

SSC MTS 4 October 2017 Shift 1

Reasoning

Instructions

For the following questions answer them individually

Question 1

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

10	4	15	30
5	20	2	28
7	6	30	?

A 42

B 43

C 44

D 48

Answer: C

Explanation:

In each row the number at the end is equal to the sum of all the three numbers and '1' is also added.

$$\text{Eg :- } (10 + 4 + 15) + 1 = 30$$

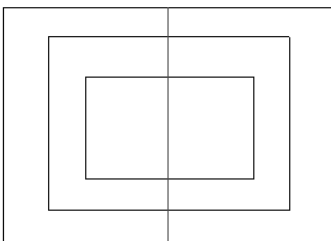
$$\text{and } (5 + 20 + 2) + 1 = 28$$

$$\text{Similarly, } (7 + 6 + 30) + 1 = 44$$

=> Ans - (C)

Question 2

How many quadrilaterals are there in the given figure ?



A 8

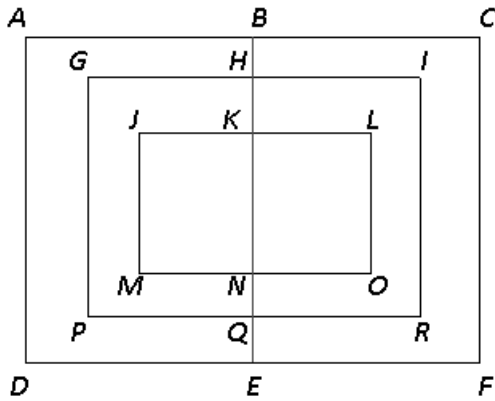
B 9

C 10

D 12

Answer: B

Explanation:



Small quadrilaterals = JKLM, KLOM

Quadrilaterals (having 2 quads) = GHQP, HIRQ

Quadrilaterals (having 3 quads) = ABED, BCFE

Big quadrilaterals = JLOM, GIRP, ACFD

Thus, total quadrilaterals = 9

=> Ans - (B)

Question 3

A word is represented by 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 column and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter these matrices can be represented first by its columns, for example, 'U' can be represented by 14, 95, etc., and 'M' can be represented by 23, 88, etc, similarly, you have to identify set for the word "PARK".

Matrix-I

	0	1	2	3	4
0	C	U	G	J	D
1	S	F	J	N	U
2	Y	P	V	M	F
3	I	E	A	C	H
4	T	K	D	Q	L

Matrix-II

	5	6	7	8	9
5	A	V	K	T	H
6	L	R	T	O	N
7	I	Q	W	Y	P
8	F	H	R	M	S
9	U	G	A	Q	B

A 21, 55, 67, 41

B 79, 55, 87, 41

C 21, 31, 67, 57

D 79, 32, 67, 57

Answer: B

Explanation:

(A) : 21, 55, 67, 41 = PATK

(B) : 79, 55, 87, 41 = **PARK**

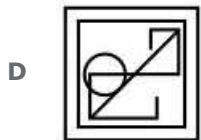
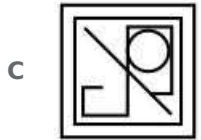
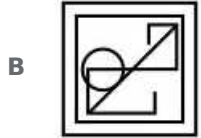
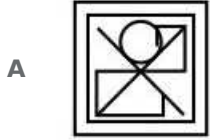
(C) : 21, 31, 67, 57 = PETK

(D) : 79, 32, 67, 57 = PATK

=> Ans - (B)

Question 4

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



Answer: A

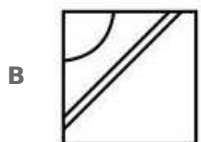
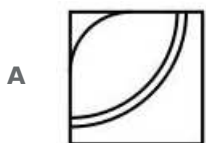
Explanation:

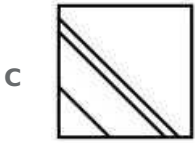
There is only one diagonal in the last three figures, and we need two to make the 'X' figure. So, if we rotate the question figure 90° clockwise, we will get the image embedded in first figure.

