B (97, 108, 119)

C (92, 103, 116)

D (74, 85, 96)

Answer: C

Explanation:
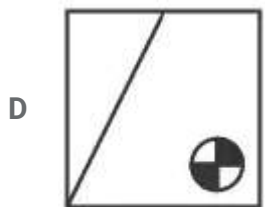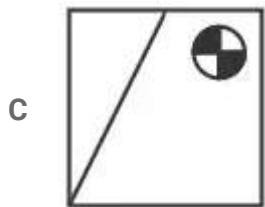
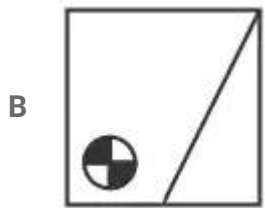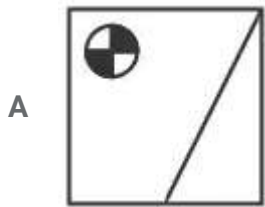The numbers are of the form : $(x, x + 11, x + 22)$

But in the third option, we have = $92 + 22 = 114 \neq 116$

Thus, (92, 103, 116) is the odd one out.

=> 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?

A

B

C

D

Answer: A

Question 49

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

A

B

C

D
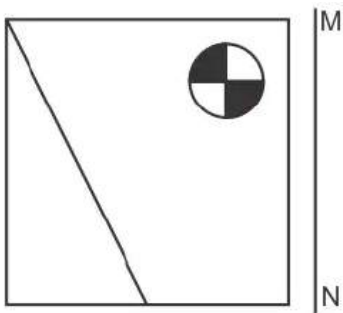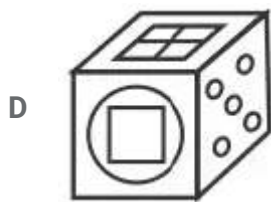
Answer: B

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 S to 9. A letter from these matrices can be represented first by i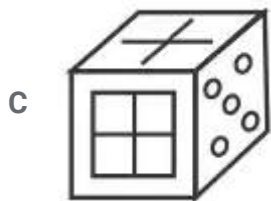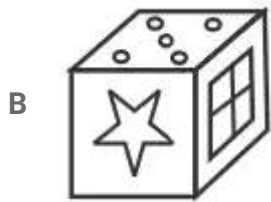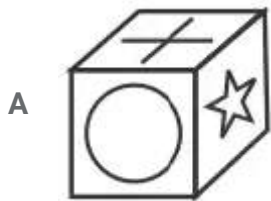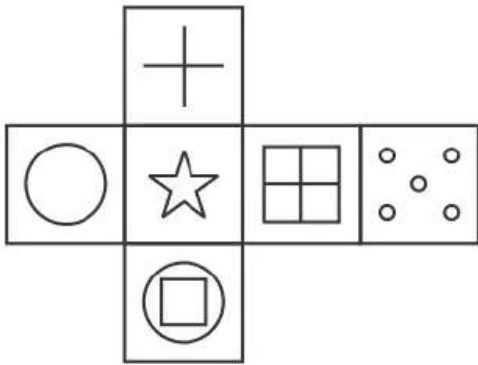ts row and next by its column, for example 'G can be represented by 31, 43 etc and 7' can be represented by 97, 69 etc. Similarly, you have to identify the set for the word 'LATE'.

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

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

A   44,23,96,20

B   13,96,14,57

C   22,96,43,95

D   41,77,30,59

Answer: A

Explanation:
(A) : 44,23,96,20 = **LATE**

(B) : 13,96,14,57 = GTKQ

(C) : 22,96,43,95 = ITGY

(D) : 41,77,30,59 = BSFP

=> 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

Needlessly to say, (a)/ we need more (b)/ environmentalists on this planet. (c)/ No error (d)

A   Needlessly to say

B we need more

C environmentalists on this planet

D No error

Answer: A

Question 52

A debit card is similar to a credit card, but unlike a (a)/ credit card, the money came directly from the (b)/ user's bank account when performing a transaction. (c)/ No error (d)

A A debit card is similar to a credit card, but unlike a

B credit card, the money came directly from the

C user's bank account when performing a transaction

D No error

Answer: B

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

One must read the Terms and Conditions _____.

A committedly

B scrutiny

C merely

D carefully

Answer: D

Question 54

The bees were buzzing around constantly, busy building their _____ pretty fast.

A hive

B live

C survive

D time

Answer: A

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

Question 55

Attenuate

A Weaken

B Expand

C Strengthen

D Intensify

Answer: A

Question 56

Omniscient

A Illiterate

B Arrogant

C All-knowing

D Local

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

Brindled

A Tabby

B Spotted

C Stippled

D Unflecked

   Answer: D

Question 58

Turbulence

A Disorder

B Agitation

C Peace

D Fight

   Answer: C

Instructions
For the following questions answer them individually

Question 59

Rearrange the parts of the sentence in correct order.

Libraries' collections are
P : such as economic development, educational
Q : research and recreational pursuits
R : crucial for diverse purposes

A RPQ

B QPR

C PQR

D PRQ

   Answer: A

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.

She found him lying on the road.

A She found him lying on the road.

B She found him on the road lying.

C He was found lying on the road.

D He is found lie on the road.

   Answer: C

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.

He said to her, "Is your name Anjali?"

A He asked her whether her name was Anjali.

B He inquire about her name being Anjali.

C He inquired to her, was not her name Anjali.

D He asked whether her name is not Anjali.

   Answer: A

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 Presume

B Perrume

C Preesume

D Preseme

   Answer: A

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.

Consciousness resembles a stream also in other particulars. A stream is _____ unbroken whole from its source to its mouth, and an observer stationed at one point cannot see all _____ it at once. He sees but the one little section which _____ to be passing his station point at the time. The current may look much the same from moment to moment, but the component particles which constitute the stream are _____ changing. So it is with our thought. Its stream is continuous from birth till death, _____ we cannot see any considerable portion of it at one time.

Question 63

A stream is _____ unbroken whole from

A a

B only

C an

D that

   Answer: C

Question 64

cannot see all _____ it at once.

A of

B form

C for

D off

   Answer: A

Question 65

section which _____ to be passing

A happens

B happen

C   happened

D   happening

   Answer: A

Question 66

the stream are _____ changing.

A   constantly

B   constant

C   constancy

D   constants

   Answer: A

Question 67

birth till death, _____ we cannot

A   because

B   if

C   then

D   but

   Answer: D

Instructions

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

Question 68

A penny for your thoughts

A   A way of asking what someone is thinking.

B   Another way of saying pennywise pound foolish.

C   An idea is less worth a penny unless it is executed successfully.

D Willing to share a secret only at a price.

Answer: A

Question 69

All in a day's work

A Even in routine work one can find instances of fun.

B Something unusual or difficult accepted as part of someone's normal routine.

C A lot of work which is done in just one day.

D Work all day on a job that you love.

Answer: B

Instructions

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

Question 70

A state of disorder due to absence or non-recognition of authority or othe controlling systems

A Anarchy

B Bridle

C Ascendancy

D Dominion

Answer: A

Question 71

A liquid with healing, magical, or poisonous properties

A Viscous

B Potion

C Dulcet

D Luscious

Answer: B

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

It must (has started) when I was eight or nine years old when the curse of cursive writing struck me.

A have started

B have start

C have starting

D no improvement

Answer: A

Question 73

The stove (to lit) using a match stick, each wick lit individually.

A were lit

B are lit

C was lit

D no improvement

Answer: C

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.

Yet, corporate redundancy
A-victims and the top
B-bosses continue to stay
C-policies have the employees as the first

A CAB

B BCA

C BAC

D ACB

Answer: A

Question 75

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

A exuberantly

B exuberrantly

C exubarantly

D exubarrantly

Answer: A

General Awareness

Instructions

For the following questions answer them individually

Question 76

Human Poverty Index was introduced in the HDR of the year _____.

A 1997

B 1990

C 1995

D 2001

Answer: A

Question 77

Which Five Year Plan was suspended one year before the time schedule?

A   Third Plan

B   First Plan

C   Sixth Plan

D   Fifth Plan

   Answer: D

Question 78

What is called the cup or bowl shaped opening of a volcano?

A   Cinder vent

B   Origin center

C   Epicenter

D   Crater

   Answer: D

Question 79

Pipli Ghat Pass is located in which mountain area?

A   Western Ghats

B   Eastern Ghats

C   Vindhyachal Ghat

D   Aravali

   Answer: D

Question 80

Which of the following marriages was NOT considered legal in the ancient India?

A   Daiv Vivah

B   Arsha Vivah

C   Gandharva Vivah

D Brahma Vivah

Answer: C

Question 81

Which of the following art did rise highest in the Sultanate period?

A Painting

B Architecture

C Dance

D Music

Answer: B

Question 82

Where is the Bhatkhande Music College located?

A Lucknow

B Ahmedabad

C Chandigarh

D Allahabad

Answer: A

Question 83

Which Country's passport was ranked as the world's most powerful passport in a new ranking of world passports released on 26 October, 2017 by Passport Index?

A USA

B Singapore

C Canada

D Switzerland

Answer: B

Question 84

Name the writer who has been chosen for the 31st Moortidevi Award for the year 2017 for his poetry collection 'Du Dondo Phowara Matro'.

A   Saumeet Chakarovorthy

B   Saumeek Bhattacharya

C   Joy Goswami

D   Tapan Majumdar

　　Answer: C

Question 85

Bhutan's national language is known as _____.

A   Dzongkha

B   Khengkha

C   Tshanglakha

D   Lhotshamkha

　　Answer: A

Question 86

What is the mass number of Deuterium?

A   1

B   2

C   3

D   4

　　Answer: B

Question 87

Ethanol reacts with sodium leading to the evolution of which gas?

A Nitrogen

B Hydrogen

C Oxygen

D Methane

Answer: B

Question 88

There are _____ levels of courts present in India.

A Two

B Three

C Four

D Five

Answer: B

Question 89

73rd Constitutional Amendment Act gave Constitutional recognition to panchayats by adding _____.

A Part VIII

B Part IX

C Part X

D Part XI

Answer: B

Question 90

The gustatory receptors in human beings detect _____.

A taste

B smell

C touch

D hear

Answer: B

Question 91

When the medium surrounding the cell is a hypotonic solution, the cell is likely to _____.

A Swell up

B Stay the same size

C Shrink

D No option is correct.

Answer: B

Question 92

In November 2017, 2nd phase of 'Bharat Net Project' was launched. What is the deadline to complete it?

A March 2018

B March 2019

C December 2018

D March 2020

Answer: B

Question 93

The Centre for Cellular and Molecular Biology (CCMB) in association with Indian Institute of Rice Research (IIRR) developed improved variety of which of the following rice wit low Glycemic Index?

A Doongara

B Samba Masuri

C Kyeema

D Langi

Answer: B

Question 94

In October 2017, India's 3rd biggest Initial Public Offering (IPO) worth _____ was launched by GIC Re.

A   Rs.10,500 crore

B   Rs.11,370 crore

C   Rs.13,900 crore

D   Rs.17,000 crore

  Answer: B

Question 95

On 5 January 2018, Lok Sabha passed High Court and Supreme Court Judge (Salaries and Conditions of Service) Amendment Bill, 2017. The Bill seeks to revise the allowances with effect from _____.

A   September 22, 2017

B   June 22, 2017

C   April 22, 2017

D   January 22, 2017

  Answer: B

Question 96

Find the kinetic energy (in J) possessed by a body of mass 20 kg moving with a velocity of $4\frac{m}{s}$.

