

SSC CHSL 1 Feb 2017 Morning Shift

Reasoning

Instructions

For the following questions answer them individually

Question 1

Select the related word/letters/number from the given alternatives. Farmer : Plough:: Painter: ?

- A Brush
- B Harrow
- C Axe
- D Knife

Answer: A

Explanation:

Plough is a large farming implement with one or more blades fixed in a frame used by farmers to plant seeds, similarly a painter uses brush to paint.

=> Ans - (A)

Question 2

Select the related word/letters/number from the given alternatives. DB: IC:: YE: ?

- A FJ
- B DF
- C TH
- D WL

Answer: B

Explanation:

Expression = DB: IC:: YE: ?

The pattern followed is :

D	B
(+5)	(+1)
I	C

Similarly, YE : DF

Y	E
(+5)	(+1)
D	F

=> Ans - (B)

Question 3

Select the related word/letters/number from the given alternatives. AEG: GKM :: MQS : ?

A SWY

B SWZ

C ZWQ

D SWB

Answer: A

Explanation:

Expression = AEG: GKM :: MQS : ?

The pattern followed is :

A	E	G
(+6)	(+6)	(+6)
G	K	M

Similarly, MQS : SWY

M	Q	S
(+6)	(+6)	(+6)
S	W	Y

=> Ans - (A)

Question 4

Select the related word/letters/number from the given alternatives.

17: 71 :: 35: ?

A 69

B 56

C 60

D 53

Answer: D

Explanation:

Expression = 17: 71 :: 35: ?

The pattern followed is that the second number is the reverse of the first number.

Eg :- 71 is reverse of 17

Similarly, reverse of 35 : **53**

=> Ans - (D)

Question 5

Select the odd word/letters/number/number pair from the given alternatives.

A Joule

B Ohm

C Watt

D Magnetic Field

Answer: D

Explanation:

Except magnetic field, all are S.I. units, hence magnetic field is the odd one out.

=> Ans - (D)

Question 6

Select the odd word/letters/number/number pair from the given alternatives.

A BGF

B FDH

C BAE

D CDE

Answer: D

Explanation:

Only the letters in the last option are consecutive alphabets according to the English alphabetical order, hence CDE is the odd one.

=> Ans - (D)

Question 7

Select the odd word/letters/number/number pair from the given alternatives.

A 2197

B 3375

C 4099

D 2744

Answer: C

Explanation:

$2197 = (13)^3$, $3375 = (15)^3$ and $2744 = (14)^3$, but 4099 is not a perfect cube, hence it is the odd one out.

=> Ans - (C)

Question 8

Select the odd word/letters/number/number pair from the given alternatives.

A 794

B 576

C 668

D 992

Answer: B

Explanation:

$576 = (24)^2$, all other numbers are not perfect square numbers, hence 576 is the odd one out.

=> Ans - (B)

Question 9

A series is given with one term missing. Select the correct alternative from the given ones that will complete the series. Padma Shri, Padma Bhushan, Padma Vibhushan, ?

A Bharat Ratna

B Ashok Chakra

C Sahitya Akademi Award

D Arjuna Award

Answer: A

Explanation:

Padma shri, Padma Bhushan, Padma Vibhushan, Bharat Ratna are Civilian awards.

=> Ans - (A)

Question 10

A series is given with one term missing. Select the correct alternative from the given ones that will complete the series. CAE, FDH, IGK, ?

A L J N

B O M Q

C K L M

D P O N

Answer: A

Explanation:

Expression : CAE, FDH, IGK, ?

The pattern followed in each letters of the terms is :

1st letter : C (+3 letters) = F (+3 letters) = I (+3 letters) = L

2nd letter : A (+3 letters) = D (+3 letters) = G (+3 letters) = J

3rd letter : E (+3 letters) = H (+3 letters) = K (+3 letters) = N

Thus, missing term = **L J N**

=> Ans - (A)

Question 11

A series is given with one term missing. Select the correct alternative from the given ones that will complete the series. AY, CW, EU, ?

A G S

B H S

C G R

D H R

Answer: A

Explanation:

Expression : AY, CW, EU, ?

The pattern followed in each letter of the terms is :

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

2nd letter : Y (-2 letters) = W (-2 letters) = U (-2 letters) = S

Thus, missing term = **GS**

=> Ans - (A)

Question 12

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

122, 197, 290, ?

A 399

B 400

C 401

D 402

Answer: C

Explanation:

The pattern followed is :

$$(11)^2 + 1 = 122$$

$$(14)^2 + 1 = 197$$

$$(17)^2 + 1 = 290$$

$$(20)^2 + 1 = \mathbf{401}$$

=> Ans - (C)

Question 13

In the following question, two statements are given each followed by two conclusions I and II. You have to consider the statements to be true even if they seem 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) India's GDP continues to grow at one of the reasonable rates but job creation is not picking up the similar pace. (II) Every year over 20 million young Indians join the workforce.

Conclusions:

(I) Population increase is more than the job creation rate.

(II) Supply basket is less and the demand basket for jobs is very high.

A Only conclusion II follows

B Conclusion I and II both follow

- C Neither I nor II follow
- D Only conclusion I follows

Answer: B

Question 14

Five girls are sitting facing towards the north. Rekha is between Shalini and Neetu. Pooja is to the immediate right of Neetu and Shalini is to the immediate right of Neha. Who is sitting in the middle?

- A Shalini
- B Neetu
- C Rekha
- D Pooja

Answer: C

Explanation:

Rekha is between Shalini and Neetu. Pooja is to the immediate right of Neetu

=> Rekha is sitting to the immediate left of Neetu, and Shalini is sitting second to the left of Neetu.

Also, Shalini is to the immediate right of Neha.

Arrangement :

Neha	Shalini	Rekha	Neetu	Pooja
------	---------	-------	-------	-------

∴ **Rekha** is sitting in the middle.

=> Ans - (C)

Question 15

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

- i. nature
- ii. nest
- iii. numeric
- iv. news

- A iii, i, ii, iv
- B iv, ii, iii, i
- C i, ii, iv, iii

D i, ii, iii, iv

Answer: C

Explanation:

As per the order of dictionary :

= nature -> nest -> news -> numeric

≡ i, ii, iv, iii

=> Ans - (C)

Question 16

In a certain code language, "TRAIN" is written as "NIART". How is "SCOOTER" written in that code language?

A RETOOC

B RETOCSO

C RETSCOO

D SCOORET

Answer: A

Explanation:

"TRAIN" is written as "NIART"

The pattern followed is that the word is inversed, i.e. first letter comes at the end, second at second last and so on.

Similarly, for SCOOTER : **RETOOC**

=> Ans - (A)

Question 17

If "+" means "minus", "x" means "divided by", "÷" means "plus" and "-" means "multiplied by", then $38 \times 2 - 6 + 19 \div 35 = ?$

A 130

B 140

C 135

D 145

Answer: A

Explanation:

Expression : $38 \times 2 - 6 + 19 \div 35 = ?$

$$\equiv 38 \div 2 \times 6 - 19 + 35$$

$$= (38 \times 3) + 16$$

$$= 114 + 16 = 130$$

=> Ans - (A)

Question 18

Which of the following interchanges in signs and numbers will make the given equation correct?

$$8 \times 9 + 2 = 74$$

A x and =, 2 and 9

B x and +, 8 and 2

C + and x, 8 and 9

D + and =, 74 and 2

Answer: B

Explanation:

Expression : $8 \times 9 + 2 = 74$

(A) : x and =, 2 and 9

$$\equiv 8 = 2 + 9 \times 74$$

$$\text{R.H.S.} = 666 + 2 = 668 \neq \text{L.H.S.}$$

(B) : x and +, 8 and 2

$$\equiv 2 + 9 \times 8 = 74$$

$$\text{L.H.S.} = 2 + 72 = 74 = \text{R.H.S.}$$

=> Ans - (B)

Question 19

In the following question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

a_b_a_c_a_bc

A bccbb

B bcbca

C cabca

D acbcb

Answer: A

Explanation:

The pattern followed is that the terms 'abbc' and 'accb' are alternatively repeated.

= abbc accb abbc

=> Ans - (A)

Question 20

A man is facing west and he turns anti-clockwise by 90 degrees and moves 10m straight, then he again turns 90 degrees anti-clockwise. Which direction is the man facing now?

A North

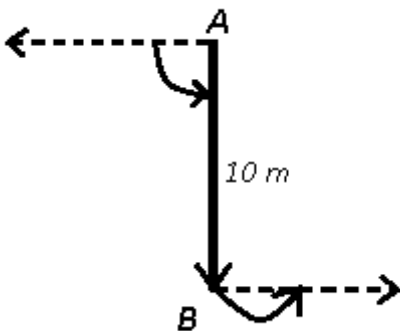
B West

C South

D East

Answer: D

Explanation:



The man is initially facing west, then he turns anti-clockwise by 90 degrees and moves 10 m straight towards south to reach point B, then he again turns 90 degrees anti-clockwise.

Thus, he is facing east at the end.

=> Ans - (D)

Question 21

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 in two matrices given below. 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, e.g., 'P' can be represented by 95, 86 etc. and 'T' can be represented by 85, 95 etc. Similarly, you have to identify the set for the word 'ALIKE'

Matrix - I

	0	1	2	3	4
0	M	K	P	P	P
1	L	M	K	Q	N
2	Y	L	M	K	N
3	E	Y	L	M	K
4	B	B	Y	L	N

Matrix - II

	5	6	7	8	9
5	I	A	O	O	J
6	C	I	A	S	J
7	E	D	I	A	H
8	T	E	F	I	A
9	T	S	E	G	H

- A 56, 10, 55, 31, 97
- B 67, 21, 66, 96, 86
- C 78, 32, 77, 12, 86
- D 89, 43, 76, 01, 30

Answer: C

Explanation:

(A) : 56, 10, 55, 31, 97 = ALIYE

(B) : 67, 21, 66, 96, 86 = ALISE

(C) : 78, 32, 77, 12, 86 = **ALIKE**

(D) : 89, 43, 76, 01, 30 = ALDKE

=> Ans - (C)

Question 22

Pointing towards a lady in a photograph, a girl says, "Vidit's grandmother is the mother-in-law of this lady". How is the lady in the photograph related to Vidit?

- A Mother

- B Sister
- C Aunt
- D Cannot be determined

Answer: D

Explanation:

Let 'X' is Vedit's grandmother, now 'X' is also the mother-in-law of the given lady.

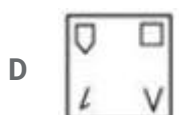
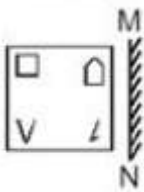
Thus, the lady is either Vedit's mother or his aunt.