=> Ans - (A)

Question 5

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





Answer: D

Explanation:

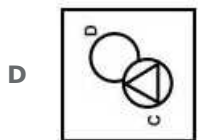
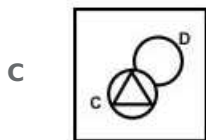
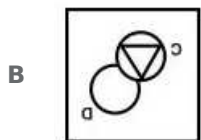
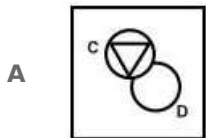
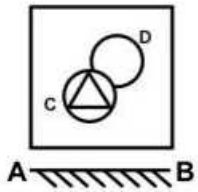
Since, the top right portion of the square is missing, hence there will be a slanted line at bottom left missing part, thus first two options are eliminated.

Also, at the corner, there will be two concentric curves, hence fourth option is correct.

=> Ans - (D)

Question 6

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



Answer: A

Explanation:

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

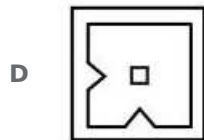
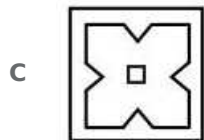
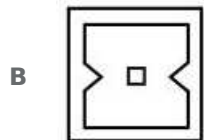
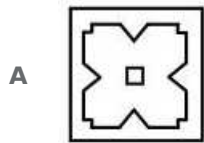
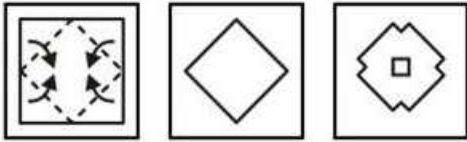
So the triangle in the circle at bottom left will now appear at top left.

Also, the triangle will also face downwards in the mirror image, hence first option is the right image.

=> Ans - (A)

Question 7

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

Question 8

If '-' means '+', 'x' means '÷', '÷' means '-' and '+' means 'x', then

$$9 \times 6 + 36 - 4 = ?$$

A 58

B 38

C 40

D 32

Answer: A

Explanation:

Expression : $9 \times 6 + 36 - 4 = ?$

$$\equiv 9 \div 6 \times 36 + 4$$

$$= \left(\frac{9}{6} \times 36\right) + 4$$

$$= (9 \times 6) + 4$$

$$= 54 + 4 = 58$$

=> Ans - (A)

Question 9

If $5 + 3 + 1 = 15$ and $6 + 1 + 4 = 24$, then $4 + 3 + 0 = ?$

- A 4
- B 12
- C 0
- D 8

Answer: C

Explanation:

Given : $5 + 3 + 1 = 15$ and $6 + 1 + 4 = 24$

If we replace '+' with 'x', then L.H.S. = R.H.S.

Eg :- $5 \times 3 \times 1 = 15$

and $6 \times 1 \times 4 = 24$

Similarly, $4 \times 3 \times 0 = 0$

=> Ans - (C)

Question 10

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

1. Jelly
2. Jenny
3. Jewel
4. Jocks
5. Jiffy

- A 12345
- B 12354
- C 13254
- D 21354

Answer: B

Explanation:

As per the order of dictionary :

= Jelly -> Jenny -> Jewel -> Jiffy -> Jocks

\equiv 12354

=> Ans - (B)

Question 11

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

121, 4, 144, 9, 169, 16, 196, ?

- A 225

B 36

C 25

D 40

Answer: C

Explanation:

Series : 121, 4, 144, 9, 169, 16, 196, ?

The above series is a combination of two series at alternate positions.

First being square of consecutive numbers starting from 11 and second starting from square of '2'.

1st : 121, 144, 169, 196

2nd : 4, 9, 16, **25**

=> Ans - (C)

Question 12

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

W, T, Q, N, ?