A   40

B   120

C   160

D   80

  Answer: C

Question 97

1 joule is equal to 1 _____.

A Nm

B $\frac{N}{m}$

C Nm^2

D $\frac{N}{m^2}$

Answer: A

Question 98

_____ which are used in refrigerators, air conditioners and aerosol sprays.

A Chlorofluorocarbons

B Acetophenones

C Cyclohexanes

D Phenols

Answer: A

Question 99

Which of the statements given below are correct?
A) In 2017, Suresh Raina captained the IPL team Sunrisers Hyderabad.
B) In 2017, Zaheer Khan captained the IPL team Delhi Daredevils.
C) France hosted the 2017 World Team Chess Championship.

A Only B

B Only C

C Both B and C

D A, B and C

Answer: A

Question 100

In Microsoft Word, _____ provides a neat way to present complex information in vertical columns and horizontal rows of cells.

A Tab

B Tables

C Rows

D Columns

Answer: B

SSC CHSl 14 March 2018 Afternoon Shift

Quant

Instructions

For the following questions answer them individually

Question 1

The sum of a proper fraction and its reciprocal is $\frac{61}{30}$. Find the fraction.

A $\frac{1}{3}$

B $\frac{5}{6}$

C $\frac{3}{10}$

D $\frac{3}{5}$

Answer: B

Explanation:

Let the fraction be x

According to ques,

=> $x + \frac{1}{x} = \frac{61}{30}$

=> $\frac{x^2 + 1}{x} = \frac{61}{30}$

=> $30x^2 - 61x + 30 = 0$

=> $30x^2 - 36x - 25x + 30 = 0$

=> $6x(5x - 6) - 5(5x - 6) = 0$

=> $(6x - 5)(5x - 6) = 0$

=> $x = \frac{5}{6}, \frac{6}{5}$

=> Ans - (B)

Question 2

Sum of four consecutive odd numbers is 208. Find the largest number.

A   55

B   57

C   59

D   61

Answer: A

Explanation:
Let the four consecutive odd numbers be $(x-3), (x-1), (x+1)$ and $(x+3)$

Sum = $(x-3) + (x-1) + (x+1) + (x+3) = 208$

=> $4x = 208$

=> $x = \frac{208}{4} = 52$

$\therefore$ Largest number = $52 + 3 = 55$

=> Ans - (A)

Question 3

If $\frac{-5x}{3} + 2 = x - 6$, then fond the value of 'x'.

A 1

B 2

C 3

D 4

Answer: C

Explanation:
Expression : $\frac{-5x}{3} + 2 = x - 6$

=> $x + \frac{5x}{3} = 2 + 6$

=> $\frac{3x + 5x}{3} = 8$

=> $8x = 8 \times 3 = 24$

=> $x = \frac{24}{8} = 3$

=> Ans - (C)

Question 4

Divya and Kriti have total 46 candies. If Divya has 10 candies more than kriti, then find the total number of candies Divya have?

A 20

B 24

C 28

D 32

Answer: C

Explanation:

Let candies with Kirti = x and with Divya = $(x + 10)$
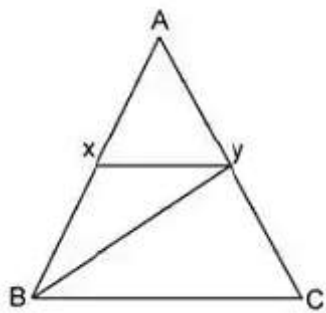
Total candies = $x + x + 10 = 46$

=> $2x = 46 - 10 = 36$

=> $x = \frac{36}{2} = 18$

$\therefore$ Number of candies that Divya has = $18 + 10 = 28$

=> Ans - (C)

Question 5

Triangle ABC as shown in the figure has line XY parallel to the BC and the line BY is the bisector of angle XYC. Which of the following option is correct?
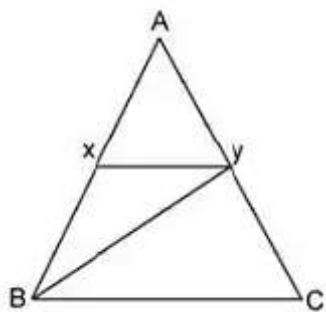

A BC=XY

B BC=YC

C BC=BY

D XY=BX

   Answer: B

Explanation:

$\because$ XY is parallel to BC

=> $\angle$ XYB = $\angle$ YBC ------------(i)   [Alternate interior angles]

Also, BY is the angle bisector of $\angle$ XYC.

=> $\angle$ XYB = $\angle$ BYC ------------(ii)

From equations (i) and (ii), we get : $\angle$ YBC = $\angle$ BYC

$\therefore$ BC = YC   [Sides opposite to equal angles]

=> Ans - (B)

Question 6

Analyze the figure shown below in which DE || BC and the other dimensions are as follows AD=3 cm, BD=4 cm, AE=4.4 cm and DE=6 cm. Calculate the length (in cm) of BC.

A   6

B   8

C   12

D   14

   Answer: D

Question 7

Two numbers are more than the third number by 16.25% and 55% respectively. First number is what percentage of the second number?

A   85

B   81.5

C   75

D   61.25

   Answer: C

Explanation:
Let the third number = $100x$

First number is greater than the third number by 16.25%, => First number = $100x + \left(\frac{16.25}{100} \times 100x\right) = 116.25x$

Similarly, second number = $100x + \left(\frac{55}{100} \times 100x\right) = 155x$

$\therefore$ Required % = $\frac{116.25x}{155x} \times 100 = 75\%$

=> Ans - (C)

Question 8

If $u : v = v : w$, then what is the value of $u^4 : v^4$?

A $u^2 : wv$

B $u^2 : w^2$

C $u^2v : w^3$

D $u : w$

   Answer: B

Explanation:
Given = $u : v = v : w$

=> $v^2 = uw$ -------------(i)

To find = $u^4 : v^4$

Substituting value from equation (i), we get :

= $u^4 : (uw)^2$

= $u^2 : w^2$

=> Ans - (B)

Question 9

R and S started a business by investing Rs 165000 and Rs 195000 respectively for the same period of time. If R's share in the profit earned by them is Rs 11000, then what is the total profit (in Rs) earned by both of them together?

A 22000

B 40000

C 26000

D 24000

   Answer: D

Explanation:
Investment by R = Rs. 165,000 and by S = Rs. 195,000

=> Ratio of profits at the end of year = $165,000 : 195,000 = 11 : 13$

R's share in the profit = Rs. 11,000

=> Total profit = $\frac{(11+13)}{11} \times 11,000$

=> $24 \times 1000 = Rs. 24,000$

=> Ans - (D)

Question 10

The average of 12 numbers is 35. If four numbers 20, 27, 15 and 29 are removed then what will be the average of remaining numbers?

A 41.125

B 49.5

C 52.5

D 38.375

 Answer: A

Explanation:
Average of 12 numbers = 35

=> Sum of numbers = $35 \times 12 = 420$

Sum of the 4 removed numbers = $20 + 27 + 15 + 29 = 91$

=> New average of 8 numbers = $\frac{(420-91)}{8}$

= $\frac{329}{8} = 41.125$

=> Ans - (A)

Question 11

What is the difference (in Rs) between compound interest (compounded annually) and simple interest for 3 years on a principal of Rs 3000 at the annual rate of 20% ?

A 464

B 384

C 356

D 424

 Answer: B

Explanation:
Principal sum = Rs. 3,000

Rate of interest = 20% and time period = 3 years

=> Difference between compound and simple interest = $[P(1 + \frac{R}{100})^T - P] - (\frac{P \times R \times T}{100})$

$= [3000(1 + \frac{20}{100})^3 - 3000] - (\frac{3000 \times 20 \times 3}{100})$

$= [3000(\frac{6}{5})^3 - 3000] - (1800)$

$= 3000 \times (\frac{216}{125}) - 4800$

$= (24 \times 216) - 4800$

$= 5184 - 4800 = Rs.\ 384$

=> Ans - (B)

Question 12

A dishonest shopkeeper uses a weight of 850 gm instead of 1 kg and sells rice on its cost price. What will be his profit percentage on selling 5 kg rice?

A 18.24

B 17.65

C 15

D 13.04

Answer: B

Explanation:

Let cost price of 1 kg rice = Rs. 1000   (1 gm rice cost Re. 1)

=> Cost price of 1 kg rice (850 gm in reality) = Rs. 850

He sells rice on its cost price, => selling price of 1 kg rice = Rs. 1000

$\therefore$ Profit % = $\frac{(1000-850)}{850} \times 100$

$= \frac{150}{8.5} = 17.647 \equiv 17.65\%$

=> Ans - (B)

Question 13

A fan is sold at a discount of 37.5%. If the marked price of the fan is Rs 7200, then what is the selling price (in Rs) of the fan?

A 4500

B 4350

C 5240

D 5120

Answer: A

Explanation:

Marked price = Rs. 7200

Discount % = 37.5% = $\frac{3}{8}$

=> Selling price = $7200 - \left(\frac{3}{8} \times 7200\right)$

= $(7200 - 2700) = Rs.\ 4500$

=> Ans - (A)

Question 14

What is the simplified value of $2\sqrt[3]{243} + 3\sqrt[3]{9} - \sqrt[3]{1125}$?

A $5\sqrt[3]{9}$

B $4\sqrt[3]{9}$

C $7\sqrt[3]{9}$

D $11\sqrt[3]{9}$

  Answer: B

Explanation:

Expression : $2\sqrt[3]{243} + 3\sqrt[3]{9} - \sqrt[3]{1125}$

= $2\sqrt[3]{27 \times 9} + 3\sqrt[3]{9} - \sqrt[3]{125 \times 9}$

= $6\sqrt[3]{9} + 3\sqrt[3]{9} - 5\sqrt[3]{9}$

= $4\sqrt[3]{9}$

=> Ans - (B)

Question 15

24 men can repair a road in 50 days. If they are joined by 16 more men, then in how much time (in days) the road can be repaired?

A   28

B   25

C   32

D   30

  Answer: D

Explanation:

24 men can repair a road in 50 days

Let time taken by (24+16=40) men = x days

Using, $M_1 D_1 = M_2 D_2$

=> $24 \times 50 = 40 \times x$

=> $x = \frac{120}{4} = 30$

$\therefore$ Road can be prepared in = **30 days**

=> Ans - (D)

Question 16

Two motorcycles are moving towards each other with the speeds of 38 km/hr and 88 km/hr respectively. One second before the collision what will be the distance (in metres) between the two motorcycles?