=> Relation cannot be determined.

=> Ans - (D)

Question 23

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



Answer: C

Question 24

Identify the diagram that best represents the relationship among the given classes. Football, Volleyball, Outdoor Games, Carrom.



Answer: B

Explanation:

Football and Volleyball are both outdoor games, but they are completely different, and carrom is an indoor game.

Thus, the venn diagram that best describes above relationship is :

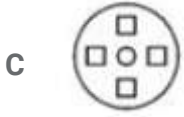


=> Ans - (B)

Question 25

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





Answer: A

General Awareness

Instructions

For the following questions answer them individually

Question 26

Chhatrapati Shivaji Terminus station was designed by

- A Frederick William Stevens
- B Santiago Calatrava
- C Fazlur Rahman Khan
- D Frei Otto

Answer: A

Question 27

Who won Nobel prize for Physics in 2015?

- A Hiroshi Amano
- B Takaaki Kajita
- C Isamu Akasaki
- D Makoto Kobayashi

Answer: B

Question 28

Kidney stones are composed of .

- A Calcium Oxalate
- B Sodium Chloride
- C Magnesium Nitrate
- D Calcium Bicarbonate

Answer: A

Question 29

Which of the following is not true about Angiosperms?

- A Dominant phase is gametophytes
- B Vascular bundles are present
- C Spores are heterospores
- D Seeds are covered

Answer: A

Question 30

All of the following are excretory (waste) products of animals, except

- A Uric Acid
- B Ammonia
- C Carbohydrates
- D Urea

Answer: C

Question 31

RNA is a polymeric molecule. What does RNA stand for?

- A Rado Nuclear Acid

- B** Ribo Nucleic Acid
- C** Rhino Nuclear Acid
- D** Resto Nucleus Acid

Answer: B

Question 32

The common name of dichlorodifluoromethane is .

- A** galena
- B** Freon
- C** gypsum
- D** borax

Answer: B

Question 33

_____ performs tasks such as inserting, updating, or deleting data occurrences.

- A** Data definition language
- B** Data manipulation language
- C** Query language
- D** OQL

Answer: B

Question 34

The Razmnama is a Persian translation of the .

- A** Mahabharata
- B** Ramayana
- C** Vedas
- D** Upanishads

Answer: A

Question 35

If demand curve for house cleaning services is $D = 45000 - 21P$ and supply curve is $S = 15000 + 9P$, find the equilibrium Quantity?

- A 12000 units
- B 6000 units
- C 24000 units
- D 30000 units

Answer: C

Question 36

Goods whose demand is proportional to price are called

- A inferior goods
- B Veblen goods
- C normal goods
- D exclusive goods

Answer: B

Question 37

Similipal Tiger Reserve is in which state?

- A Maharashtra
- B Andhra Pradesh
- C Chhattisgarh
- D Odisha

Answer: D

Question 38

Which of the following is a greenhouse gas or a gas which can deplete the ozone layer?

- A N2O
- B AsH3
- C N2
- D C5H12

Answer: A

Question 39

Manohar Parrikar is India's .

- A Railway Minister
- B Finance Minister
- C HRD Minister
- D Defence Minister

Answer: D

Question 40

What is the capital of Finland?

- A Tashkent
- B Helsinki
- C Bern
- D Dublin

Answer: B

Question 41

Which city is located on the banks of the river Mula-Mutha?

- A Surat
- B Ahmedabad
- C Nagpur

D Pune

Answer: D

Question 42

Ajatashatru was the son of

A Brahmadata

B Bindusara

C Bimbisara

D Chetaka

Answer: C

Question 43

Chhatrapati Sambhaji (1680-1688 AD) was the ruler of which dynasty?

A Maratha

B Nanda

C Haryanka

D Maurya

Answer: A

Question 44

Who Invented the computer mouse?

A Gene Dolgoff

B Brendan Eich

C Douglas Engelbart

D Federico Faggin

Answer: C

Question 45

states that internal energy is a function of state and the increase in internal energy is equal to the sum of the heat supplied to system and work done by the system.

- A First law of thermodynamics
- B Hooke's Law
- C The coulomb's law
- D Faraday's Law

Answer: A

Question 46

What is the direction of torque?

- A Perpendicular to the direction of applied force
- B Same as the direction of applied force
- C Opposite to the direction of applied force
- D Parallel to the radius

Answer: A

Question 47

Article 27 of the Indian Constitution "Freedom as to payment of taxes for promotion of any particular religion" deals with?

- A the Union Government
- B the State Government
- C the directive principles of state policy
- D the fundamental rights of the Indian Citizen

Answer: D

Question 48

Article 31C of the Indian Constitution "Saving of laws giving effect to certain directive principles" deals with?

- A** the fundamental rights of the Indian Citizen
- B** the State Government
- C** the Union Government
- D** the directive principles of state policy

Answer: A

Question 49

Who among the following has not scored a double hundred in an ODI?

- A** Virender Sehwag
- B** Sachin Tendulkar
- C** Brian Lara
- D** Rohit Sharma

Answer: C

Question 50

Who is the author of the book '7 Secrets of Shiva'?

- A** Sudeep Nagarkar
- B** Devdutt Pattanaik
- C** R. K. Narayan
- D** Aravind Adiga

Answer: B

Mathematics

Instructions

For the following questions answer them individually

Question 51

If $7A = 5B = 2C$; find $A : B : C$.

A 35:14:10

B 14:10:35

C 2:5:7

D 10:14:35

Answer: D

Explanation:

Let $7A = 5B = 2C = k$

$$\Rightarrow A = \frac{k}{7}, B = \frac{k}{5}, C = \frac{k}{2}$$

$$\Rightarrow \text{Ratio of } A : B : C = \frac{k}{7} : \frac{k}{5} : \frac{k}{2}$$

$$= \frac{1}{7} : \frac{1}{5} : \frac{1}{2}$$

L.C.M. of 2,5 and 7 = 70, thus multiplying by 70, we get :

$$= \frac{70}{7} : \frac{70}{5} : \frac{70}{2}$$

$$= 10 : 14 : 35$$

\Rightarrow Ans - (D)

Question 52

Which of the following numbers is not a prime number?

A 731

B 227

C 347

D 461

Answer: A

Explanation:

Prime Factorization of 731 = 17×43

For all the remaining numbers, the only factors are 1 and the number themselves.

Thus, only 731 is not a prime number.

\Rightarrow Ans - (A)

Question 53

A factory buys 7 machines. 2 Machine A, 2 Machine B and rest Machine C. Prices of the machines are Rs 95000, Rs 75000 and Rs 43000 respectively. Calculate the average cost of these machines?

A 71000

B 67000

C 75000

D 65500

Answer: B

Explanation:

Cost of machines A, B and C respectively are : Rs. 95000 , 75000 and 43000

Number of machines A, B and C respectively are : 2 , 2 , 3

$$\Rightarrow \text{Total cost} = (2 \times 95000) + (2 \times 75000) + (3 \times 43000)$$

$$= 190,000 + 150,000 + 129,000 = \text{Rs. } 4,69,000$$

$$\therefore \text{Average cost} = \frac{4,69,000}{7} = \text{Rs. } 67,000$$

\Rightarrow Ans - (B)

Question 54

The value of x for which the expressions $7x + 13$ and $13x - 7$ become equal is .

A $-10/3$

B $3/10$

C $-3/10$

D $10/3$

Answer: D

Explanation:

Expressions : $7x + 13$ and $13x - 7$

$$\Rightarrow 7x + 13 = 13x - 7$$

$$\Rightarrow 13x - 7x = 13 + 7$$

$$\Rightarrow 6x = 20$$

$$\Rightarrow x = \frac{20}{6} = \frac{10}{3}$$

\Rightarrow Ans - (D)

Question 55

A can do a work in 15 days and B in 9 days. If they work on it together for 5 days, then what fraction of work is left?

A $1/6$

B $3/7$

C $1/3$

D $1/9$

Answer: D

Explanation:

Let total work to be done = 45 units

A's efficiency = $\frac{45}{15} = 3$ units/day

B's efficiency = $\frac{45}{9} = 5$ units/day

(A + B)'s 1 day's work = $3 + 5 = 8$ units/day

Work done by them together in 5 days = $8 \times 5 = 40$ units

Work left = $45 - 40 = 5$ units

\therefore Fraction of work that is left = $\frac{5}{45} = \frac{1}{9}$

\Rightarrow Ans - (D)

Question 56

On dividing $256a^2b^2c^2$ by $64a^2$, we get

A $2c^2$

B $2b^2$

C 4

D $4b^2c^2$

Answer: D

Explanation:

Expression : $\frac{256a^2b^2c^2}{64a^2}$

$= \frac{256}{64} \times \frac{a^2b^2c^2}{a^2}$

$= 4b^2c^2$

=> Ans - (D)

Question 57

Rehman walks at 8 km/hr and Roma cycles at 13 km/hr towards each other. What was the distance between them when they started if they meet after 36 minutes?

A 12.6 kms

B 18.9 kms

C 15.8 kms

D 9.5 kms

Answer: A

Explanation:

Speed of Rehman = 8 km/hr and speed of Roma = 13 km/hr

They are travelling towards each other, thus relative speed = $8 + 13 = 21$ km/hr

Time taken = 36 min = $\frac{36}{60}$ hr = $\frac{3}{5}$ hr

Distance = speed \times time

$$= 21 \times \frac{3}{5} = \frac{63}{5}$$

$$= 12.6 \text{ km}$$

=> Ans - (A)

Question 58

On a certain Principal if the Simple interest for two years is Rs 4800 and Compound interest for the two years is Rs 5088, what is the rate of Interest?

A 6 percent

B 24 percent

C 12 percent

D 18 percent

Answer: C

Explanation:

Let the principal amount = Rs. $100x$ and rate of interest = $r\%$

Time period = 2 years

$$\text{Simple Interest} = \frac{P \times R \times T}{100} = 4800$$

$$\Rightarrow \frac{100x \times r \times 2}{100} = 4800$$

$$\Rightarrow 2rx = 4800$$

$$\Rightarrow x = \frac{4800}{2r} = \frac{2400}{r}$$

$$\text{Compound Interest} = P \left[\left(1 + \frac{R}{100} \right)^T - 1 \right] = 5088$$

$$\Rightarrow 100x \left[\left(1 + \frac{r}{100} \right)^2 - 1 \right] = 5088$$

$$\Rightarrow 100x \left[\left(1 + \frac{r^2}{100^2} + 2 \frac{r}{100} \right) - 1 \right] = 5088$$

$$\Rightarrow \left(100 \times \frac{2400}{r} \right) \left[\frac{r^2}{10000} + \frac{2r}{100} \right] = 5088$$

$$\Rightarrow 24r + 4800 = 5088$$

$$\Rightarrow 24r = 5088 - 4800 = 288$$

$$\Rightarrow r = \frac{288}{24} = 12\%$$

\Rightarrow Ans - (C)

Question 59

Two students appeared for an examination. One of them secured 24 marks more than the other and his marks were 65% of the sum of their marks. The marks obtained by them are .