A J

B K

C L

D M

Answer: B

Explanation:

The pattern followed is :

W (-3 letters) = T

T (-3 letters) = Q

Q (-3 letters) = N

N (-3 letters) = **K**

=> Ans - (B)

Question 13

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

A Grass

B Plant

C Tree

D Land

Answer: D

Explanation:

Grass, plant and tree are all parts of natural habitat, hence land is the odd one out.

=> Ans - (D)

Question 14

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

- A 7 - 52
- B 11 - 124
- C 12 - 147
- D 14 - 201

Answer: D

Explanation:

The numbers are of the form = $n : n^2 + 3$

(A) : $(7)^2 + 3 = 52$

(B) : $(11)^2 + 3 = 124$

(C) : $(12)^2 + 3 = 147$

(D) : $(14)^2 + 3 = 199 \neq 201$

=> Ans - (D)

Question 15

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

- A CDEH
- B JKLO
- C RSTW
- D EFGK

Answer: D

Explanation:

(A) : C (+1 letter) = D (+1 letter) = E (+3 letters) = H

(B) : J (+1 letter) = K (+1 letter) = L (+3 letters) = O

(C) : R (+1 letter) = S (+1 letter) = T (+3 letters) = W

(D) : E (+1 letter) = F (+1 letter) = G (+4 letters) = K

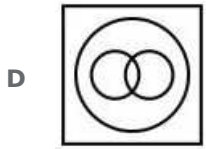
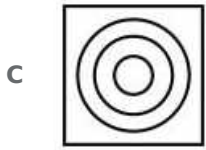
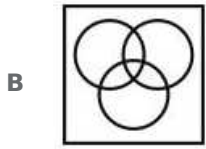
=> Ans - (D)

Question 16

Identify the diagram that best represents the relationship among the given classes.

Biology, Science, Subject



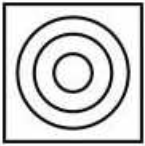


Answer: C

Explanation:

Biology is a branch of science and science is a subject.

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



=> Ans - (C)

Question 17

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

Metal : Ore :: Paper : ?

- A** Flour
- B** Pulp
- C** Brick
- D** Seed

Answer: B

Explanation:

Expression = Metal : Ore :: Paper : ?

An ore is a solid material from which a metal is extracted, similarly paper is made from **pulp**.

=> Ans - (B)

Question 18

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

1 : 8 :: 216 : ?

- A** 343
- B** 125

C 64

D 729

Answer: A

Explanation:

Expression = $1 : 8 :: 216 : ?$

The pattern followed is that = $n^3 : (n + 1)^3$

Eg :- $1^3 : (1 + 1)^3 = 1 : 8$

Similarly, $(6)^3 : (6 + 1)^3 = 216 : 343$

=> Ans - (A)

Question 19

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

FA : CC :: PX : ?

A KY

B LY

C MZ

D KZ

Answer: C

Explanation:

Expression = FA : CC :: PX : ?

The pattern followed is that in the pair each letter of the first term is related to the second term as :

F (-3 letters) = C

A (+2 letters) = C

Similarly, P (-3 letters) = M, X (+2 letters) = Z

=> PX : **MZ**

=> Ans - (C)

Question 20

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

TOURNAMENT

A TORMENT

B RENT

C TOUR

D TRAP

Answer: D

Explanation:

The word TOURNAMENT does not contain any 'P', thus the term **Trap** cannot be formed.

=> Ans - (D)

Question 21

Pointing to a man, Heena said "he is the only son of wife of my father". How is the man related to Heena?

- A Grandfather
- B Husband
- C Brother
- D Son

Answer: C

Explanation:

Wife of Heena's father = Heena's mother

Now, the man is the only son of Heena's mother, => Heena is his sister.

=> The man is Heena's **brother**.

=> Ans - (C)

Question 22

Nayan remembers his examinations starts after 15th August, while her mother remembers that his examinations starts before 18th August. On which date of August does his examinations start?