A 42

B 40

C 34

D 35

Answer: D

Explanation:

The motorcycles are moving towards each other, relative speed = $38 + 88 = 126$ km/hr
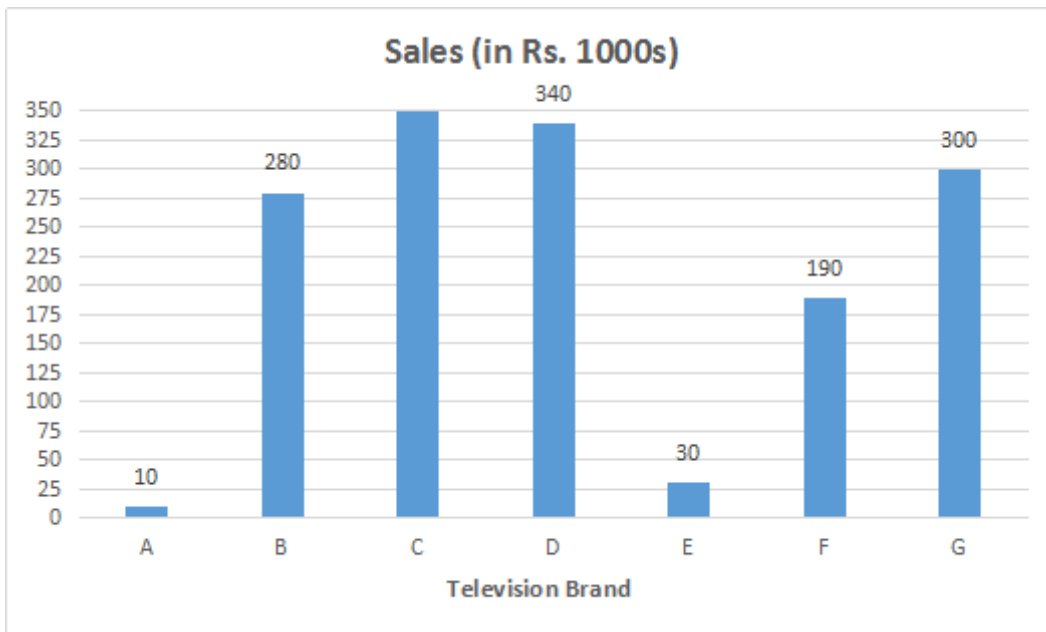
= $\left(126 \times \frac{5}{18}\right) = 35$ m/s

Thus, one second before the collision, the distance (in metres) between the two motorcycles will be = 35

=> Ans - (D)

Instructions

The bar graph shows 1 month's sales figures of different brands of televisions of a certain electronics store in Rs 1000s. Study the diagram and answer the following questions.

Sales (in Rs. 1000s)

Question 17

Sales of which television brand were the second lowest?

A   A

B   C

C   G

D   E

Answer: D

Explanation:

Sales of television brand **E** were the second lowest = Rs. 30,000

=> Ans - (D)

Question 18

What is the ratio of sales of brand E to that of brand A?

A   1 : 3

B   3 : 1

C   4 : 1

D   1 : 4

Answer: B

Explanation:

Sales of brand E (in Rs. 000's) = 30

Sales of brand A (in Rs. 000's) = 10

=> Required ratio = $\frac{30}{10} = 3:1$

=> Ans - (B)

Question 19

Sales of brand B was lesser than that of brand G by _____.

A   3.75%

B   6.67%

C   7.14%

D   5.25%

Answer: B

Explanation:

Sales of brand B (in Rs. 000's) = 280

Sales of brand G (in Rs. 000's) = 300

=> Required % = $\frac{(300-280)}{300} \times 100$

= $\frac{20}{3} = 6.67\%$

=> Ans - (B)

Question 20

If the sales figures are exclusive of tax then at the rate of 12% tax how much is the tax to be paid (in Rs) on the sales of all the 7 brands of televisions?

A   180000

B   18000

C   420000

D   42000

Answer: A

Explanation:
Total sales of all the 7 brands of televisions (in Rs. 000's)

= 10 + 280 + 350 + 340 + 30 + 190 + 300 = 1500

Tax % = 12%

=> Tax to be paid (in Rs) on the sales of all the 7 brands of televisions = $\frac{12}{100} \times 15,00,000 = 180,000$

=> Ans - (A)

Instructions

For the following questions answer them individually

Question 21

The area and the length of one of the diagonals of a rhombus is $60cm^2$ and 8 cm respectively. Find the length of its other diagonal (in cm).

A 7.5

B 30

C 22.5

D 15

   Answer: D

Explanation:

Let length of one diagonal = d cm and length of other diagonal = 8 cm

=> Area of rhombus = $\frac{1}{2} \times d_1 d_2$

=> $\frac{1}{2} \times 8 \times d = 60$

=> $d = \frac{60 \times 2}{8}$

=> $d = 15$ cm

=> Ans - (D)

Question 22

Find the area $(in cm^2)$ of a semi-circle of radius 7 cm.

A 154

B 21

C 42

D 77

   Answer: D

Explanation:

Radius of semi circle = $r = 7$ cm

=> Area of semi-circle = $\frac{1}{2}\pi r^2$

= $\frac{1}{2} \times \frac{22}{7} \times (7)^2$

= $11 \times 7 = 77\ cm^2$

=> Ans - (D)

Question 23

Find the total surface area $(in cm^2)$ of a cube of side 3.5 cm.

A 91.7

B 64

C 88

D 73.5

Answer: D

Explanation:

Edge of cube, $a = 3.5$ cm

Total surface area = $6a^2$

= $6 \times (3.5)^2 = 73.5\ cm^2$

=> Ans - (D)

Question 24

What is the value of $\left(\frac{1}{\sqrt{3}} + cot60°\right)$?

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

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

C $\frac{(4+\sqrt{3})}{2\sqrt{3}}$

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

Answer: D

Explanation:

Expression : $\left(\frac{1}{\sqrt{3}} + cot60°\right)$

= $\frac{1}{\sqrt{3}} + \frac{1}{\sqrt{3}}$

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

=> Ans - (D)

Question 25

ΔABC is right angled at B. If $\cot A = \frac{7}{24}$, then what is the value of $\operatorname{cosec} C$?
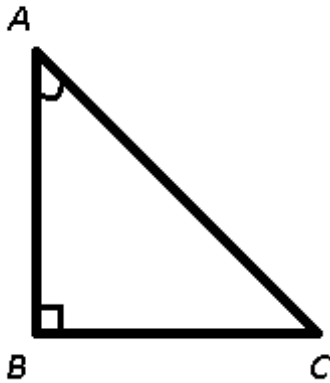
A $\frac{7}{25}$

B $\frac{25}{7}$

C $\frac{24}{7}$

D $\frac{7}{24}$

   Answer: B

Explanation:

Given : $\cot A = \frac{7}{24}$

Also, $\cot A = \frac{AB}{BC} = \frac{7}{24}$

Let AB = 7 cm and BC = 24 cm

Thus, in $\triangle$ ABC,

=> $(AC)^2 = (AB)^2 + (BC)^2$

=> $(AC)^2 = (7)^2 + (24)^2$

=> $(AC)^2 = 49 + 576 = 625$

=> $AC = \sqrt{625} = 25$ cm

To find : $\operatorname{cosec} C = \frac{AC}{AB}$

= $\frac{25}{7}$

=> 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.
Hospital : Treatment : : ? : ?

A   Product : Production

B   Government : Country

C   Justice : Court

D   School : Education

   Answer: D

Explanation:
Expression = Hospital : Treatment : : ? : ?

The first is use for second, i.e. hospitals are used to treat patients, similarly schools are used for the purpose of education.

=> Ans - (D)

Question 27

In the following question, select the related number from the given alternatives.
13 : 171 : : 17 : ?

A   286

B   289

C   291

D   294

   Answer: C

Explanation:
Expression = 13 : 171 : : 17 : ?

The numbers are of the form = $n : (n^2 + 2)$

Eg :- $(13)^2 + 2 = 169 + 2 = 171$

Similarly, $(17)^2 + 2 = 289 + 2 = 291$

=> Ans - (C)

Question 28

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

PTR : NRP : : WTV : ?

A   YVX

B   YVZ

C   URT

D   UQT

   Answer: C

Explanation:

Expression = PTR : NRP : : WTV : ?

The pattern followed is :

P	T	R
(-2)	(-2)	(-2)
N	R	P

Similarly, for WTV : **URT**

W	T	V
(-2)	(-2)	(-2)
U	R	T

=> Ans - (C)

Question 29

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

A   West

B   Direction

C   South

D   South - West

   Answer: B

Explanation:

West, South and South - West are all directions, hence **Direction** is the odd one out.

=> Ans - (B)

Question 30

In the following question, four number pairs are given. The number on left side of (-) is related to the number on 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 23 - 24

B 25 - 26

C 27 - 28

D 29 - 27

   Answer: D

Explanation:

The difference between each of the pair of numbers is 1.

But in the last option => $29 - 27 = 2$

Thus, (29 - 27) is the odd one out.

=> Ans - (D)

Question 31

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

A SRQP

B JIHG

C VUTS

D ZYXV

   Answer: D

Explanation:

(A) : S (-1 letter) = R (-1 letter) = Q (-1 letter) = P

(B) : J (-1 letter) = I (-1 letter) = H (-1 letter) = G

(C) : V (-1 letter) = U (-1 letter) = T (-1 letter) = S

(D) : Z (-1 letter) = Y (-1 letter) = X (**-2** letters) = V

=> Ans - (D)

Question 32

Arrange the given words in the sequence in which they occur in the dictionary.
1. Dispel
2. Dispute
3. Distinct
4. Dissent
5. Disrupt

A   35412

B   15342

C   23415

D   12543

   Answer: D

Explanation:
As per the order of dictionary :

= Dispel -> Dispute -> Disrupt -> Dissent -> Distinct

≡ 12543

=> Ans - (D)

Question 33

In the following question, select the missing number from the given series.
15, 21, 28, 34, ?, 47

A   41

B   40

C   44

D   43

   Answer: A

Explanation:
'6' and '7' are alternatively added.

15 + 6 = 21

21 + 7 = 28

28 + 6 = 34

34 + 7 = **41**

41 + 6 = 47

=> Ans - (A)

Question 34

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

D, G, K, N, R, ?, ?, B, F

A U, Z

B U, Y

C X, Z

D T, Z

 Answer: B

Explanation:

Series : D, G, K, N, R, ?, ?, B, F

The pattern followed is that there is a difference of 7 letters in the two alternative series.

Even series : G (+7 letters) = N (+7 letters) = U (+7 letters) = B

Odd series : D (+7 letters) = K (+7 letters) = R (+7 letters) = Y (+7 letters) = F

Thus, missing terms = **U, Y**

=> Ans - (B)

Question 35

Rajnish walks 35 km towards north. He turns left and walks 20 km. He turns left and walks 35 km. How far (in km) is he now from his starting point?

A 25

B 90

C 20

D 10√2

 Answer: C

Question 36

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

Nightingales

A   Nine

B   Gales

C   Eight

D   Novel

   Answer: D

Explanation:
The word NIGHTINGALES does not contain any 'O' or 'V', thus the term **Novel** cannot be formed.

=> Ans - (D)

Question 37

In a certain code language, "TALCS" is written as "UENCV". How is "SPARK" written in that code language?

A   HRVTN

B   MTCRU

C   MTCSV

D   MAMTR

   Answer: B

Explanation:
"TALCS" is written as "UENCV"

The pattern followed is that when we reverse the word, we have : SCLAT

S	C	L	A	T
(+2)	(+2)	(+2)	(+2)	(+2)
U	E	N	C	V

Similarly, for SPARK :

K	R	A	P	S
(+2)	(+2)	(+2)	(+2)	(+2)
M	T	C	R	U

=> Ans - (B)

Question 38

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

2 ÷ 12 - 6 + 20 x 4 = ?

A 40

B 1

C 20

D 43

Answer: C

Explanation:

Expression : 2 ÷ 12 - 6 + 20 x 4 = ?