A 78 and 54

B 85 and 61

C 67 and 43

D 52 and 28

Answer: D

Explanation:

Let marks scored by 1st student = x

\Rightarrow Marks scored by another student = $(x + 24)$

According to question, $\Rightarrow (x + 24) = \frac{65}{100} \times (x + x + 24)$

$$\Rightarrow x + 24 = \frac{13}{10} \times (x + 12)$$

$$\Rightarrow 10x + 240 = 13x + 156$$

$$\Rightarrow 13x - 10x = 240 - 156 = 84$$

$$\Rightarrow x = \frac{84}{3} = 28$$

\therefore Marks scored by other student = $28 + 24 = 52$

\Rightarrow Ans - (D)

Question 60

If $3x - 4 > 2 - x/3$ and $3x + 5 > 4x - 5$; then find the value of x ?

- A 7
- B 10
- C -11
- D 1

Answer: A

Explanation:

Expression 1 : $3x - 4 > 2 - x/3$

$$\Rightarrow 3x + \frac{x}{3} > 2 + 4$$

$$\Rightarrow \frac{10x}{3} > 6$$

$$\Rightarrow x > \frac{18}{10} = 1.8 \text{ -----(i)}$$

Expression 2 : $3x + 5 > 4x - 5$

$$\Rightarrow 4x - 3x < 5 + 5$$

$$\Rightarrow x < 10 \text{ -----(ii)}$$

Combining inequalities (i) and (ii), we get : $1.8 < x < 10$

Thus, the only value that x can take among the options = 7

\Rightarrow Ans - (A)

Question 61

When a discount of 25% is given on a wedding gown, the profit is 32%. If the discount is 17%, then the profit is .

- A 47.74 percent
- B 49 percent
- C 51.92 percent
- D 43.16 percent

Answer: A

Explanation:

Let Marked Price = $Rs.100x$

When discount is 25%, Selling price = $\frac{75}{100} \times 100x = Rs.75x$

Let Cost price = $Rs.y$

$$\text{Profit \%} = \frac{75x-y}{y} \times 100 = 32$$

$$\Rightarrow \frac{75x-y}{y} = \frac{32}{100} = \frac{8}{25}$$

$$\Rightarrow 1875x - 25y = 8y$$

$$\Rightarrow 25y + 8y = 1875x$$

$$\Rightarrow y = \frac{1875x}{33} = 56.18x$$

When discount is 17%, Selling price = $\frac{83}{100} \times 100x = Rs.83x$

$$\therefore \text{Profit \%} = \frac{83x-56.18x}{56.18x} \times 100$$

$$\approx 47.74\%$$

\Rightarrow Ans - (A)

Question 62

If $3x + 2y = 7$ and $4x - y = 24$, then $x - y =$.

A 9

B 1

C -9

D -1

Answer: A

Explanation:

Equation (i) : $3x + 2y = 7$

Equation (ii) : $4x -$

$$8x - 2y = 48$$

$$(3x + 8x) + (2y - 2y) = (7 + 48)$$

$$11x = 55$$

$$x = \frac{55}{11} = 5$$

$$4(5) - y = 24$$

$$y = 20 - 24 = -4$$

$$\therefore (x - y) = 5 - (-4) = 5 + 4 = 9$$

\Rightarrow Ans - (A)

Question 63

The co-ordinates of the centroid of a triangle ABC are $(-1,-2)$ what are the co-ordinates of vertex C, if co-ordinates of A and B are $(6,-4)$ and $(-2,2)$ respectively?

A $(-7,-4)$

B $(7,4)$

C $(7,-4)$

D $(-7,4)$

Answer: A

Explanation:

Coordinates of centroid of triangle with vertices (x_1, y_1) , (x_2, y_2) and (x_3, y_3) is $(\frac{x_1+x_2+x_3}{3}, \frac{y_1+y_2+y_3}{3})$

Let coordinates of vertex C = (x, y)

Vertex A $(6,-4)$ and Vertex B $(-2,2)$ and Centroid = $(-1,-2)$

$$\Rightarrow -1 = \frac{-2+6+x}{3}$$

$$\Rightarrow x + 4 = -1 \times 3 = -3$$

$$\Rightarrow x = -3 - 4 = -7$$

Similarly, $\Rightarrow -2 = \frac{-4+2+y}{3}$

$$\Rightarrow y - 2 = -2 \times 3 = -6$$

$$\Rightarrow y = -6 + 2 = -4$$

\therefore Coordinates of vertex C = $(-7,-4)$

\Rightarrow Ans - (A)

Question 64

What is the slope of the line parallel to the line passing through the points $(4,-2)$ and $(-3,5)$?

A $3/7$

B 1

C $-3/7$

D -1

Answer: D

Explanation:

Slope of line passing through points (4,-2) and (-3,5)

$$= \frac{5+2}{-3-4} = \frac{7}{-7} = -1$$

Slope of two parallel lines is always equal.

=> Slope of the line parallel to the line having slope -1 = -1

=> Ans - (D)

Question 65

At 24% discount the selling price of a washing machine is Rs 38000, what is the selling price if the discount is 40%?

A Rs 18000

B Rs 30000

C Rs 22320

D Rs 31920

Answer: B

Explanation:

Let Marked Price of the machine = $Rs.100x$

If discount is 24%, Selling price = $\frac{100-24}{100} \times 100x = 76x$

According to ques, => $76x = 38000$

$$\Rightarrow x = \frac{38000}{76} = 500$$

If discount is 40%, selling price = $\frac{100-40}{100} \times 100x = 60x$

$$= 60 \times 500 = Rs.30,000$$

=> Ans - (B)

Question 66

Dodecahedron has 20 vertices. How many edges does it have?

A 30

B 16

C 12

D 24

Answer: A

Explanation:

Euler's formula : $V + F - E = 2$ where V is number of vertices , F is number of faces and E is number of edges.

Dodecahedron has 20 vertices and 12 faces.

$$\Rightarrow E = V + F - 2 = 20 + 12 - 2$$

$$\Rightarrow E = 32 - 2 = 30$$

\Rightarrow Ans - (A)

Question 67

The diagonal of a square is equal to the side of an equilateral triangle. If the area of the square is $15\sqrt{3}$ sq cm, what is the area of the equilateral triangle?

A $45/\sqrt{2}$ sq cm

B $45\sqrt{2}$ sq cm

C 45 sq cm

D $45/2$ sq cm

Answer: D

Explanation:

Let the side of square = s cm and diagonal = d cm

$$\Rightarrow \text{Area of square} = (s)^2 = 15\sqrt{3} \text{ -----(i)}$$

$$\text{In right triangle of the square, } \Rightarrow (s)^2 + (s)^2 = (d)^2$$

Substituting value of s^2 from equation (i)

$$\Rightarrow (d)^2 = 15\sqrt{3} + 15\sqrt{3} = 30\sqrt{3} \text{ -----(ii)}$$

Side of equilateral triangle = Diagonal of square = d cm

$$\therefore \text{Area of equilateral triangle} = \frac{\sqrt{3}}{4}d^2$$

Substituting value of d^2 from (ii), we get :

$$= \frac{\sqrt{3}}{4} \times 30\sqrt{3} = \frac{90}{4} = \frac{45}{2} \text{ cm}^2$$

\Rightarrow Ans - (D)

Question 68

If the curved surface area of a right circular cone is 3080 sq cm and its slant height is 35 cm, find its total surface area?

A 11088 sq cm

B 1848 sq cm

C 5544 sq cm

D 2772 sq cm

Answer: C

Explanation:

Let radius of the cone = r cm and slant height, $l = 35$ cm

Curved surface area of cone = $\pi r l = 3080$

$$\Rightarrow \frac{22}{7} \times r \times 35 = 3080$$

$$\Rightarrow 22 \times 5 \times r = 3080$$

$$\Rightarrow r = \frac{3080}{110} = 28$$

\therefore Total surface area of cone = $\pi r l + \pi r^2$

$$= 3080 + \frac{22}{7} \times (28)^2$$

$$= 3080 + 2464 = 5544 \text{ cm}^2$$

\Rightarrow Ans - (C)

Question 69

What is the value of cosec $11\pi/6$?

A $-2/\sqrt{3}$

B $\sqrt{2}$

C -2

D $-\sqrt{2}$

Answer: C

Explanation:

Expression : cosec $11\pi/6$

$$= \text{cosec}\left(2\pi - \frac{\pi}{6}\right)$$

$$= -\text{cosec}\left(\frac{\pi}{6}\right) = -2$$

\Rightarrow Ans - (C)

Question 70

$\cos(A+B) + \cos(A-B)$ is equal to ?

A $2\cos A \cos B$

B $2\sin A \sin B$

C $2\sin A \cos B$

D $2\cos A \sin B$

Answer: A

Explanation:

Expression : $\cos(A+B) + \cos(A-B)$

$$= (\cos A \cos B - \sin A \sin B) + (\cos A \cos B + \sin A \sin B)$$

$$= (\cos A \cos B + \cos A \cos B) + (\sin A \sin B - \sin A \sin B)$$

$$= 2\cos A \cos B$$

=> Ans - (A)

Question 71

$1/(\tan A + \cot A)$ is equal to ?