- A 16
- B 17
- C 16 or 17
- D 17 or 18

Answer: C

Explanation:

The exam starts after 15th August but before 18th August

Thus, possible date of examination in August = **16 or 17**

=> Ans - (C)

Question 23

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

Statements:

- I. Some yellow are small.
- II. All small are red.

Conclusions:

- I. Some red are yellow.
- II. Some small are yellow.

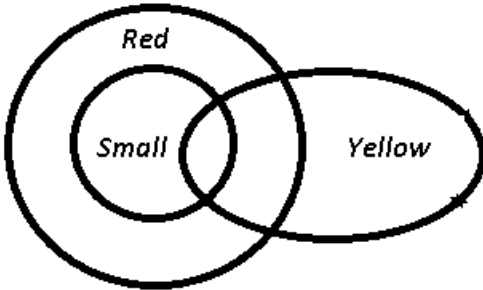
- A Only conclusion (I) follows.
- B Only conclusion (II) follows.

- C** Neither conclusion (I) nor conclusion (II) follows.
- D** Both conclusion follow.

Answer: D

Explanation:

The venn diagram for above statements is :



Conclusions:

- I. Some red are yellow = true
 II. Some small are yellow = true

Thus, both conclusion follow.

=> Ans - (D)

Question 24

In a certain code language, "HAZE" is written as "ICCI". How is "SMOG" written in that code language?

- A** TORK
- B** TORL
- C** TNRK
- D** TNSK

Answer: A

Explanation:

"HAZE" is written as "ICCI"

The pattern followed is :

H	A	Z	E
(+1)	(+2)	(+3)	(+4)
I	C	C	I

Similarly, for SMOG : **TORK**

S	M	O	G
(+1)	(+2)	(+3)	(+4)
T	O	R	K

=> Ans - (A)

Question 25

In a certain code language, "SIN" is written as "43" and "PEN" is written as "36". How is "TIP" written in that code language?

- A** 45
- B** 46

C 44

D 43

Answer: B

Explanation:

"SIN" is written as "43"

The pattern followed is that if we number the alphabets sequentially, i.e. A=1, B=2, C=3 and so on.

Also, '1' is added to the sum of the numbers.

Eg :- $SIN \equiv (19 + 9 + 14) + 1 = 43$

and $PEN \equiv (16 + 5 + 14) + 1 = 36$

Similarly, $TIP \equiv (20 + 9 + 16) + 1 = 46$

=> Ans - (B)

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 26

Elderly people can have a normal (1)/ body temperature below 98.6 so (2)/ the younger population can have a little higher temperature. (3)/ No Error (4)

- A Elderly people can have a normal
- B body temperature below 98.6 so
- C the younger population can have a little higher temperature.
- D No Error

Answer: B

Question 27

We are at that critical juncture when (1)/we are facing a serious issue (2)/with the image perception of the railways. (3)/ No Error (4)

- A We are at that critical juncture when
- B we are facing a serious issue
- C with the image perception of the railways.
- 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 28

Everything is bright and beautiful, _____?

- A isn't he
- B isn't it
- C isn't she
- D isn't him

Answer: B

Question 29

They are terribly busy with _____ work.

- A his
- B their
- C them
- D her

Answer: B

Instructions

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

Question 30

Lean

- A Fat
- B Thin
- C Obese
- D Plump

Answer: B

Instructions

For the following questions answer them individually

Question 31

Lurk

- A Ignore
- B Rush
- C Come

D Sneak

Answer: D

Question 32

Groan

A Grumble

B Agreement

C Liking

D Regard

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 33

Lethargic

A Lazy

B Sluggish

C Lively

D Dull

Answer: C

Question 34

Defend

A Uphold

B Surrender

C Secure

D Resist

Answer: B

Question 35

Command

A Opposition

B Call

C Dictate

D Notification

Answer: A

Instructions

In the following question, out of the four given alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.