$\equiv 2 - 12 + 6 \times 20 \div 4$

= $-10 + (6 \times 5)$

= $-10 + 30 = 20$

=> Ans - (C)

Question 39

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

18 x 12 - 6 ÷ 5 + 4 = 35

A ÷ and +

B - and ÷

C - and +

D + and x

Answer: B

Explanation:

Expression : 18 x 12 - 6 ÷ 5 + 4 = 35

(A) : ÷ and +

$\equiv 18 \times 12 - 6 + 5 \div 4 = 35$

L.H.S. = $216 - 6 + 1.25 = 211.25 \neq$ R.H.S.

(B) : - and ÷

$\equiv 18 \times 12 \div 6 - 5 + 4 = 35$

L.H.S. = $\left(18 \times \frac{12}{6}\right) - 1$

= $36 - 1 = 35 =$ R.H.S.

=> Ans - (B)

Question 40

If 8*9 = 36, 12*4 = 24 and 14*6 = 42, then find the value of 18*6 = ?

A   14

B   54

C   44

D   2

   Answer: B

Explanation:

Given : 8*9 = 36, 12*4 = 24 and 14*6 = 42

If we replace '*' with 'x', and divide the product by 2, we get the desired result.

Eg :- $\frac{8 \times 9}{2} = 36$

and $\frac{12 \times 4}{2} = 24$ and $\frac{14 \times 6}{2} = 42$

Similarly, $\frac{18 \times 6}{2} = 54$

=> Ans - (B)

Question 41

Which of the following terms follows the trend of the given list?
AABAAAA, BAAAAAA, AAAAABA, AAABAAA, ABAAAAA, _____.

A   AAAABAA

B   AABAAAA

C   BAAAAAA

D   AAAAAAB

   Answer: D

Explanation:

Expression : AABAAAA, BAAAAAA, AAAAABA, AAABAAA, ABAAAAA, _____.

The pattern followed is that in each term there are combinations of 'A' and 'B' (7 letters) and in each term, the position of B is shifted two places to the left starting from third position.

Thus, in the missing term, B will be at the end = **AAAAAAB**

=> Ans - (D)

Question 42

A goods carrier travels 23 km East, then it turns North and travels 15 km, then it turns West and Travels 38 km, then it turns to its left and travels 15 km. Where is it now with reference to its starting position?

A 61 km West

B 15 km East

C 61 km East

D 15 km West

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: All brushes are brooms
Statement II: All mops are brushes

Conclusion I: All brooms are mops
Conclusion II: All mops are brooms

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: B

Question 44

In the following figure, rectangle represents Dieticians, circle represents Floral designers, triangle represents Gardeners and square represents Asians. Which set of letters represents Floral designers who are not Gardeners?
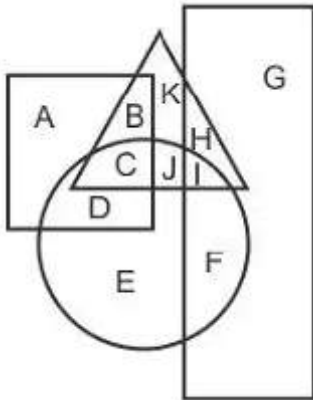
A BKH

B ABC

C DEF

D GHI

Answer: C

Question 45

A series is given with one term missing. Select the correct alternative from the given ones that will complete the series.
PMA, RPE, TSI, VVM, ?

A YZR

B VWO

C XYQ

D ACS

Answer: C

Explanation:
Series : PMA, RPE, TSI, VVM, ?

The pattern followed in each letter of the terms is :

1st letter : P (+2 letters) = R (+2 letters) = T (+2 letters) = V (+2 letters) = X

2nd letter : M (+3 letters) = P (+3 letters) = S (+3 letters) = V (+3 letters) = Y

3rd letter : A (+4 letters) = E (+4 letters) = I (+4 letters) = M (+4 letters) = Q

Thus, missing term = **XYQ**

=> Ans - (C)

Question 46

In the following question, select the missing number from the given series.
67, 80, 93, ?, 119, 132

A 108

B 106

C 114

D 112

Answer: B

Explanation:
'13' is added to all the numbers.

67 + 13 = 80

80 + 13 = 93

93 + 13 = **106**

106 + 13 = 119

119 + 13 = 132

=> Ans - (B)

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 (4, 16, 64)

B (5, 25, 125)

C (6, 36, 216)

D (7, 49, 243)

Answer: D

Explanation:
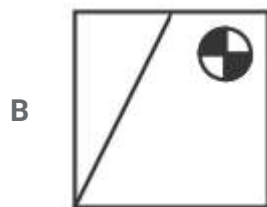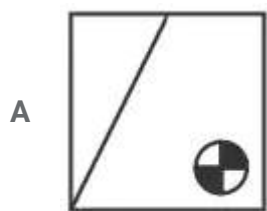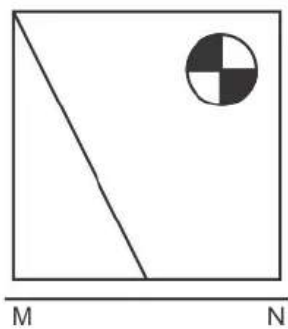The numbers are of the form : (x, x^2, x^3)

But in the last option, we have = $7^3 = 343 \neq 243$

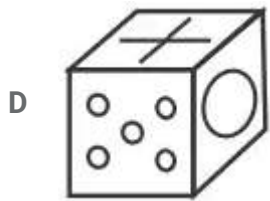Thus, (7, 49, 243) is the odd one out.
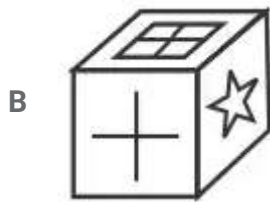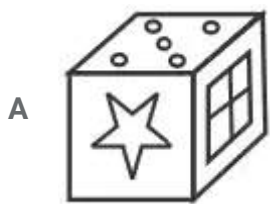
=> Ans - (D)

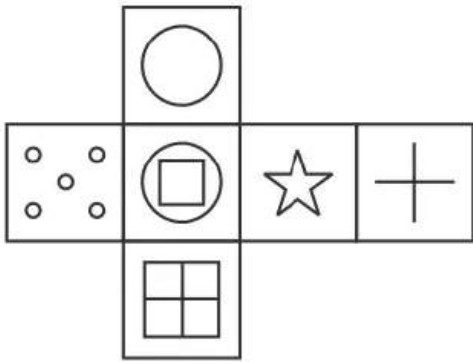**Question 48**

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

A

B

C

D

Answer: A

Question 49

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

A

B

C

D

Answer: A

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 'A' can be represented by 30, 41 etc and 'W can be represented by 65, 97 etc. Similarly, you have to identify the set for the word 'QUIT'.

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

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

A   42,79,23,57

B   24,86,20,85

C   76,96,40,79

D   31,78,34,88

Answer: C

Explanation:
(A) : 42,79,23,57 = BTKV

(B) : 24,86,20,85 = FOEV

(C) : 76,96,40,79 = **QUIT**

(D) : 31,78,34,88 = HVMZ

=> Ans - (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 51

The evolutionary history of penguins (a)/ is well-researched and represents a showcase of (b)/ evolution biogeography. (c)/ No error (d)

A The evolutionary history of penguins

B is well-researched and represents a showcase of

C evolution biogeography

D No error

Answer: C

Question 52

It was by real sorrow (a)/ that I heard this morning (b)/ of your great loss. (c)/ No error (d)

A It was by real sorrow

B that I heard this morning

C of your great loss

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

Angela was _____ of that big mansion.

A terrified

B moisturised

C embarrassed

D sweating

Answer: A

Question 54

_____ great was achieved by an individual without enthusiasm and interest.

A Nothing

B Something

C Everything

D Anything

  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

Jettison

A Keep

B Eject

C Embrace

D Retain

  Answer: B

Question 56

Prolific

A Dead

B Productive

C Famous

D Evidence

  Answer: B

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

Purloin

A   Steal

B   Filch

C   Lift

D   Compensate

   Answer: D

Question 58

Florid

A   Busy

B   Plain

C   Flowery

D   Pretentious

   Answer: B

Instructions
For the following questions answer them individually

Question 59

Rearrange the parts of the sentence in correct order.

The economic
P : a country leads to exponential
Q : growth of that country
R : empowerment of women of

A   PRQ

B   PQR

C   RPQ

D   RQP

Answer: C

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.

The commotion terrified her.

A She was terrified.

B She is terrified of commotion.

C She terrified by the commotion.

D She was terrified by the commotion.

Answer: D

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.

I said to Ajay, "Will you lend me some money?"

A I told Ajay to lend me some money.

B I said to Ajay if he would give me some money.

C I asked Ajay if he would lend me some money.

D I asked Ajay if he would give me some money or not.

Answer: C

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 Meidieval

B Medieval

C Medeival

D Medievul

Answer: B

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.

It is basic to a democracy that its citizens remain in harmony _____ one another. At the very least, they should _____ treat each other as enemies. Enmity is spread only by vested interests that hope to thrive _____ polarising citizens. The _____ between professed love for the country and infecting the people with hatred remains ignored. There is no instance in history of the policy of 'divide and rule' _____ people's welfare.

Question 63

remain in harmony _____ one another.

A to

B at

C each

D with

Answer: D

Question 64

they should _____ treat each other

A no

B neither

C not

D nor

Answer: C

Question 65

hope to thrive _____ polarising citizens

A so

B as

C by

D like

   Answer: C

Question 66

The _____ between professed love

A incompatible

B in compatibility

C in compatible

D incompatibility

   Answer: D

Question 67

'divide and rule' _____ people's welfare.

A promote

B promotion

C promoted

D promoting

   Answer: D

Instructions

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

Question 68

Blessing in disguise

A Good fortune always follows bad; that is the way of fate.

B An apparent misfortune that eventually has good results.

C If a curse makes one stronger than it is a blessing.

D A life of hardship does wonders for a person's character.

Answer: B

Question 69

A picture paints a thousand words

A An image of a subject conveys its meaning more effectively than a description does.

B No words can do justice to a masterpiece.

C A great poem or script recreates a complete imagery.

D Your mind will create fanciful images based on the information that it gets.

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

Working-class people regarded collectively

A Opulent

B Proletariat

C Gilded

D Affluent

Answer: B

Question 71

A long, angry speech of criticism or accusation

A Obeisance

B Panegyric

C Homage

D Tirade

Answer: D

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

The Buddha (was consumed) by the human suffering that he saw all around him.

A was consume

B was consuming

C were consumed

D no improvement

Answer: D

Question 73

This unresponsive attitude by people must (has hurt) him.

A have hurt

B have hurting

C have has hurt

D no improvement

Answer: A

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.

Rest assured that water
A-stop plunging if there are too
B-many people around
C-in the Nohkhalikai falls will not

A BCA

B CAB

C BAC

D ACB

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 scrupulus

B scruppulous

C scruppulus

D scrupulous

Answer: D

General Awareness

Instructions

For the following questions answer them individually

Question 76

Buyer's market denotes the place where _____.

A the demand exceed the supply

B the supply exceed the demand

C commodities are available at competitive rates

D the demand and supply are well balanced

Answer: A

Question 77

State with maximum production of coffee in India is _____.

A   Karnataka

B   Kerala

C   Maharashtra

D   Tamil Nadu

   Answer: A

Question 78

Which of the following is NOT an example of intermontane plateau?

A   Plateau of Tibet

B   Columbia Plateau

C   Patagonia Plateau

D   Bolivian Plateau

   Answer: C

Question 79

Whose tributary is Tawa River?

A   Narmada

B   Tapi

C   Chambal

D   Yamuna

   Answer: A

Question 80

The Sanskrit poet Rajshekhar lived in the court of _____.