A $(\operatorname{cosec} A + \sin A)(\sec A - \cos A)$

B $\sqrt{[(\operatorname{cosec} A - \sin A)(\sec A - \cos A)]}$

C $\sqrt{[(\operatorname{cosec} A + \sin A)(\sec A - \cos A)]}$

D $(\operatorname{cosec} A - \sin A)(\sec A - \cos A)$

Answer: D

Explanation:

Expression : $1/(\tan A + \cot A)$

$$= 1 \div \left(\frac{\sin A}{\cos A} + \frac{\cos A}{\sin A} \right)$$

$$= 1 \div \left(\frac{\sin^2 A + \cos^2 A}{\sin A \cos A} \right)$$

$$= 1 \times \sin A \cos A = \sin A \cos A$$

Multiplying and dividing by $(\sin A \cos A)$

$$= \frac{\sin^2 A \cos^2 A}{\sin A \cos A} = \left(\frac{\cos^2 A}{\sin A} \times \frac{\sin^2 A}{\cos A} \right)$$

$$= \left(\frac{1 - \sin^2 A}{\sin A} \right) \times \left(\frac{1 - \cos^2 A}{\cos A} \right)$$

$$= \left(\frac{1}{\sin A} - \sin A \right) \times \left(\frac{1}{\cos A} - \cos A \right)$$

$$= (\operatorname{cosec} A - \sin A)(\sec A - \cos A)$$

=> Ans - (D)

Question 72

Refer the below data table and answer the question

	Weight	Height in meter
Aruna	79	1.61
Arushi	52	1.68
Arya	52	1.5
Asha	53	1.63

Who was the least weight to height ratio ?

- A Aruna
- B Arushi
- C Arya
- D Asha

Answer: B

Explanation:

Ratio of weight to height

$$\text{Aruna} : \frac{79}{1.61} = 49.06$$

$$\text{Arushi} : \frac{52}{1.68} = 30.95 \quad \text{[LEAST]}$$

$$\text{Arya} : \frac{52}{1.5} = 34.67$$

$$\text{Asha} : \frac{53}{1.63} = 32.51$$

=> Ans - (B)

Question 73

Refer the below data table and answer the question

Year	Company's % Profit
2011	25
2012	5
2013	10
2014	15
2015	20

What was the Revenue of the company if its Expenditure was Rs 575 crore in the year when its % profit was the least?

- A 632.5
- B 603.75

C 661.25

D 575

Answer: B

Explanation:

Profit % was least in 2012 = 5%

Let revenue = Rs. x crore and expenditure = Rs. 575 crore

$$\Rightarrow \text{Profit \%} = \frac{x-575}{575} \times 100 = 5$$

$$\Rightarrow \frac{x-575}{575} = \frac{5}{100} = \frac{1}{20}$$

$$\Rightarrow x - 575 = \frac{575}{20} = 28.75$$

$$\Rightarrow x = 575 + 28.75 = 603.75 \text{ crore}$$

\Rightarrow Ans - (B)

Question 74

The following table shows the number of children in each house of a society

Number of Children	Number of Houses
0	4
1	13
2	17
3	5

A 2.09

B 1.84

C 1.59

D 1.34

Answer: C

Question 75

image

A 45000 shares

B 30000 shares

C 60000 shares

D 15000 shares

Answer: A

English

Instructions

For the following questions answer them individually

Question 76

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.

The lawyer tried to his client to accept the generous settlement offer.

- A draw
- B seduce
- C incite
- D persuade

Answer: D

Question 77

Improve the bracketed part of the sentence.

The stranded pilgrims (had waited) in the bitter cold for more than two hours now.

- A has been waiting
- B have been waiting
- C have waited
- D no improvement

Answer: B

Question 78

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'.

I am coming directly(A)/to my office(B)/from the station.(C)/No error(D)

- A B

B A

C C

D D

Answer: A

Question 79

Improve the bracketed part of the sentence. The exhausted travellers seemed relieved when the train finally (came into) the station.

A pulled in

B pulled into

C pulled onto

D no improvement

Answer: A

Question 80

Rearrange the parts of the sentence in correct order.

It is for the government,

P-especially one with such a

Q-significant majority, to have the

R-intelligence and leadership to think long term

A QRP

B PQR

C RPQ

D QPR

Answer: B

Question 81

In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase. to drink like a fish

A a person who spends a lot

- B** a person who keeps cheating for a very long time without getting noticed
- C** a person who needs to relive himself very frequently
- D** to drink excessive amounts of alcohol

Answer: D

Question 82

Rearrange the parts of the sentence in correct order.

There is a deeper

P-fissure here that goes

Q-from western theory

R-beyond explanations

- A** PRQ
- B** PQR
- C** QPR
- D** RPQ

Answer: A

Question 83

Select the synonym of to preside

- A** to acquiesce
- B** to concur
- C** to officiate
- D** to accord

Answer: C

Question 84

Select the synonym of dabble

- A** solemn
- B** austere

C meditative

D dally

Answer: D

Question 85

In the following question, a sentence has been given in Active/Passive voice. Out of four alternatives suggested, select the one, which best expresses the same sentence in Passive/Active voice.

The owners remodelled the car to help it sell.

A The car was remodelled by the owners to help it sell.

B The car is being remodelled by the owners to help it sell.

C The car was remodelled by the owners to help it being sold.

D The car is being remodelled by the owners to help it being sold.

Answer: A

Question 86

Select the word with the correct spelling.

A thresonical

B numeracy

C nepotesm

D tolarate

Answer: B

Question 87

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

A person who is lazy and has low standards of cleanliness.

A hog

B slob

C swine

D brute

Answer: B

Question 88

Select the antonym of therapeutic

A ameliorative

B analeptic

C salubrious

D inimical

Answer: D

Question 89

Select the antonym of to perpetuate

A to eternize

B to canonize

C to cease

D to bolster

Answer: C

Question 90

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'.

The task of(A)/writing a autobiography(B)/is a difficult one.(C)/No error(D)

A A

B B

C C

D D

Answer: B

Question 91

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

- A removing the bondage that is keeping one down
- B the last second before the bomb explodes
- C to denote a situation whose outcome is not decided until the very last minute
- D finishing all of one's resources to the last penny

Answer: C

Question 92

In the following question, a sentence has been given in Direct/Indirect speech. Out of the four alternatives suggested, select the one, which best express the same sentence in Indirect/Direct speech.

Manoj said, "I must go now."

- A Manoj said that he must go then.
- B Manoj said that he must go than.
- C Manoj said he has to go then.
- D Manoj said that he should be going than.

Answer: A

Question 93

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

To exclude from a society or group.

- A to ostracise
- B to deport
- C to boycott
- D to snub

Answer: A

Question 94

Select the word with the correct spelling.

- A glucose
- B hermetec
- C wigling
- D derogate

Answer: A

Question 95

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

If immigrants don't learn to speak the native languages of their new countries, they won't be able to themselves into society.

- A conjoin
- B interface
- C integrate
- D reconcile

Answer: C

Question 96

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.

the Troubled Asset Relief Program (TARP), the government had purchased assets of struggling banks with a view ensuring that they did not collapse taking them the rest of the financial system. These assets later at a profit by the government! The U.S. government had acted smartly, while in the Indian case the banks now find themselves with loans made by them to an individual with negative net worth.

the Troubled Asset Relief Program (TARP)

- A Below
- B Down
- C Lower

D Under

Answer: D

Question 97

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.

the Troubled Asset Relief Program (TARP), the government had purchased assets of struggling banks with a view ensuring that they did not collapse taking them the rest of the financial system. These assets later at a profit by the government! The U.S. government had acted smartly, while in the Indian case the banks now find themselves with loans made by them to an individual with negative net worth.

(TARP), the government had purchased assets of struggling banks with a view

A to

B of

C for

D so

Answer: A

Question 98

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.

the Troubled Asset Relief Program (TARP), the government had purchased assets of struggling banks with a view ensuring that they did not collapse taking them the rest of the financial system. These assets later at a profit by the government! The U.S. government had acted smartly, while in the Indian case the banks now find themselves with loans made by them to an individual with negative net worth.

they did not collapse taking them the rest of the financial system.

A from

B all

C along with

D also with

Answer: C

Question 99

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.

the Troubled Asset Relief Program (TARP), the government had purchased assets of struggling banks with a view ensuring that they did not collapse taking them the rest of the financial system. These assets later at a profit by the government! The U.S. government had acted smartly, while in the Indian case the banks now find themselves with loans made by them to an individual with negative net worth.

These assets later at a profit by the government!

- A are disposed of
- B were disposed of
- C are disposed off
- D had been disposed off

Answer: B

Question 100

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.

the Troubled Asset Relief Program (TARP), the government had purchased assets of struggling banks with a view ensuring that they did not collapse taking them the rest of the financial system. These assets later at a profit by the government! The U.S. government had acted smartly, while in the Indian case the banks now find themselves with loans made by them to an individual with negative net worth.

find themselves with loans made by them to an individual with negative net worth.

- A saddled
- B baffled
- C puzzled
- D caught

Answer: A

SSC CHSL 1 Feb 2017 Afternoon Shift

Reasoning

Instructions

For the following questions answer them individually

Question 1

Select the related word/letters/number from the given alternatives.

Nephrology : Kidney :: Ichthyology : ?

- A Fish
- B Soil
- C Algae
- D Insects

Answer: A

Explanation:

Nephrology is the branch of medicine that deals with the physiology and diseases of the kidneys, similarly Ichthyology is the branch of zoology that deals with *fishes*.

=> Ans - (A)

Question 2

Select the related word/letters/number from the given alternatives.

AGREE : FGPIB :: RULES : ?

- A TJGSU
- B TGJWS
- C TGJSU
- D THJUS

Answer: B

Explanation:

Expression = AGREE : FGPIB :: RULES : ?

The pattern followed when we *reverse* the code is :

E	E	R	G	A
(+1)	(+2)	(-2)	(+2)	(+1)
F	G	P	I	B

Similarly, reverse of RULES :

S	E	L	U	R
(+1)	(+2)	(-2)	(+2)	(+1)
T	G	J	W	S

=> Ans - (B)

Question 3

Select the related word/letters/number from the given alternatives.

MUMBAI: UMBMIA :: GURUGRAM : ?

A RUGUMARG

B UGURRGMA

C UGURGRMA

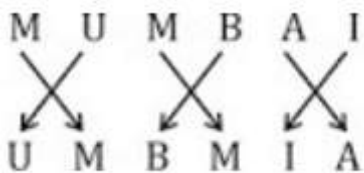
D UGRURGAM

Answer: B

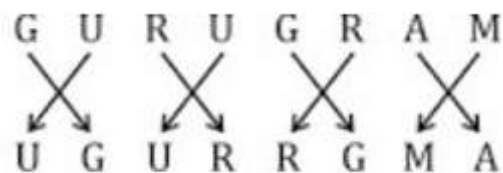
Explanation:

Expression = MUMBAI: UMBMIA :: GURUGRAM : ?

The pattern followed is :



Similarly, for GURUGRAM :



=> Ans - (B)

Question 4

Select the related word/letters/number from the given alternatives.

30 : 16 :: 24 : ?

A 14

B 13

C 20

D 25

Answer: B

Explanation:

Expression = $30 : 16 :: 24 : ?$

The pattern followed is = $x : \frac{x}{2} + 1$

Eg :- $30 : \frac{30}{2} + 1 = 30 : 16$

Similarly, $\frac{24}{2} + 1 = 12 + 1 = 13$

=> Ans - (B)

Question 5

Select the odd word/letters/number/number pair from the given alternatives.

A Dog

B Cat

C Goat

D Lion

Answer: D

Explanation:

Except Lion others are domestic animal, hence lion is the odd one out.

=> Ans - (D)

Question 6

Select the odd word/letters/number/number pair from the given alternatives.

A E5T

B O9S

C U3A

D I7M

Answer: C

Explanation:

Except U3A, all have one vowel and one consonant, hence U3A is the odd one out.

=> Ans - (C)

Question 7

Select the odd word/letters/number/number pair from the given alternatives.

A 862

B 835

C 439

D 147

Answer: D

Explanation:

Apart from 147, sum of digits of other numbers is 16, hence 147 is the odd one out.

=> Ans - (D)

Question 8

Select the odd word/letters/number/number pair from the given alternatives.

A 45

B 56

C 55

D 78

Answer: C

Explanation:

Apart from 55, difference between digits of other numbers is 1, hence 55 is the odd one out.

=> Ans - (C)

Question 9

A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. MHZ, NIW, OKT, PNQ, ?

A QNR

B QRN

C RNM

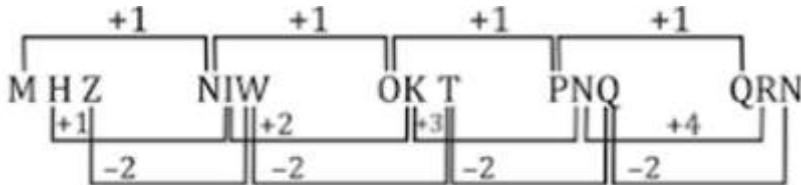
D QNO

Answer: B

Explanation:

Expression : MHZ, NIW, OKT, PNQ, ?

The pattern followed is :



Thus, missing term = QRN

=> Ans - (B)

Question 10

A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. CFE, ILK, ORQ, ?

A UXW

B VYW

C UYW

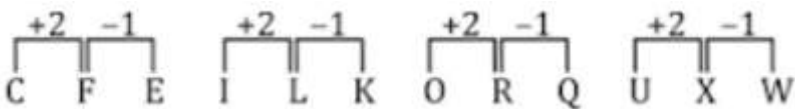
D UXX

Answer: A

Explanation:

Expression : CFE, ILK, ORQ, ?

The pattern followed is :



Thus, missing term = UXW

=> Ans - (A)

Question 11

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

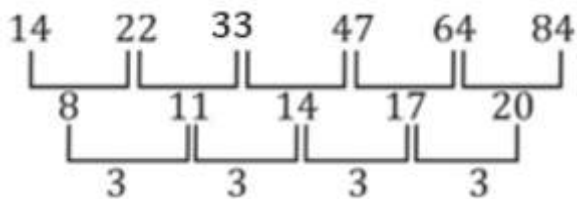
14, 22, 33, 47, 64, ?

- A 81
- B 84
- C 92
- D 94

Answer: B

Explanation:

The pattern followed is :



Thus, missing number = **84**

=> Ans - (B)

Question 12

In the following question, two statements are given each followed by two conclusions I and II. You have to consider the statements to be true even if they seem 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) Retail shops increasingly want to retain potential buyers.
- (II) 10 % of the customers are lost due to out of stock products.

Conclusions:

- (I) People don't find their sizes or specific color in stock and then they leave the store without any purchase.
- (II) Retailers want maximum footfall to get converted into purchases.

- A Only conclusion II follows
- B Conclusion I and II both follow
- C Neither I nor II follow
- D Only conclusion I follows

Answer: B

Question 13

A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. Morning, Afternoon, Evening, ?

- A Day

B Week

C Year

D Night

Answer: D

Explanation:

Time of day in chronological order.

= Morning -> Afternoon -> Evening -> Night

=> Ans - (D)

Question 14

A, B, C and X, Y, Z were sitting facing each other. A, B and C were facing south and X, Y and Z were facing north. X was left of Y but in front of A; Z was not at the left end and was not facing C. Who were at the left and right positions respectively?

A B and Y

B C and X

C B and Z

D X and A

Answer: D

Explanation:

A, B and C were facing south and X, Y and Z were facing north.

X was left of Y but in front of A. Z was not at the left end and was not facing C.

=> Z is sitting at right end and C is sitting in the middle. A is facing X.

Thus, arrangement :

A	C	B	↓
X	Y	Z	↑

∴ **X and A** were at the left and right positions respectively.

=> Ans - (D)

Question 15

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

- i. Drama
- ii. Dramatical
- iii. Dramaticism
- iv. Dramality
- v. Dramatise

A i, iv, ii, iii, v

B i, iv, ii, v, iii

C i, iv, v, iii, ii

D iv, i, v, iii, ii

Answer: A

Explanation:

As per the order of dictionary :

= Drama -> Dramality -> Dramatical -> Dramaticism -> Dramatise

≡ i, iv, ii, iii, v

=> Ans - (A)

Question 16

In a certain code language "GASTRIC" is written as "UCIREKT". How will "DECEIVE" be written in that code language?

A ACBCCTG

B ACACCTG

C EGFCGXX

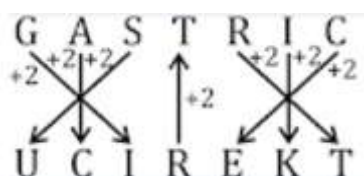
D BFCCTGL

Answer: C

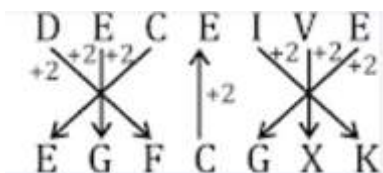
Explanation:

"GASTRIC" is written as "UCIREKT"

The pattern followed is :



Similarly, for DECEIVE :



=> Ans - (C)

Question 17

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

9	8	5
6	6	7
3	?	3
5	7	4

A 9

B 4

C 8

D 2

Answer: D

Explanation:

The pattern followed for a , b , c and d in each column is : $a = (c \times d) - b$

$$\text{Eg :- } (3 \times 5) - 6 = 15 - 6 = 9$$

$$(3 \times 4) - 7 = 12 - 7 = 5$$

$$\text{Similarly, } (x \times 7) - 6 = 8$$

$$\Rightarrow 7x = 8 + 6 = 14$$

$$\Rightarrow x = \frac{14}{7} = 2$$

=> Ans - (D)

Question 18

Which of the following interchanges in signs and numbers will make the given equation correct?

$$8 \times 6 + 4 = 52$$

A x and +, 8 and 52

B + and x, 6 and 4

C x and +, 8 and 4

D + and x, 6 and 8

Answer: C

Explanation:

Expression : $8 \times 6 + 4 = 52$

(A) : x and +, 8 and 52

$$\equiv 52 + 6 \times 4 = 8$$

$$\text{L.H.S.} = 52 + 24 = 76 \neq \text{R.H.S.}$$

(B) : + and x, 6 and 4

$$\equiv 8 + 4 \times 6 = 52$$

$$\text{L.H.S.} = 8 + 24 = 32 \neq \text{R.H.S.}$$

(C) : x and +, 8 and 4

$$\equiv 4 + 6 \times 8 = 52$$

$$\text{L.H.S.} = 4 + 48 = 52 = \text{R.H.S.}$$

=> Ans - (C)

Question 19

In the following question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?

_cca_a_ca_ac_ab

A abcbc

B abcbb

C abbcc

D abccb

Answer: A

Explanation:

The pattern followed is that in groups of 5, the term 'accab' is repeated.

= **accab accab accab**

=> Ans - (A)

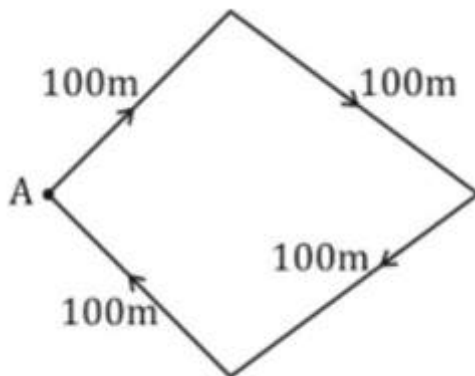
Question 20

From point A, Ram moves 100m in northeast direction, he again turns and moves 100m in southeast direction. He again turns and covers 100m southwest and finally covers 100m in northwest direction. In which direction is he now with respect to A?

- A West
- B Southwest
- C At point A
- D East

Answer: C

Explanation:



Ram starts from point A and moves 100 m in north-east direction, he again turns and moves 100 m in south-east direction. He again turns and covers 100 m towards south-west and finally covers 100 m in north-west direction.

Thus, he is finally at point A.

=> Ans - (C)

Question 21

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, 'K' can be represented by 10, 34 etc. and 'I' can be represented by 76, 88 etc. Similarly, you have to identify the set for the word 'LIGHT'.

Matrix -I

	0	1	2	3	4
0	T	M	L	K	G
1	K	L	G	T	M
2	L	T	M	G	K
3	M	G	T	L	K
4	G	K	M	T	L

Matrix -II

	5	6	7	8	9
5	F	R	I	A	H
6	I	A	F	H	R
7	R	I	H	F	A
8	A	H	R	I	F
9	H	F	A	R	I

- A 02, 65, 31, 58, 21
- B 20, 77, 12, 68, 13
- C 44, 87, 40, 95, 32
- D 33, 99, 04, 59, 43

Answer: D

Explanation:

- (A) : 02, 65, 31, 58, 21 = LIGAT
- (B) : 20, 77, 12, 68, 13 = LHGHT
- (C) : 44, 87, 40, 95, 32 = LRGHT
- (D) : 33, 99, 04, 59, 43 = **LIGHT**

=> Ans - (D)

Question 22

Pointing a man, Suraj says, "He is the son of the sister of my father's wife". How is that man related to Suraj?