A   Mahipala I

B   Dharmapala

C   Bhoja

D   Devpala II

Answer: A

Question 81

Which of the following Mughal rulers started 'Jharokha Darshan'?

A   Babar

B   Humayun

C   Akbar

D   Jahangir

Answer: C

Question 82

Who of the following is a world famous flute player?

A   Pandit Ravi Shankar

B   Shivkumar Sharma

C   Zakir Hussain

D   Hariprasad Chaurasia

Answer: D

Question 83

With which country India has signed an agreement in September 2017 for co-operation in health sector?

A   Indonesia

B   Norway

C   France

D   Denmark

Answer: B

Question 84

Who among the following was honored with the "Hridaynath Mangeshkar Award-2017" in October 2017?

A   Salim Khan

B   Javed Akhtar

C   Nana Patekar

D   Mahesh Bhatt

Answer: B

Question 85

Pakistan is located in which direction of India?

A   East

B   West

C   East-North

D   West-North

Answer: D

Question 86

If an atom has atomic number 10 and mass number 23, then what will be the number of protons and neutrons in an atom respectively?

A   10, 10

B   10, 23

C   13, 10

D   10, 13

Answer: D

Question 87

While cooking, if the bottom of the vessel is getting blackened on the outside, it means that _____.

A the food is not cooked completely

B the fuel is not burning completely

C the fuel is wet

D the fuel is burning completely

Answer: B

Question 88

Temporary Provisions with respect to the state of Jammu and Kashmir is given in which Article of Indian Constitution?

A Article 350

B Article 360

C Article 370

D Article 380

Answer: C

Question 89

Which among the following writs can be issued against any private individual?
I. Certiorari
II. Prohibition
III. Habeas Corpus

A Only III

B Both I and III

C Both II and III

D No option is correct.

Answer: A

Question 90

Which type of epithelial tissue forms the lining of kidney tubules and ducts of salivary glands, where it provides mechanical support?

A   Simple squamous epithelial

B   Stratified squamous epithelial

C   Ciliated columnar epithelial

D   Cuboidal epithelial

   Answer: D

Question 91

The cell walls of many organisms of Fungi kingdom are made of a tough complex sugar called _____.

A   Pectin

B   Suberin

C   Cellulose

D   Chitin

   Answer: D

Question 92

In November 2017, who launched 'Grahak Sadak Koyla Vitaran App' that aims to benefit customers of Coal India Limited (CIL)?

A   R. K. Singh

B   Suresh Prabhu

C   Naredra Singh Tomar

D   Piyush Goyal

   Answer: D

Question 93

What is the name of the asteroid that causes Geminid meteor shower display around 15 December of every year?

A   3 Juno

B 3200 Phaethon

C 511 Davida

D 5200 Europa

   Answer: B

Question 94

In October 2017, RBI planned to make _____ compulsory for companies having aggregate exposure over Rs 5 crore.

A Index Identifier

B Economic Fund Identifier

C Legal Entity Identifier

D No option is correct.

   Answer: C

Question 95

On January 16, 2018 the Supreme Court ruled the attacks and interference on adults opting for inter-caste marriage as 'absolutely illegal' in the petition filed by which NGO in 2010?

A PRATHAM

B Shakti Vahini

C Goonj

D Sammaan

   Answer: B

Question 96

Find the acceleration $(in\,m/s^2)$ produced in a body of mass 2 kg when a force of 8 N is applied on it.

A 4

B 16

C 8

D 32

   Answer: A

Question 97

An object having a capability to do work is said to possess _____.

A force

B moment

C momentum

D energy

   Answer: D

Question 98

The ozone layer protects us from harmful _____ rays of the sun.

A infrared

B cosmic

C gamma

D ultraviolet

   Answer: D

Question 99

Which of the statements given below are correct?

A) In 2017, Michael Carrick captained the Premier League team Manchester United.
B) Sergio García won the Golf 2017 ANA Inspiration.
C) In 2018 IPL auctions, Kolkata Knight Riders retained Axar Patel.

A Only A

B Both B and C

C Both A and B

D None of these

Answer: A

Question 100

In MS-Excel, _____ are an excellent tool to present data in a worksheet in a visually appealing format which aids in analyzing and comparing data.

A Charts

B Mail merge

C Outline

D Tables

Answer: A

Quant

Instructions

For the following questions answer them individually

Question 1

Find the average of first 30 multiples of 7.

A   94.8

B   99.6

C   104.4

D   108.5

   Answer: D

Explanation:

First thirty multiples of 7 will form an arithmetic progression : 7,14,21,.......,210

First term, $a = 7$ and common difference, $d = 7$

Sum of n terms = $\frac{n}{2}(a + l)$

=> $S_{30} = \frac{30}{2}(7 + 210)$

= 15×217

Now, average of 30 terms = $\frac{15 \times 217}{30}$

= $\frac{217}{2} = 108.5$

=> Ans - (D)

Question 2

Calculate the value of $\frac{\sqrt{5}}{(5-\sqrt{5})}$, if $\sqrt{5} = 2.236$

A   0.809

B   0.89

C   0.089

D   0.807

   Answer: A

Explanation:

Given : $\sqrt{5} = 2.236$

To find : $\frac{\sqrt{5}}{(5-\sqrt{5})}$

$= \frac{\sqrt{5}}{\sqrt{5}(\sqrt{5}-1)} = \frac{1}{\sqrt{5}-1}$

Rationalizing the denominator, we get :

$= \frac{1}{(\sqrt{5}-1)} \times \frac{(\sqrt{5}+1)}{(\sqrt{5}+1)}$

$= \frac{\sqrt{5}+1}{5-1} = \frac{\sqrt{5}+1}{4}$

$= \frac{2.236+1}{4} = \frac{3.236}{4} = 0.809$

=> Ans - (A)

Question 3

If $x + \frac{1}{x} = -2$, then find the value of $x^{631} + \frac{1}{x^{632}}$

A   -2

B   -1

C   0

D   2

Answer: C

Explanation:

Expression : $x + \frac{1}{x} = -2$

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

=> $x^2 + 2x + 1 = 0$

=> $(x+1)^2 = 0$

=> $x + 1 = 0$

=> $x = -1$

$\therefore x^{631} + \frac{1}{x^{632}}$

$= (-1)^{631} + \frac{1}{(-1)^{632}}$

$= -1 + 1 = 0$

=> Ans - (C)

Question 4

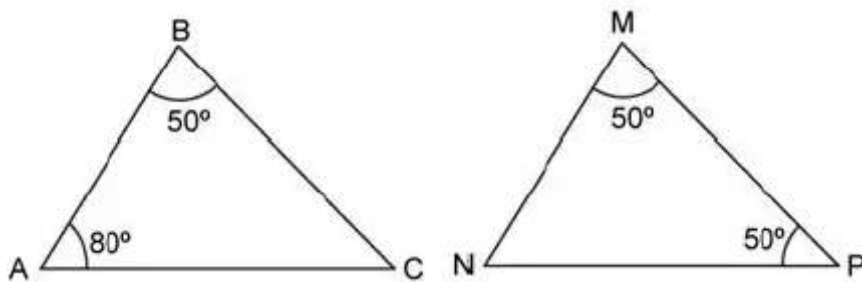Find the area (in sq units) enclosed by y = 0, x+6=0 and 2x-3y=6.

A   9

B 16

C 20

D 27

Answer: D

Question 5

Consider the following two triangles as shown in the figure below

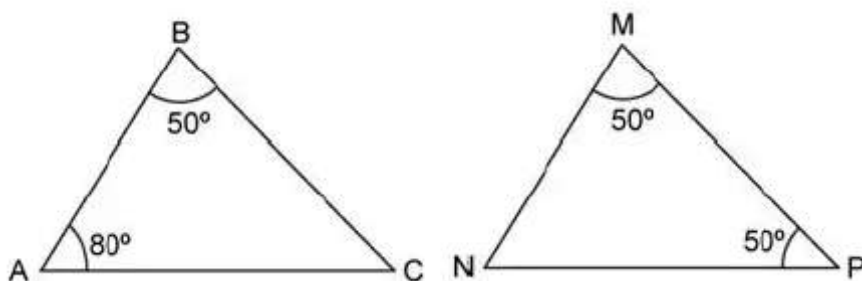**A** $\triangle BAC \sim \triangle NMP$

B $\triangle BAC \sim \triangle MNP$

C $\triangle CAB \sim \triangle NMP$

D $\triangle BAC \sim \triangle PMN$

Answer: B

Explanation:

According to angle sum property : $\angle$ C = $50°$ and $\angle$ N = $80°$

Now, in $\triangle$ ABC and $\triangle$ MNP,

$\angle$ A = $\angle$ N = $80°$

The remaining 2 angles are equal to $50°$, thus either $\angle$ B = $\angle$ P or $\angle$ B = $\angle$ M

But $\angle$ A is corresponding to $\angle$ N.

Thus, $\triangle BAC \sim \triangle MNP$

=> Ans - (B)

Question 6

In the triangle ABC, the internal bisector of angle A meets the side BC at D. If BD = 7.5 cm and BC = 9 cm. Then calculate the value of AB : AC.
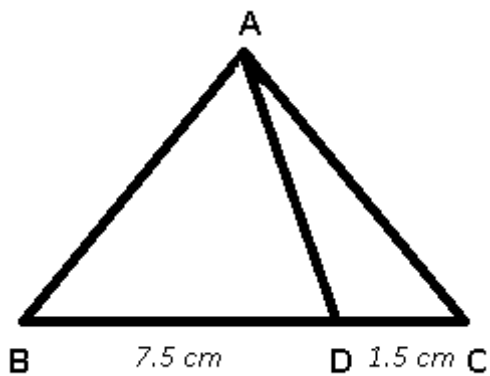
A 2:1

B 1:2

C 5:1

D 1:5

   Answer: C

Explanation:

Given : AD is the angle bisector of $\angle$ A. Also, BD = 7.5 cm and BC = 9 cm

To find : AB : AC = ?

Solution : CD = 9 - 7.5 = 1.5 cm

According to angle bisector theorem,

=> $\frac{AB}{BD} = \frac{AC}{DC}$

=> $\frac{AB}{AC} = \frac{BD}{DC}$

=> $\frac{AB}{AC} = \frac{7.5}{1.5} = \frac{5}{1}$

=> Ans - (C)

Question 7

If 170% of a number added to 66, then the result becomes equal to twice of the number. What is the number?

A 200

B 220

C 210

D 236

Answer: B

Explanation:

Let the number be x

According to ques,

=> $\frac{170}{100}x + 66 = 2x$

=> $1.7x + 66 = 2x$

=> $2x - 1.7x = 0.3x = 66$

=> $x = \frac{66}{0.3} = 220$

=> Ans - (B)

Question 8

The ratio of Mohit's and Sunil's age at present is 7 : 9. Mohit is 4 years younger than Sunil. What will be the ratio of Mohit's age and Sunil's age after 6 years?

A 5 : 6

B 4 : 5

C 6 : 7

D 5 : 7

Answer: A

Explanation:

Let Mohit's age = $7x$ years and Sunil's age = $9x$ years

According to ques, => $9x - 7x = 4$

=> $2x = 4$

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

$\therefore$ Ratio of Mohit's age and Sunil's age after 6 years = $\frac{7(2)+6}{9(2)+6}$

= $\frac{20}{24} = \frac{5}{6}$

=> Ans - (A)

Question 9

In a mixture, unbroken and broken rice grains are in the ratio 3 : 2. How much fraction of the mixture must be drawn off and substituted with broken grains, so that the ratio of unbroken and broken grains becomes 1 : 1?