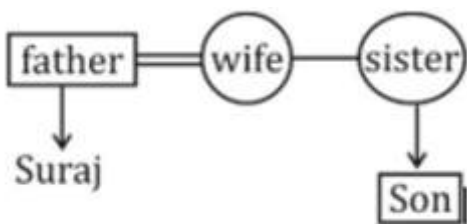
- A Father
- B Brother
- C Cousin
- D Nephew

Answer: C

Explanation:

Sister of Suraj's father's wife = Suraj's aunt

Relation is :

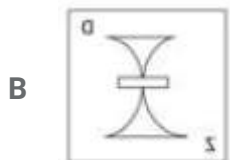
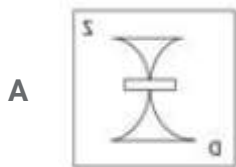
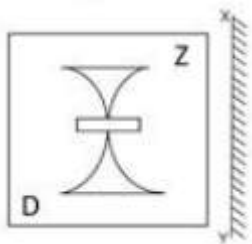


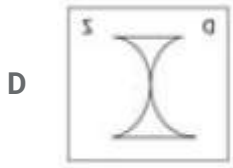
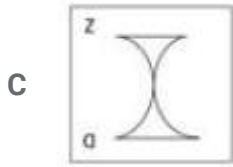
Thus, the man and Suraj are cousins.

=> Ans - (C)

Question 23

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

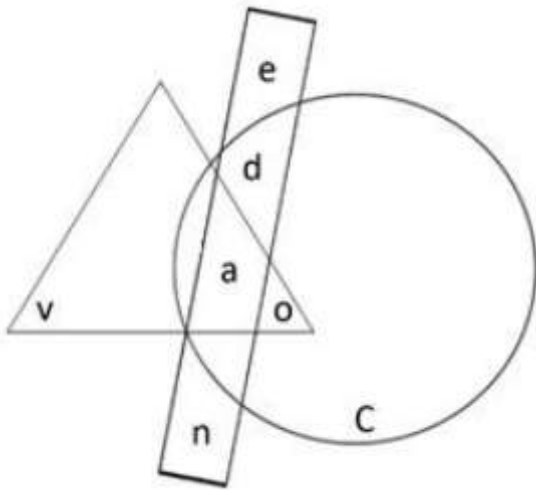




Answer: A

Question 24

Which of the following is a part of both circle and triangle ?



A e

B v

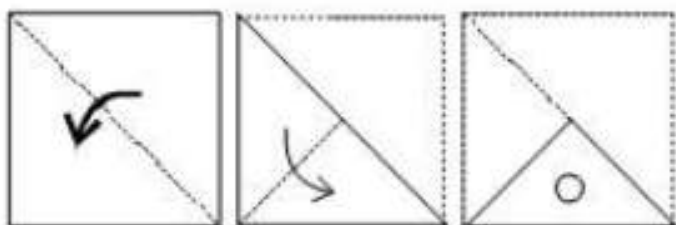
C o

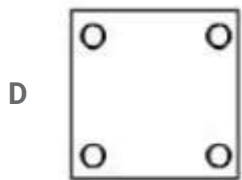
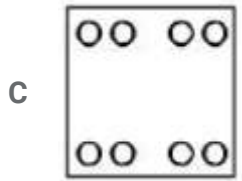
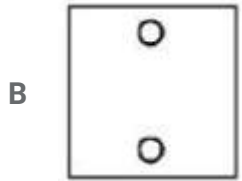
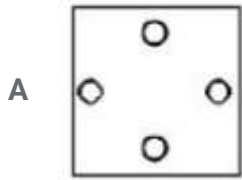
D c

Answer: C

Question 25

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





Answer: A

General Awareness

Instructions

For the following questions answer them individually

Question 26

Which of these is not a UNESCO World Heritage Site?

- A Ajanta Caves, Maharashtra
- B Red Fort, New Delhi
- C Victoria Memorial, Kolkata
- D Kaziranga Wildlife Sanctuary, Assam

Answer: C

Question 27

Highest Civilian Honour received by Amitabh Bachchan is .

- A Padma Shri
- B Padma Bhushan
- C Padma Vibhushan
- D Bharat Ratna

Answer: C

Question 28

Which organ does detoxification and produces chemicals needed for digestion?

- A Salivary glands
- B Pancreas
- C Thyroid gland
- D Liver

Answer: D

Question 29

NaHCO_3 is chemical formula for .

- A Borax
- B Vinegar
- C Lime
- D Baking soda

Answer: D

Question 30

Which of the following elements has the lowest melting point?

- A Chromium

B Hydrogen

C Zinc

D Silver

Answer: B

Question 31

C Programming language was developed by .

A Charles Babbage

B Larry Wall

C James Gosling

D Dennis Ritchie

Answer: D

Question 32

Which of these Indian Music Legends is the exponent of the instrument, Sitar?

A Bhimsen Joshi

B Ravi Shankar

C Amjad Ali Khan

D Alla Rakha

Answer: B

Question 33

If demand curve for alphonso mangoes is $D = 25000 - 70P$ and supply curve is $S = 10000 + 80P$, find the equilibrium quantity?

A 18,000 units

B 2,000 units

C 1,800 units

D 200 units

Answer: A

Question 34

Match the characteristics with their market structure:

(a) Price > MC in both short and long run

(b) Faces highly elastic demand

A (a) Monopolistic competition, (b) Pure competition

B (a) Pure Monopoly, (b) Monopolistic competition

C (a) Pure competition, (b) Monopolistic competition

D (a) Oligopoly, (b) Pure competition

Answer: B

Question 35

Anamalai Tiger Reserve is in which state?

A Telangana

B Madhya Pradesh

C Tamil Nadu

D Kerala

Answer: C

Question 36

Which is the most economical method of removing solid matter from water?

A Using deactivated carbon

B Electrolysis

C Distillation

D Sedimentation

Answer: D

Question 37

What is the Capital of Telangana State?

- A Hyderabad
- B Secunderabad
- C Vijayanagara
- D Visakhapatnam

Answer: A

Question 38

Birbal was an advisor in the court of?

- A Babur
- B Akbar
- C Aurangzeb
- D Jahangir

Answer: B

Question 39

Humayun's Tomb is located in

- A Delhi
- B Agra
- C Gwalior
- D Jaipur

Answer: A

Question 40

Assembly line was invented by

- A Alexander Parkes

- B Luigi Palmieri
- C Alexey Pajitnov
- D Ransom Eli Olds

Answer: D

Question 41

Instrument for measuring blueness of the sky or ocean is called .

- A Bathymeter
- B Ceraunograph
- C Cyanometer
- D Barometer

Answer: C

Question 42

Farad is unit of .

- A Capacitance
- B Reactance
- C Electric charge
- D Electric conductance

Answer: A

Question 43

Under which Article is the Union Public Service Commission of India established?

- A Article 315
- B Article 250
- C Article 300
- D Article 52

Answer: A

Question 44

The Westminster parliamentary system was developed in .

- A** Spain
- B** Australia
- C** UK
- D** USA

Answer: C

Question 45

Whose ear Mike Tyson bite in professional boxing match in 1997 for the WBA Heavyweight Championship?

- A** James Douglas
- B** Evander Holyfield
- C** Riddick Bowe
- D** Michael Moorer

Answer: B

Question 46

Who is the author of "India 2020: A Vision for the New Millennium"?

- A** APJ Abdul Kalam
- B** Shashi Tharoor
- C** Narendra Modi
- D** Arun Shourie

Answer: A

Question 47

Psidium guajava is the scientific name of

- A Guava
- B Mango
- C Bamboo
- D Jack fruit

Answer: A

Question 48

In which year, RBI was nationalized?

- A 1939
- B 1949
- C 1959
- D 1969

Answer: B

Question 49

Ottawa is the Capital City of .

- A France
- B Norway
- C Canada
- D Greece

Answer: C

Question 50

Which drug is used as a Blood Thinner?

- A Warfarin
- B Tramadol

C Azithromycin

D Hydralazine

Answer: A

Mathematics

Instructions

For the following questions answer them individually

Question 51

The value of x for which the expressions $15 - 7x$ and $15x + 7$ become equal is .

A $-4/11$

B $-11/4$

C $11/4$

D $4/11$

Answer: D

Explanation:

Expressions : $15 - 7x$ and $15x + 7$

$$\Rightarrow 15 - 7x = 15x + 7$$

$$\Rightarrow 15x + 7x = 15 - 7$$

$$\Rightarrow 22x = 8$$

$$\Rightarrow x = \frac{8}{22} = \frac{4}{11}$$

\Rightarrow Ans - (D)

Question 52

The largest 5 digit number exactly divisible by 95 is

A 99936

B 99935

C 99940

D 99933

Answer: C

Explanation:

Largest 5 digit number = 99999

If 99999 is divided by 95, $\Rightarrow 99999 = 95 \times 1052 + 59$

Quotient is 1052 and remainder is 59

Thus, largest 5 digit number which is divisible by 95 = $99999 - 59$

= 99940

\Rightarrow Ans - (C)

Question 53

If $a:b = 3:8$, find the value of $(5a - 3b)/(2a + b)$.

A 9/14

B 14/9

C -9/14

D -14/9

Answer: C

Explanation:

It is given that $a : b = 3 : 8$

Let $a = 3$ and $b = 8$

To find: $\frac{5a-3b}{2a+b}$

$$= \frac{(5 \times 3) - (3 \times 8)}{(2 \times 3) + (8)}$$

$$= \frac{(15-24)}{(6+8)} = \frac{-9}{14}$$

\Rightarrow Ans - (C)

Question 54

If $5 - 3x < 4 - x$ and $5(2 - x) > 2 - 2x$, then x can take which of the following values?

A 0

B -1

C 1

D 3

Answer: C

Explanation:

Expression 1 : $5 - 3x < 4 - x$

$$\Rightarrow 3x - x > 5 - 4$$

$$\Rightarrow 2x > 1$$

$$\Rightarrow x > \frac{1}{2} \text{-----(i)}$$

Expression 2 : $5(2 - x) > 2 - 2x$

$$\Rightarrow 10 - 5x > 2 - 2x$$

$$\Rightarrow 5x - 2x < 10 - 2$$

$$\Rightarrow 3x < 8$$

$$\Rightarrow x < \frac{8}{3} \text{-----(ii)}$$

Combining inequalities (i) and (ii), we get : $\frac{1}{2} < x < \frac{8}{3}$

The only value that x can take among the given options = 1

\Rightarrow Ans - (C)

Question 55

The average revenues of 9 consecutive years of a company is Rs 76 lakhs. If the average of first 5 years is Rs 71 lakhs and that of last 5 years is Rs 83 lakhs, find the revenue for the 5th year.