A $\frac{1}{3}$

B $\frac{1}{6}$

C $\frac{1}{4}$

D $\frac{2}{5}$

Answer: B

Explanation:

Let quantity of unbroken and broken rice grains be 3 and 2 units respectively.

Let x units of mixture is taken out

=> Unbroken rice grains in $(5 - x)$ units of mixture = $\frac{3}{5}(5 - x)$

Similarly, after adding broken rice grains, => Broken rice grains in mixture = $\frac{2}{5}(5 - x) + x$

According to ques,

=> $\frac{\frac{3}{5}(5-x)}{\frac{2}{5}(5-x)+x} = \frac{1}{1}$

=> $3 - \frac{3}{5}x = 2 - \frac{2}{5}x + x$

=> $\frac{3x}{5} - \frac{2x}{5} + x = 3 - 2$

=> $\frac{6x}{5} = 1$

=> $x = \frac{5}{6}$

$\therefore$ Required fraction = $\frac{\frac{5}{6}}{5} = \frac{1}{6}$

=> Ans - (B)

Question 10

The average of 10 numbers is X and one of the number is 38. If 38 is replaced with 19, then what will be the new average?

A $X - \left(\frac{1}{2}\right)$

B $X - \left(\frac{1}{19}\right)$

C $X - \left(\frac{19}{10}\right)$

D $X - \left(\frac{19}{9}\right)$

Answer: C

Explanation:

Average of 10 numbers = x

=> Sum of numbers = $10x$

If 38 is replaced with 19, then new average = $\frac{10x-38+19}{10}$

= $\frac{10x-19}{10}$

= $x - \left(\frac{19}{10}\right)$

=> Ans - (C)

Question 11

Simple interest on a sum of Rs 67400 for 14 months is Rs 4718. What is the rate (in percentage) of interest per annum?

A 5.5

B 6

C 8

D 7

Answer: B

Explanation:

Principal sum = Rs. 67,400 and simple interest = Rs. 4718

Let rate of interest = $r\%$ and time period = $\frac{14}{12} = \frac{7}{6}$ years

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

=> $\frac{67,400 \times r \times 7}{6 \times 100} = 4718$

=> $\frac{4718r}{6} = 4718$

=> $r = 6\%$

=> Ans - (B)

Question 12

On selling 25 shirts, a retailer earns profit equal to the cost price of 8 shirts. What is the profit percentage?

A 47.05

B 32

C 25

D 34.5

Answer: B

Explanation:

Let cost price of a shirt = Rs. x and selling price = Rs. y

Profit on selling 25 shirts = Rs. $25(y - x)$

According to ques,

=> $25(y - x) = 8x$

=> $25y - 25x = 8x$

=> $25y = 8x + 25x = 33x$

=> $\frac{y}{x} = \frac{33}{25}$

Let $x = 25$ and $y = 33$

Thus, profit % = $\frac{(y-x)}{x} \times 100$

= $\frac{(33-25)}{25} \times 100$

= $8 \times 4 = 32\%$

=> Ans - (B)

Question 13

What will be the net discount (in percentage) for two successive discounts of 20% and 30%?

A 50

B 56

C 44

D 54

Answer: C

Explanation:

Let marked price = Rs. 100

After 1st discount of 20%, price = $100 - \left(\frac{20}{100} \times 100\right)$

= $100 - 20 = 80$

After 2nd discount of 30% (on changed price), selling price = $80 - \left(\frac{30}{100} \times 80\right)$

= $80 - 24 = Rs. 56$

∴ Net discount = $\frac{(100-56)}{100} \times 100 = 44\%$

=> Ans - (C)

Question 14

If X=1.1, then what is the value of $\sqrt{4x^2 - 4x + 1}$?

A 1.21

B 1.331

C 2.21

D 1.2

Answer: D

Explanation:

Expression : $\sqrt{4x^2 - 4x + 1}$

= $\sqrt{(2x - 1)^2} = (2x - 1)$ -----------(i)

It is given that $x = 1.1$, substituting it in equation (i),

=> $2(1.1) - 1 = 2.2 - 1 = 1.2$

=> Ans - (D)

Question 15

Manish can complete a work in 21 days and Karan can complete the same work in 28 days. If both together work for 7 days, then what fraction of total work is left?

A $\frac{3}{5}$

B $\frac{2}{3}$

C $\frac{7}{12}$

D $\frac{5}{12}$

Answer: D

Explanation:

Let total work to be done = L.C.M. (21,28) = 84

Manish can complete the work in 21 days, => Manish's efficiency = $\frac{84}{21} = 4$ units/day

Similarly, Karan's efficiency = $\frac{84}{28} = 3$ units/day

Now, (Manish+Karan)'s 7 day's work = $(4 + 3)7 = 49$ units

Fraction of work that is left = $\frac{(84-49)}{84} = \frac{35}{84} = \frac{5}{12}$

=> Ans - (D)

Question 16

A train is moving with uniform speed crosses two tunnels of lengths 270 metres and 450 metres in 12 seconds and 15 seconds respectively. What is the speed (in km/hr) of the train?

A   144

B   169

C   196

D   216

Answer: D

Explanation:

Let speed of train = x km/hr and length of train = l km

Using, speed = distance/time

=> $x = \frac{l+270}{12}$ ----------(i)

and $x = \frac{l+450}{15}$ --------(ii)

Comparing both equations, we get :

=> $\frac{l+270}{12} = \frac{l+450}{15}$

=> $5l + 1350 = 4l + 1800$

=> $5l - 4l = 1800 - 1350$

=> $l = 450$

Substituting it in equation (ii), => $x = \frac{450+450}{15} = \frac{900}{15} = 60$ m/s

= $\left(60 \times \frac{18}{5}\right) = 216$ km/hr

=> Ans - (D)

Instructions

The bar graph shows the number of motorcycles of different brands sold by a dealer in a month. Study the diagram and answer the following questions.

Sales (in Rs.1000s)
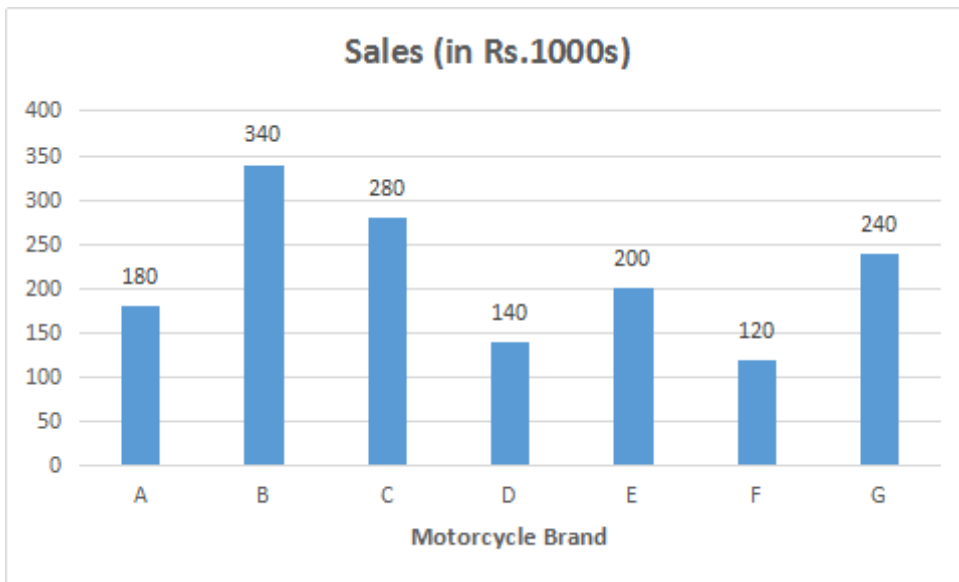
Question 17

Units sold of which Motorcycle brand were the second highest?

A   C

B   B

C   G

D   D

   Answer: A

Explanation:

Units sold of Motorcycle brand **C** were the second highest = 280

=> Ans - (A)

Question 18

What is the ratio of units sold of brand A to that of brand C?

A   9 : 14

B   14 : 9

C   11 : 14

D   14 : 11

   Answer: A

Explanation:

Number of units sold of brand A = 180

Number of units sold of brand C = 280

=> Required ratio = $\frac{180}{280} = 9 : 14$

=> Ans - (A)

Question 19

Units sold of brand D was lesser than that of brand E by _____.

A   37.20%

B   60%

C   42.80%

D   30%

   Answer: D

Explanation:
Number of units sold of brand D = 140

Number of units sold of brand E = 200

=> Required % = $\frac{(200-140)}{200} \times 100$

= $\frac{60}{2} = 30\%$

=> Ans - (D)

Question 20

If the average price of a Motorcycle sold by the dealer is Rs 1 lakh then what is the sales (in Rs lakhs) of all the motorcycles sold by the dealer in the month?

A   150

B   1600

C   160

D   1500

   Answer: D

Explanation:
Total number of units sold of all the brands

= 180 + 340 + 280 + 140 + 200 + 120 + 240 = 1500

Average price of 1 Motorcycle = Rs. 1 lakh

=> Sales (in Rs lakhs) of all the motorcycles sold by the dealer in the month = $1500 \times 1 = 1500$

=> Ans - (D)

Instructions

For the following questions answer them individually

Question 21

The length of the diagonal and the breadth of a rectangle is 13 cm and 5 cm respectively. Calculate its area (in cm^2).

A 60

B 120

C 37

D 74

Answer: A

Explanation:

Let the length of rectangle = l cm and breadth, $b = 5$ cm

=> Diagonal, $d^2 = l^2 + b^2$

=> $l^2 = (13)^2 - (5)^2$

=> $l^2 = 169 - 25 = 144$

=> $l = \sqrt{144} = 12$ cm

$\therefore$ Area = $12 \times 5 = 60\ cm^2$

=> Ans - (A)

Question 22

What is the sum of the measures of all the interior angles of a regular polygon of 5 sides?

A 720

B 1080

C 1260

D 540

Answer: D

Explanation:

Sum of all interior angles of a polygon with $'n'$ sides = $(n-2) \times 180°$

=> Sum of angles of a pentagon = $(5-2) \times 180°$

= $3 \times 180° = 540°$

Question 23

The volume of a sphere is $179.67 cm^3$. Find its diameter (in cm).

A 3.5

B 14

C 7

D 10.5

Answer: C

Explanation:

Let radius of sphere = r cm

Volume of sphere = $\frac{4}{3} \times \pi r^3$

=> $\frac{4}{3} \times \frac{22}{7} \times (r)^3 = 179.67$

=> $(r)^3 = 179.67 \times \frac{21}{88}$

=> $(r)^3 = 42.875$

=> $r = \sqrt[3]{42.875} = 3.5$ cm

$\therefore$ Diameter = $2 \times 3.5 = 7$ cm

=> Ans - (C)

Question 24

What is the value of $\left(cos45° - \frac{1}{3}\right)$?

A $2 - \sqrt{3}$

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

C $\frac{(3-\sqrt{2})}{3\sqrt{2}}$

D $\frac{1}{2\sqrt{3}}$

Answer: C

Explanation:

Expression : $\left(cos45° - \frac{1}{3}\right)$

= $\frac{1}{\sqrt{2}} - \frac{1}{3}$

$$= \frac{(3-\sqrt{2})}{3\sqrt{2}}$$

=> Ans - (C)

Question 25

ΔUVW is right angled at V. If $secU = \frac{5}{3}$, then what is the value of $tanW$?

A $\frac{3}{4}$
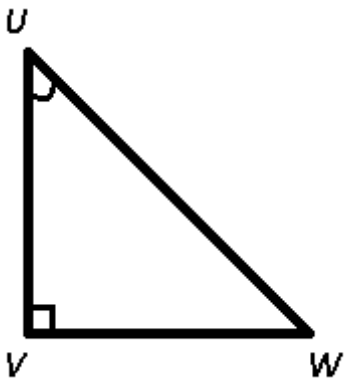
B $\frac{5}{3}$

C $\frac{4}{5}$

D $\frac{4}{3}$

   Answer: A

Explanation:

Given : sec $U = \frac{5}{3}$

Also, sec $U = \frac{UW}{UV} = \frac{5}{3}$

Let UW = 5 cm and UV = 3 cm

Thus, in △ UVW, => $(VW)^2 = (UW)^2 - (UV)^2$

=> $(VW)^2 = (5)^2 - (3)^2$

=> $(VW)^2 = 25 - 9 = 16$

=> $VW = \sqrt{16} = 4$ cm

To find : $\tan W = \frac{UV}{VW}$

= $\frac{3}{4}$

=> Ans - (A)

Reasoning

Question 26

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

Vehicle : Bus : : ? : ?

A   Car : Tyre

B   Vegetable : Spinach

C   Road : Ship

D   Vehicle : Run

   Answer: B

Explanation:

Expression = Vehicle : Bus : : ? : ?

The second comes under the category of first, i.e. bus is a vehicle, similarly spinach is a vegetable.

=> Ans - (B)

Question 27

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

63 : 105 : : 48 : ?

A   77

B   60

C   80

D   65

   Answer: C

Question 28

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

ADF : KNP : : ILN : ?

A   SUW

B   SVX

C   TVW

D   TUX

   Answer: B

Explanation:
Expression = ADF : KNP : : ILN : ?

The pattern followed is :

A	D	F
(+10)	(+10)	(+10)
K	N	P

Similarly, for ILN : **SVX**

I	L	N
(+10)	(+10)	(+10)
S	V	X

=> Ans - (B)

Question 29

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

A   Court - Justice

B   Education - School

C   Product - Shop

D   Treatment - Hospital

   Answer: A

Explanation:
Second is the institute where we acquire the first thing, hence **Court - Justice** is the odd one out since its order is reversed.

=> Ans - (A)

Question 30

In the following question, four number pairs are given. The number on left side of (-) is related to the number on 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

A 63 - 67

B 17 - 21

C 39 - 43

D 31 - 37

Answer: D

Explanation:

The difference between each of the pair of numbers is 4.

But in the last option => $37 - 31 = 6$

Thus, (31 - 37) is the odd one out.

=> Ans - (D)

Question 31

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

A CHM

B GLQ

C KPV

D NSX

Answer: C

Explanation:

(A) : C (+5 letters) = H (+5 letters) = M

(B) : G (+5 letters) = L (+5 letters) = Q

(C) : K (+5 letters) = P (**+6** letters) = V

(D) : N (+5 letters) = S (+5 letters) = X

=> Ans - (C)

Question 32

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

1. **Budge**
2. **Bulb**
3. **Cannon**
4. **Bumper**
5. **Capable**

A Bumper

B Bulb

C Budge

D Capable

   Answer: B

Explanation:
As per the order of dictionary :

= Budge -> Bulb -> Bumper -> Cannon -> Capable

Thus, the second word = **Bulb**

=> Ans - (B)

Question 33

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

13, 22, 66, ?, 225, 234, 702, 711

A 65

B 75

C 80

D 70

   Answer: B

Explanation:
The pattern followed is :

13 + 9 = 22

22 $\times$ 3 = 66

66 + 9 = **75**

75 $\times$ 3 = 225

225 + 9 = 234

234 $\times$ 3 = 702

702 + 9 = 711

=> Ans - (B)

Question 34

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

NC, OE, PG, QI, ?

A RL

B RK

C SJ

D SL

   Answer: B

Explanation:

Series : NC, OE, PG, QI, ?

The pattern followed in each letter of the terms is :

1st letter : N (+1 letter) = O (+1 letter) = P (+1 letter) = Q (+1 letter) = R

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

Thus, missing term = **RK**

=> Ans - (B)

Question 35

In a row of boys, Rahul is 33rd from the left end. Rajat is 17 ranks to the right of Rahul. If Rajat is 35th from right end, then what will be the rank of Rahul from the right end?

A 49

B 50

C 51

D 52

   Answer: D

Explanation:

Rahul's rank from left = 33rd

Rajat is 17 ranks to the right of Rahul, => Rajat's rank from left = 33 + 17 = 50th

Also, Rajat's rank from right = 35th

=> Total boys in the row = $(50 + 35) - 1 = 84$

$\therefore$ Rahul's rank from right = $(84 + 1) - 33 = 52$

=> Ans - (D)

Question 36

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

Superannuated

A Neat

B After

C Sure

D Super

   Answer: B

Explanation:
The word SUPERANNUATED does not contain any 'F', thus the term **After** cannot be formed.

=> Ans - (B)

Question 37

In a certain code language, "PRICE" is written as "1618935" and "VALUE" is written as "22112215". How is "MARK" written in that code language?

A 1381211

B 1311811

C 1341817

D 1718192

   Answer: B

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

Eg :- PRICE = 16,18,9,3,5 -> 1618935

VALUE = 22,1,12,21,5 -> 22112215

Similarly, MARK = 13,1,18,11 -> **1311811**

=> Ans - (B)

Question 38

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

6 ÷ 10 - 30 + 4 x 12 = ?

A   6

B   2

C   42

D   41

   Answer: A

Explanation:
Expression : 6 ÷ 10 - 30 + 4 x 12 = ?

$\equiv 6 - 10 + 30 \times 4 \div 12$

$= -4 + \frac{120}{12}$

$= -4 + 10 = 6$

=> Ans - (A)

Question 39

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

90 ÷ 10 + 5- 6 x 4 = 28

A   - and +

B   ÷ and x

C   x and -

D   ÷ and -

   Answer: A

Explanation:
Expression : 90 ÷ 10 + 5- 6 x 4 = 28

(A) : - and +

$\equiv 90 \div 10 - 5 + 6 \times 4 = 28$

L.H.S. = $\left(\frac{90}{10}\right) - 5 + (6 \times 4)$

= $9 - 5 + 24 = 28 =$ R.H.S.

=> Ans - (A)

Question 40

If 3@7 = 20, 8@1 = 18 and 6@5 = 22, then find the value of 4@4 = ?

A 15

B 16

C 20

D 29

Answer: B

Explanation:

Given : 3@7 = 20, 8@1 = 18 and 6@5 = 22

If we replace '@' with '+', and multiply the sum by 2, we get the desired result.

Eg :- $(3 + 7) \times 2 = 20$

and $(8 + 1) \times 2 = 18$ and $(6 + 5) \times 2 = 22$

Similarly, $(4 + 4) \times 2 = 16$

=> Ans - (B)

Question 41

Which of the following terms follows the trend of the given list?
abaBABAB, AbabABAB, ABabaBAB, ABAbabAB, ABABabaB, _____.

A aBABABab

B ABABAbab

C abaBABAB

D AbabABAB

Answer: B

Question 42

A flock of migrating geese flies 20 km East, then turns South and flies 50 km, then turns East and flies 40 km, and turns to its left and flies 50 km. Where is the flock now with reference to its starting position?

A 20 km East

B 60 km East

C 60 km West

D 20 km West

   Answer: B

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: Some razors are blades
Statement II: All knives are razors

Conclusion I: Some razors are knives
Conclusion II: No knives are blades

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: A

Question 44

In the following figure, rectangle represents Accountants, circle represents Food stylists, triangle represents Tattooists and square represents Europeans. Which set of letters represents Accountants who are either Food stylists or Europeans?
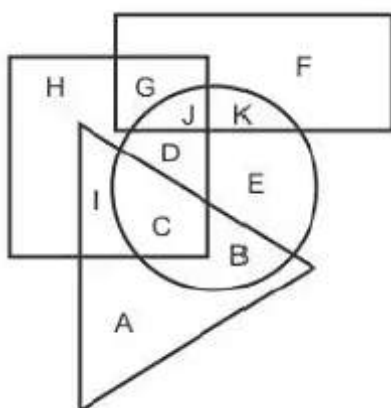
A   J

B   KE

C   HG

D   GJK

   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.

PIG, TMK, XQO, ?, FYW

A   CAR

B   CVT

C   BUS

D   DWU

   Answer: C

Explanation:
Series : PIG, TMK, XQO, ?, FYW

The pattern followed in each letter of the terms is :

1st letter : P (+4 letters) = T (+4 letters) = X (+4 letters) = B (+4 letters) = F

2nd letter : I (+4 letters) = M (+4 letters) = Q (+4 letters) = U (+4 letters) = Y

3rd letter : G (+4 letters) = K (+4 letters) = O (+4 letters) = S (+4 letters) = W

Thus, missing term = **BUS**

=> Ans - (C)

Question 46

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

1, 2, 4, 7, 11, ?

A   16

B 18

C 20

D 17

   Answer: A

Explanation:
Successive natural numbers are added.

1 + 1 = 2

2 + 2 = 4

4 + 3 = 7

7 + 4 = 11

11 + 5 = **16**

=> Ans - (A)

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 (6, 25, 19)

B (9, 36, 28)

C (7, 29, 22)

D (5, 21, 16)

   Answer: B

Explanation:
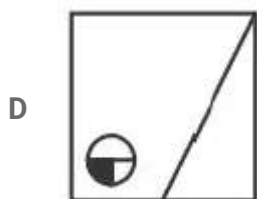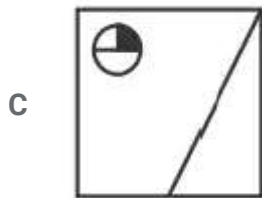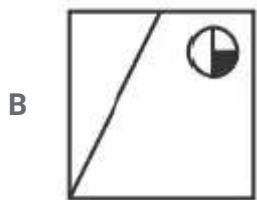The numbers are of the form : $(x, 4x + 1, 3x + 1)$
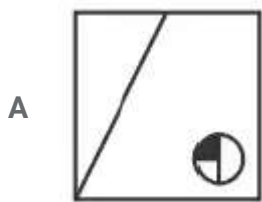
But in the second option, we have = $4 \times 9 + 1 = 37 \neq 36$

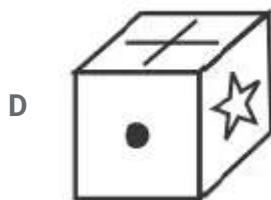Thus, (9, 36, 28) is the odd one out.
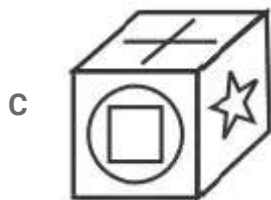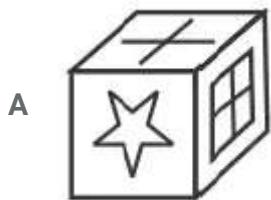
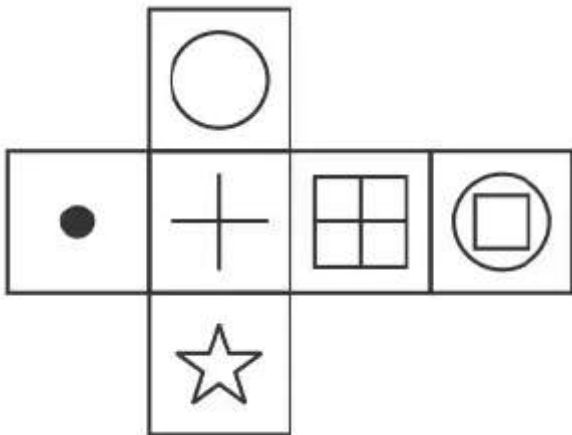=> Ans - (B)

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?