A Rs 88 lakhs

B Rs 84 lakhs

C Rs 86 lakhs

D Rs 82 lakhs

Answer: C

Explanation:

Total revenues of 9 years of the company = $76 \times 9 =$ Rs. 684 lakhs

Total revenue of first 5 years = $71 \times 5 =$ Rs. 355 lakhs

Total revenue of last 5 years = $83 \times 5 =$ Rs. 415 lakhs

\therefore Revenue of 5th year = $(355 + 415) - 684 = 770 - 684$

= Rs. 86 lakhs

=> Ans - (C)

Question 56

If $2x + 3y = 0$ and $3x - 4y = 34$, then $x - y =$

A 10

B -10

C 2

D -2

Answer: A

Explanation:

Equation 1 : $2x + 3y = 0$

Multiplying by 3 on both sides, we get : $6x + 9y = 0$ -----(iii)

Equation 2 : $3x - 4y = 34$

Multiplying by 2 on both sides, => $6x - 8y = 68$ -----(iv)

Subtracting equation(iv) from (iii),

$$\Rightarrow (6x - 6x) + (9y + 8y) = (0 - 68)$$

$$\Rightarrow 17y = -68$$

$$\Rightarrow y = \frac{-68}{17} = -4$$

Substituting it in equation (i), we get : $2x + 3(-4) = 0$

$$\Rightarrow 2x = 12$$

$$\Rightarrow x = \frac{12}{2} = 6$$

$$\therefore (x - y) = 6 - (-4) = 6 + 4 = 10$$

=> Ans - (A)

Question 57

5 hrs after a goods train passed a station, another train travelling at a speed of 70 km/hr following that goods train passed through that station. If after passing the station the train overtakes the goods train in 9 hours. What is the speed of the goods train?

A 45 km/hr

B 54 km/hr

C 67.5 km/hr

D 36 km/hr

Answer: A

Explanation:

Let the speed of goods train = x km/hr

Speed of another train = 70 km/hr

Distance between the two trains = $70 \times 5 = 350$ km

The trains are moving in same direction, \Rightarrow Relative speed = $(70 - x)$ km/hr

Time = $5 + 9 = 14$ hours

\Rightarrow speed = distance/time

$$\Rightarrow 70 - x = \frac{350}{14} = 25$$

$$\Rightarrow x = 70 - 25 = 45 \text{ km/hr}$$

\Rightarrow Ans - (A)

Question 58

Marked price of an item is Rs 200. On purchase of 1 item discount is 22%, on purchase of 4 items discount is 33%. Rabia buys 5 items, what is the effective discount?

A 35 percent

B 30.8 percent

C 34 percent

D 20.4 percent

Answer: B

Explanation:

Marked price of item = Rs. 200

$$\text{Amount saved on buying 1 item} = \frac{22}{100} \times 200 = \text{Rs.}44$$

Marked price of 4 items = $4 \times 200 = \text{Rs.} 800$

$$\text{Amount saved on buying 4 items} = \frac{33}{100} \times 800 = \text{Rs.}264$$

Thus, on buying 5 items, total amount saved = $44 + 264 = \text{Rs.} 308$

Total marked price of 5 items = $5 \times 200 = \text{Rs.} 1000$

$$\therefore \text{Effective discount} = \frac{308}{1000} \times 100$$

$$= \frac{308}{10} = 30.8\%$$

\Rightarrow Ans - (B)

Question 59

Find two numbers such that their mean proportion is 8 and third proportion is 64.

- A 4 and 8
- B 8 and 16
- C 8 and 8
- D 4 and 16

Answer: D

Explanation:

Three numbers a,b,c are in proportion iff $b^2 = ac$ where b is the mean proportion and c is the third proportion

Mean proportion of two numbers x and $y = 8$

$$\Rightarrow xy = (8)^2 = 64 \text{ -----(i)}$$

Third proportion = 64

$$\Rightarrow y^2 = x \times 64 \text{ -----(ii)}$$

Substituting value of x from equation(i) in equation(ii), we get :

$$\Rightarrow y^2 = \frac{64}{y} \times 64$$

$$\Rightarrow y^3 = (2)^6 \times (2)^6 = (2)^{6+6}$$

$$\Rightarrow y = (2)^{\frac{12}{3}} = 2^4 = 16$$

Substituting it in equation(i), $\Rightarrow x = \frac{64}{16} = 4$

\Rightarrow Ans - (D)

Question 60

Akash is 3 times as good a workman as Baldev and therefore is able to finish a job in 40 days less than Baldev. Working together, they can finish it in .

- A 15 days
- B 60 days
- C 20 days
- D 10 days

Answer: A

Explanation:

Ratio of times taken by Akash and Baldev = 1 : 3

The time difference is $(3 - 1) 2$ days while Baldev take 3 days and Akash takes 1 day.

If difference of time is 2 days, Baldev takes 3 days.

If difference of time is 40 days, Baldev takes = $\frac{3}{2} \times 40 = 60$ days

So, Akash takes 20 days

Akash's 1 day's work = $\frac{1}{20}$

Baldev's 1 day's work = $\frac{1}{60}$

(Akash + Baldev)'s 1 day's work together = $\frac{1}{20} + \frac{1}{60} = \frac{4}{60} = \frac{1}{15}$

∴ Akash and Baldev together can do the work in = 15 days

=> Ans - (A)

Question 61

At what rate of compound interest per annum will a sum of Rs 20000 become Rs 23328 in 2 years?

- A 8 percent
- B 16 percent
- C 24 percent
- D 12 percent

Answer: A

Explanation:

Let rate of interest = $r\%$ and time period = 2 years

Principal = Rs. 20,000 and Amount = Rs. 23,328

Amount after compound interest = $P(1 + \frac{R}{100})^T$

$$\Rightarrow 20,000(1 + \frac{r}{100})^2 = 23328$$

$$\Rightarrow (1 + \frac{r}{100})^2 = \frac{23328}{20000} = 1.1664$$

$$\Rightarrow (1 + \frac{r}{100}) = \sqrt{1.1664} = 1.08$$

$$\Rightarrow \frac{r}{100} = 1.08 - 1 = 0.08$$

$$\Rightarrow r = 0.08 \times 100 = 8\%$$

=> Ans - (A)

Question 62

ΔABC is similar to ΔPQR . Length of AB is 18 cm and length of the corresponding side PQ is 12 cm. If area of ΔABC is 324 sq cm, what is the area of ΔPQR ?

- A 72 sq cm

B 144 sq cm

C 36 sq cm

D 487.5 sq cm

Answer: B

Explanation:

It is given that $\Delta ABC \sim \Delta PQR$

Also, length of AB = 18 cm and length of the corresponding side PQ = 12 cm

Let area of $\Delta PQR = x$ sq cm

=> Ratio of Area of ΔABC : Area of ΔPQR = Ratio of square of corresponding sides = $(AB)^2 : (PQ)^2$

$$\Rightarrow \frac{324}{x} = \frac{(18)^2}{(12)^2}$$

$$\Rightarrow x = (12)^2 = 144 \text{ sq cm}$$

=> Ans - (B)

Question 63

What is the slope of the line perpendicular to the line passing through the points (8,2) and (3,1)?

A -5

B 3/5

C 5/3

D 1/5

Answer: A

Explanation:

Slope of line passing through (x_1, y_1) and (x_2, y_2) is $\frac{y_2 - y_1}{x_2 - x_1}$

$$\Rightarrow \text{Slope of line passing through (3,1) and (8,2)} = \frac{2-1}{8-3} = \frac{1}{5}$$

Let slope of line perpendicular to it = m

Also, product of slopes of two perpendicular lines = -1

$$\Rightarrow m \times \frac{1}{5} = -1$$

$$\Rightarrow m = -5$$

=> Ans - (A)

Question 64

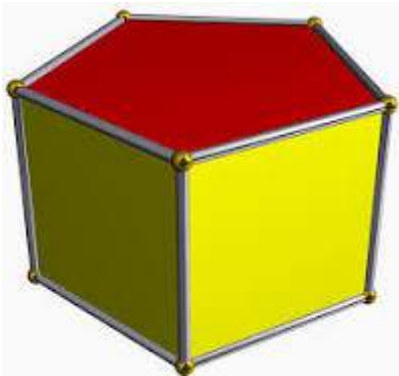
A pentagonal prism has 15 edges. How many vertices does it have?

- A 12
- B 10
- C 15
- D 20

Answer: B

Explanation:

Pentagonal Prism :



Euler's formula : $V + F - E = 2$ where V is number of vertices , F is number of faces and E is number of edges.

Pentagonal Prism has 15 edges and 7 faces.

$$\Rightarrow V = 2 + E - F = 2 + 15 - 7$$

$$\Rightarrow V = 17 - 7 = 10$$

\Rightarrow Ans - (B)

Question 65

The diameter of a circle is equal to the side of the square. What is the area of the square if the area of the circle is 49π sq cm?

- A 196 sq cm
- B 154 sq cm
- C 124 sq cm
- D 98 sq cm

Answer: A

Explanation:

Let radius of circle = r cm

$$\text{Area of circle} = \pi r^2 = 49\pi$$

$$\Rightarrow r^2 = 49$$

$$\Rightarrow r = \sqrt{49} = 7 \text{ cm}$$

Thus, diameter of circle = Side of square = $2 \times 7 = 14$ cm

$$\therefore \text{Area of square} = (14)^2 = 196 \text{ cm}^2$$

\Rightarrow Ans - (A)

Question 66

The radius of a hemisphere is 7 cm, find its volume?

- A 718.67 cubic cm
- B 1437.34 cubic cm
- C 239.56 cubic cm
- D 359.34 cubic cm

Answer: A

Explanation:

Radius of hemisphere = 7 cm

$$\text{Volume of hemisphere} = \frac{2}{3}\pi r^3$$

$$= \frac{2}{3} \times \frac{22}{7} \times (7)^3$$

$$= \frac{2}{3} \times 22 \times 49 = \frac{2156}{3}$$

$$= 718.67 \text{ cm}^3$$

\Rightarrow Ans - (A)

Question 67

29 is 0.8% of?