A

B

C

D
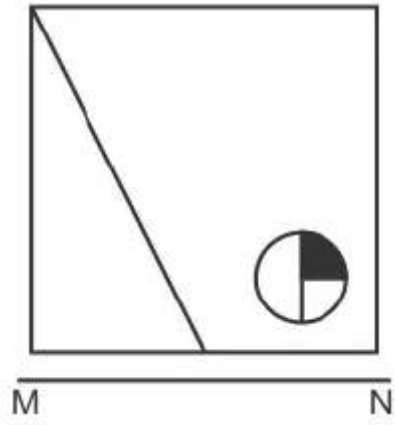
Answer: B

Question 49

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

A

B

C

D

Answer: C

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 as column, for example •G' can be represented by 32, 43 etc and 'Q' can be represented by 76, 77 etc. Similarly, you have to identify the set for the word 'HEAP'.

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

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

A 21,23,11,96

B 23,55,30,76

C 13,69,22,99

D 41,96,30,58

Answer: A

Explanation:
(A) : 21,23,11,96 = **HEAP**

(B) : 23,55,30,76 = EYIQ

(C) : 13,69,22,99 = ANLW

(D) : 41,96,30,58 = JPIN

=> 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

The noise startled (a)/ the dog (b)/ and made it to yell. (c)/ No error (d)

A The noise startled

B the dog

C and made it to yell

D No error

　　Answer: C

Question 52

There is a general agreement that some behaviors that are common in birds (a)/ as well as in crocodiles, was also common among (b)/ extinct dinosaur groups. (c)/No error (d)

A There is a general agreement that some behaviors that are common in birds

B as well as in crocodiles, was also common among

C extinct dinosaur groups

D No error

　　Answer: B

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

She kept thinking, "How lucky Serena _____!"

A can

B could be

C is

D supposedly

　　Answer: C

Question 54

Faith is the only power that can inspire a human being who is in _____.

A flair

B glair

C   stair

D   despair

   Answer: D

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

Enigmatic

A   Obvious

B   Mysterious

C   Plain

D   Known

   Answer: B

Question 56

Declension

A   Decay

B   Decision

C   Improvement

D   Increase

   Answer: A

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

Fritter

A   Blow

B Dwindle

C Dissipate

D Save

   Answer: D

Question 58

Melancholy

A Destroyed

B Moody

C Low

D Cheerful

   Answer: D

Instructions

For the following questions answer them individually

Question 59

Rearrange the parts of the sentence in correct order.

The ideology of
P : modern economics suggests that
Q : enhanced satisfaction and well-being
R : material progress has yielded

A PQR

B RQP

C PRQ

D RPQ

   Answer: C

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.

She threw me into a ditch.

A   I was threw.

B   I am threw by her into a ditch.

C   I was thrown into a ditch by her.

D   I was thrown into a ditch.

   Answer: C

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.

"Be silent" I said to them.

A   I told them to be silent.

B   I told them of being silent.

C   I said them to be silent.

D   Be silent, he said to them.

   Answer: A

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   Surgent

B   Sergant

C   Sergeant

D   Sergent

   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.

Although it has been felt necessary to devote much space to _____ attempt to find principles that may be said to be at the basis _____ the art of all nations, the executive side of the question has not been neglected. And it is hoped that the _____ method for the study of drawing from the two opposite points of view of line and mass here advocated may be useful, and help students to avoid some of the _____ that results from attempting simultaneously the study of these _____ qualities of form expression.

Question 63

much space to _____ attempt to find principles

A   an

B   a

C   it

D   once

   Answer: A

Question 64

at the basis _____ the art of all nations,

A   of

B   off

C   for

D   from

   Answer: A

Question 65

And it is hoped that the _____ method for the study

A   logic

B   logics

C logical

D logically

Answer: C

Question 66

avoid some of the _____ that results

A confuse

B confusing

C confused

D confusion

Answer: D

Question 67

study of these _____ qualities of form expression.

A difference

B different

C differences

D differently

Answer: B

Instructions

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

Question 68

Bite off more than you can chew

A A voracious person who eats with big morsels.

B It is not good manners to hog food when you are in a social setting.

C A commitment is a commitment irrespective of whether you can do it or not.

D Take on a commitment one cannot fulfil.

Answer: D

Question 69

A fool's paradise

A An average person appears smart in company of fools.

B A state of happiness based on a person's not knowing about potential trouble.

C A paradise is ruined when fools enter it.

D Pretending that everything is going fine when actually all is being lost.

Answer: B

Instructions

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

Question 70

The clandestine copying and distribution of literature banned by the state

A Wanton

B Brazen

C Flagrant

D Samizdat

Answer: D

Question 71

The forming of a theory or conjecture without firm evidence

A Verification

B Substantiation

C Speculation

D Attestation

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

People (have got so addict) to their virtual life that they forget there is more to life than just sitting in front of a plastic box.

A have got so addicting

B has got so addicted

C have got so addicted

D no improvement

Answer: C

Question 73

During the last decade the typewriters (had give) way to the computers.

A have gave

B is giving

C have given

D no improvement

Answer: C

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.

Leaders usher
A- creates a natural tension
B- in organisational change, which
C- as the status quo fights back

A ACB

B ABC

C BAC

D CBA

   Answer: C

Question 75

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

A effuzively

B effusively

C efusively

D efuzively

   Answer: B

General Awareness

Instructions

For the following questions answer them individually

Question 76

Which one of the following countries is NOT a member of ASEAN?

A Brunei Darussalam

B Cambodia

C Vietnam

D India

   Answer: D

Question 77

Planning in India derives its objectives and social premises from which of the following?

A Public Policy

B Directive Principles of State Policy

C Fundamental Rights

D Fundamental Duties

Answer: B

Question 78

The hills, namely Black, Blue and Green Hill, are located in which country?

A Australia

B Germany

C USA

D Russia

Answer: C

Question 79

Where is the origin of Ganga and Brahmaputra rivers are situated respectively?

A In Nepal and Tibet

B In Tibet and Sikkim

C In Uttar Pradesh and Tibet

D Uttarakhand and Tibet

Answer: D

Question 80

Upanishad Books are: _____.

A On religion

B On yoga

C On the law

D On philosophy

Answer: D

Question 81

In which year Swami Vivekananda established the Ramakrishna Mission at Belur?

A 1885

B 1890

C 1897

D 1901

Answer: C

Question 82

Panna Lal Ghosh is related to which musical instrument?

A Mridangam

B Flute

C Shehnai

D Sarod

Answer: B

Question 83

The first ever disaster management exercise of BIMSTEC countries was held _____ in October 2017.

A Dhaka

B Colombo

C New Delhi

D Karachi

Answer: C

Question 84

Which country was, in October 2017, named the best country to visit in 2018, according to Lonely Planet 'Best in Travel 2018' list?

A India

B Chile

C Thailand

D South Korea

Answer: B

Question 85

In which year Bhutan adopted its Constitution?

A 2004

B 2006

C 2008

D 2010

Answer: C

Question 86

Atomic number is always equal to _____.

A Number of protons

B Number of neutrons

C Number of electrons

D Sum of protons and neutrons

Answer: A

Question 87

Which of the following statement(s) is/are INCORRECT ?

I. Alkenes are fairly unreactive.
II. Alkenes burn with blue flame.
III. Alkanes burn with yellow flame.

A   Only I and II

B   Only I and III

C   Only II and III

D   All I, II and III

  Answer: D

Question 88

Which pillar of Indian Constitution is its final interpreter?

A   The Executive

B   The Legislative

C   The Judiciary

D   No option is correct.

  Answer: C

Question 89

Which Constitutional Amendment Act gave constitutional recognition to the panchayats ?

A   72nd Constitutional Amendment Act

B   73rd Constitutional Amendment Act

C   74th Constitutional Amendment Act

D   75th Constitutional Amendment Act

  Answer: B

Question 90

Which of the following is NOT included in the excretory system of human being?

A   A pair of kidney

B   A pair of ureters

C   Abdomen

D   Urinary bladder

Answer: C

Question 91

By which process substance like carbon dioxide or oxygen can move across the cell membrane?

A   Plasmolysis

B   Sedimentation

C   Diffusion

D   Transpiration

Answer: C

Question 92

In November 2017, Indian Government approved setting up of 'Pradhan Mantri Mahila Shakti Kendras'. These will be set up in how many most backward districts of the country?

A   100

B   150

C   115

D   200

Answer: C

Question 93

Researchers from Columbia University Medical Centre in United States o America have converted which of the following into the world's smallest data recorder?

A   Natural bacterial immune system

B   Magnetic tape

C   Viral snippet copies

D   No option is correct.

   Answer: A

Question 94

As per RBI In October 2017, Gross Non-Performing Assets (GNPA) ratio for NBFCs increased to what percentage till March 2017?

A   2

B   5

C   10

D   20

   Answer: B

Question 95

On 5 January 2018, Lok Sabha passed High Court and Supreme Court Judges (Salaries and Conditions of Service) Amendment Bill, 2017. The Bill seeks to amend _____.

A   High Court Judges (Salaries and Conditions of Service) Act, 1954

B   High Court Judges (Salaries and Conditions of Service) Act, 1964

C   High Court Judges (Salaries and Conditions of Service) Act, 1975

D   High Court Judges (Salaries and Conditions of Service) Act, 1980

   Answer: A

Question 96

A Sonar of a ship sends sounds waves of speed 1000 m/s. These waves are reflected back by the ocean floor in 2 seconds. Find the depth (in m) of the ocean floor.

A   2000

B 500

C 1000

D 100

    Answer: C

Explanation:

Speed of sound waves = 1000 m/s

Using, distance = speed $\times$ time

= $1000 \times 2 = 2000$ m

But, this is the total distance travelled by the sound, so the depth is half of this.

=> Depth = $\frac{2000}{2} = 1000$ m

=> Ans - (C)

Question 97

If the acceleration due to gravity on the surface of earth is g, then the acceleration due to gravity on the surface of a planet whose mass is same as that of earth and radius is half as that of earth is _____.

A $2g$

B $\frac{g}{4}$

C $\frac{g}{2}$

D $4g$

    Answer: D

Question 98

The process of electric discharge between clouds and the earth or between different clouds causes _____.

A thunderstorm

B cyclone

C lightning

D winds

    Answer: C

Question 99

Which of the statements given below are correct?

A) Julio Granda won the 2017 World Senior Chess Championship.
B) Zhansaya Abdumalik won the Women's 2017 World Junior Chess Championship.
C) In 2017 Pro Kabaddi League, Suraj Desai played for Dabang Delhi.

A   Only C

B   Both A and C

C   A, B and C

D   None of these

   Answer: C

Question 100

The objective of _____ is to make India a global information technology superpower.

A   NIC

B   NASSCOM

C   Department of Information Technology

D   State Bank of India

   Answer: C