- A 3625
- B 1450
- C 7250
- D 10875

Answer: A

Explanation:

Let the number be x

According to ques, 0.8% of $x = 29$

$$\Rightarrow \frac{0.8}{100} \times x = 29$$

$$\Rightarrow \frac{x}{125} = 29$$

$$\Rightarrow x = 29 \times 125 = 3625$$

\Rightarrow Ans - (A)

Question 68

If $\sin 5\pi/3 = x$, then the value of x is

A $\sqrt{3}/2$

B $-\sqrt{3}/2$

C 2

D $-2/\sqrt{3}$

Answer: B

Explanation:

Expression : $\sin 5\pi/3 = x$

$$= \sin(2\pi - \frac{\pi}{3})$$

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

\Rightarrow Ans - (B)

Question 69

If $(\tan A + \tan B)/(1 - \tan A \tan B) = x$, then the value of x is

A $\tan(A + B)$

B $\tan(A - B)$

C $\cot(A + B)$

D $\cot(A - B)$

Answer: A

Explanation:

Expression : $(\tan A + \tan B)/(1 - \tan A \tan B) = x$

$$= \left(\frac{\sin A}{\cos A} + \frac{\sin B}{\cos B} \right) \div \left(1 - \frac{\sin A \sin B}{\cos A \cos B} \right)$$

$$\begin{aligned}
&= \left(\frac{\sin A \cos B + \cos A \sin B}{\cos A \cos B} \right) \div \left(\frac{\cos A \cos B - \sin A \sin B}{\cos A \cos B} \right) \\
&= \left[\frac{\sin(A+B)}{\cos A \cos B} \right] \div \left[\frac{\cos(A+B)}{\cos A \cos B} \right] \\
&= \left[\frac{\sin(A+B)}{\cos A \cos B} \right] \times \left[\frac{\cos A \cos B}{\cos(A+B)} \right] \\
&= \frac{\sin(A+B)}{\cos(A+B)} = \tan(A+B) \\
&\Rightarrow \text{Ans - (A)}
\end{aligned}$$

Question 70

If $1/(\operatorname{cosec}A + \cot A) = x$, then the value of x is

- A $\operatorname{cosec}A + \cot A$
- B $\operatorname{cosec}A - \cot A$
- C $\operatorname{cosec}^2 A + \cot^2 A$
- D $\sqrt{[\operatorname{cosec}^2 A + \cot^2 A]}$

Answer: B

Explanation:

$$\text{Expression : } \frac{1}{\operatorname{cosec}A + \cot A}$$

$$\begin{aligned}
&= \frac{1}{\frac{1}{\sin A} + \frac{\cos A}{\sin A}} \\
&= \frac{1}{\frac{1 + \cos A}{\sin A}} = \frac{\sin A}{1 + \cos A}
\end{aligned}$$

Multiplying both numerator and denominator by $(1 - \cos A)$

$$\begin{aligned}
&= \frac{\sin A}{1 + \cos A} \times \frac{(1 - \cos A)}{(1 - \cos A)} \\
&= \frac{\sin A(1 - \cos A)}{1 - \cos^2 A} = \frac{\sin A(1 - \cos A)}{\sin^2 A} \\
&= \frac{1 - \cos A}{\sin A} = \frac{1}{\sin A} - \frac{\cos A}{\sin A} \\
&= \operatorname{cosec}A - \cot A
\end{aligned}$$

\Rightarrow Ans - (B)

Question 71

A vendor buys oranges at the rate of 5 for Rs 6 and sells at the rate of 2 for Rs 3. What will be the result?

- A 25 percent loss
- B 25 percent gain

C 20 percent gain

D 20 percent loss

Answer: B

Explanation:

The vendor buys 5 oranges for Rs. 6

$$\Rightarrow \text{Cost price of 1 orange} = \frac{6}{5} = \text{Rs } 1.2$$

He sells 2 oranges for Rs. 3

$$\Rightarrow \text{Selling price of 1 orange} = \frac{3}{2} = \text{Rs } 1.5$$

\therefore Selling price is more than Cost price, the vendor earns a profit

$$\Rightarrow \text{Profit \%} = \frac{(1.5-1.2)}{1.2} \times 100$$

$$= \frac{1}{4} \times 100 = 25\%$$

\Rightarrow Ans - (B)

Question 72

Refer the below data table and the following question.

	Boys	Girls
Medical	20	45
Engineering	90	25

What percent students who choose Engineering are girls

A 13.89

B 21.74

C 35.71

D 27.78

Answer: B

Explanation:

Number of girls who chose engineering = 25

Total number of engineers = 90 + 25 = 115

$$\Rightarrow \text{Percent of the girls who choose engineering} = \frac{25}{115} \times 100$$

$$= \frac{500}{23} \approx 21.74\%$$

\Rightarrow Ans - (B)

Question 73

Refer the below data table and answer the following question

	Cumulative production
January	300
February	500
March	1080
April	1630
May	2030
June	2320

How many car were manufactured in the months of April and May ?

- A 690
- B 1130
- C 3660
- D 950

Answer: D

Explanation:

Number of cars produced in :

January = 300

February = $500 - 300 = 200$

March = $1080 - 500 = 580$

April = $1630 - 1080 = 550$

May = $2030 - 1630 = 400$

June = $2320 - 2030 = 290$

=> Number of cars that were manufactured in the month of the April and may = $550 + 400 = 950$

=> Ans - (D)

Question 74

Refer the below data table and answer the following question

Day of the week	Distance jogged (km)
Monday	3.5
Tuesday	3
Wednesday	2.5
Thursday	5
Friday	2.5
Saturday	2
Sunday	4.5

If 400 calories are burned by jogging 5km, how many calories were burnt in the given week?

- A 1890 calories
- B 1840 calories
- C 1790 calories
- D 1740 calories

Answer: B

Explanation:

Total distance jogged in entire week

$$= 3.5 + 3 + 2.5 + 5 + 2.5 + 2 + 4.5 = 23 \text{ km}$$

Calories burned after jogging 5 km = 400 calories

$$\Rightarrow \text{Calories burned after jogging 23 km} = \frac{400}{5} \times 23$$

$$= 80 \times 23 = 1840 \text{ calories}$$

\Rightarrow Ans - (B)

Question 75

Refer the below data table and answer the following question

Items	Yearly Expense In Lakhs
Raw Materials	6
Labour	3
Rent	5
Interest	6
Taxes	3

Rent and Taxes are what percent of total expenses ?

- A 27.53 percent
- B 34.78 percent
- C 20.28 percent
- D 42.03 percent

Answer: B

Explanation:

Yearly experience in Rent and Taxes (in Lakhs) = 5 + 3 = 8

Total expenses (in Lakhs) = 6 + 3 + 5 + 6 + 3 = 23

$$\Rightarrow \text{Required \%} = \frac{8}{23} \times 100$$

$$= \frac{800}{23} = 34.78\%$$

\Rightarrow Ans - (B)

English

Instructions

For the following questions answer them individually

Question 76

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

To rummage about in a place or container in search of something.

- A to rake
- B to excavate
- C to ferret
- D to poke

Answer: C

Question 77

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

to buy a lemon

- A to purchase a vehicle that constantly gives problems
- B buying only half the recipe will not help you prepare the full dish
- C to purchase an insignificant thing which eventually becomes very useful
- D to buy stuff which you don't need

Answer: A

Question 78

Select the antonym of mere

- A unadorned
- B immense

C sheer

D blunt

Answer: B

Question 79

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'.

The population of Mumbai(A)/is greater than(B)/in any city in USA.(C)/No error(D)

A A

B B

C C

D D

Answer: C

Question 80

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.

The bank-----his house as he had failed to pay the instalments despite repeated warnings.

A mobbed

B confiscated

C hijacked

D captured

Answer: B

Question 81

Rearrange the parts of the sentence in correct order:

At one level,

Pthe law in understanding Qsuch cases of violence Rone senses the limits of

A RQP

B PQR

C RPQ

D QRP

Answer: C

Question 82

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'.

For a full week(A)/she enjoyed the benefits(B)/ of being a big sister.(C)/No error(D)

A A

B B

C C

D D

Answer: D

Question 83

Select the synonym of to ordain

A to anoint

B to retract

C to veto

D to void

Answer: A

Question 84

Select the synonym of to stranded

A to douse

B to aground

C to swamp

D to inundate

Answer: B

Question 85

Improve the bracketed part of the sentence.

All the allegations levelled (over) the poor watchman were found to be baseless.

- A** upon
- B** off
- C** against
- D** no improvement

Answer: C

Question 86

Rearrange the parts of the sentence in correct order.

It is the right to

Pwho see us at our most vulnerable Qthe indiscretions of doctors Rprivacy that protects us from

- A** QRP
- B** QPR
- C** PRQ
- D** RQP

Answer: D

Question 87

Select the antonym of to comprise

- A** to dispute
- B** to embody
- C** to span
- D** to encompass

Answer: A

Question 88

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

- A** a very greedy person
- B** to be able to eat or drink anything without any problems
- C** to be indifferent to harsh words
- D** to face so many difficulties in life that one now becomes immune to even poison

Answer: B

Question 89

In the following question, a sentence has been given in Active/Passive voice. Out of four alternatives suggested, select the one, which best expresses the same sentence in Passive/Active.

The event manager is making all the reservations.

- A** All the reservations would be made by the event manager.
- B** All the reservations are being made by the event manager.
- C** All the reservations would have been made by the event manager.
- D** All the reservations will have been made by the event manager.

Answer: B

Question 90

Improve the bracketed part of the sentence.

"I am the only man in the world who (can) paint a picture so true to life," he said.

- A** will
- B** could
- C** may
- D** no improvement

Answer: D

Question 91

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

To sell (stocks or other securities or commodities) in advance of acquiring them, with the aim of making a profit when the price falls.

- A bilking
- B duping
- C conning
- D shorting

Answer: D

Question 92

In the following question, a sentence has been given in Direct/Indirect speech. Out of the four alternatives suggested, select the one, which best express the same sentence in Indirect/Direct speech.

'Do you have anything to say on behalf of the accused?' said the judge finally.

- A The judge finally asked that if he had anything to say on behalf of the accused.
- B The judge finally ask that whether he had anything to say on behalf of the accused.
- C The judge finally asked that if he has anything to say on behalf of the accused.
- D The judge finally asked that if he has had anything to say on behalf of the accused.

Answer: B

Question 93

Select the word with the correct spelling.

- A amphybia
- B indanted
- C ancumber
- D levelled

Answer: D

Question 94

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

A large crowd-----to get a glimpse of their favourite star.

- A gathered
- B rallied
- C clustered
- D compiled

Answer: A

Question 95

Select the word with the correct spelling.

- A tidlers
- B thistlees
- C pulchritude
- D tenderred

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.

In a strange -----(1)----- the production and the consumption of the event become cause for concern.-----
(2)-----wonders whether newer forms of “noncaring” or violence are appearing. Somehow, silence, even ----
-(3)-----, quietly suppresses a meditation on such events.------(4)-----a professor, I can recollect
the number of occasions when my students have cried as we discussed such events in class.------(5)-----
– society seems so indifferent.

Question 96

1

- A way
- B form

C step

D method

Answer: A

Question 97

2

A Anyone

B One

C Someone

D Somebody

Answer: B

Question 98

3

A attention

B bias

C regard

D indifference

Answer: D

Question 99

4

A Like

B Alike

C As

D Being

Answer: C

Question 100

5

A Yet

B Thus

C Hence

D So

Answer: A