Question 36

Rest on one's laurels

- A** To retire from active life
- B** To remember thing clearly
- C** Not to come to point
- D** Defend from enemies

Answer: A

Question 37

Fallout

- A** To admire
- B** Declared dead
- C** To love someone
- D** To quarrel

Answer: D

Instructions

For the following questions answer them individually

Question 38

Improve the bracketed part of the sentence.

The main (causes of this failure is) inadequate ability growth and character development.

- A** causes of these failure is
- B** cause of this failure are
- C** causes of this failure are
- D** No improvement

Answer: C

Question 39

Improve the bracketed part of the sentence.

If they (did not know their ability) and they do not know which sports they want to do, they will not learn to play any sports and will not succeed.

- A** do not know their ability
- B** would not know their ability
- C** did not know their capability
- D** No improvement

Answer: A

Instructions

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

Question 40

Art or craft making skill with hand.

- A** Hovercraft
- B** Handicraft
- C** Statecraft
- D** Spacecraft

Answer: B

Question 41

Insufficient feeding or nourishing.

- A** Abduction
- B** Abolition
- C** Addiction
- D** Malnutrition

Answer: D

Instructions

Choose the correct spelling from the given words

Question 42

- A** Defecient
- B** Deficeint
- C** Deficient

D Deficient

Answer: C

Question 43

A Chanlenge

B Chalenge

C Challainge

D Challenge

Answer: D

Instructions

For the following questions answer them individually

Question 44

Rearrange the parts of the sentence in correct order.

His vision

P: hardly related to

Q: and goals were

R: the reality around him

A PRQ

B QPR

C PQR

D RPQ

Answer: B

Question 45

Rearrange the parts of the sentence in correct order.

Pollution needs

P: otherwise our future generations

Q: to be tackled seriously

R: would suffer a lot

A PRQ

B QRP

C RPQ

D QPR

Answer: D

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.

The thoughts, behavior and tastes of fashion, music, television and other ___(1)___ of life of the masses are often seen

having a ___(2)___ impact on the living of the society. We tend to get influenced by the lifestyles of our peer group. The changing ways of life of our peers often __ (3)___ us to change our ways of looking at life and leading it. It's a human tendency to do what the crowd does. Few have the courage to resist the peer pressure and be their own selves rather than being one among the lot. Peer pressure is bound to affect most of us, both, positively and ___(4)__. The distinction between positive and negative peer pressure lies in a thoughtful analysis of the views of the masses. Following your peers ___(5)___ leaves a negative impact on your life while an analytical approach of looking at peer behavior can act positively. Let us look at the positive and negative effects of peer pressure.

Question 46

television and other _____ of life

- A** walks
- B** cakes
- C** notion
- D** ideas

Answer: A

Question 47

a _____ impact on the living

- A** mere
- B** deep
- C** follow
- D** slow

Answer: B

Question 48

peers often _____ us to change

- A** reduce
- B** converse
- C** force
- D** relates

Answer: C

Question 49

both, positively and _____.

- A** positively
- B** neutral
- C** indifferent

D negatively

Answer: D

Question 50

Following your peers _____ leaves a

A blindly

B effectively

C rarely

D surely

Answer: A

Quant

Instructions

For the following questions answer them individually

Question 51

Which smallest number to be subtracted from 300, so that the resulting number is completely divisible by 9?

A 5

B 6

C 3

D 1

Answer: C

Explanation:

On dividing 300 by 9, we get : $300 = 9 \times 33 + 3$

Thus, the smallest number which should be subtracted from $300 = 3$

Also, $300 - 3 = 297$ is completely divisible by 9.

=> Ans - (C)

Question 52

What is the digit in unit's place of the product $25 \times 252 \times 37$?

A 1

B 2

C 0

D 5

Answer: C

Explanation:

Expression : $25 \times 252 \times 37$

The above set of number contains 252 and 25 and the unit's digit of their product is 0. ($\because 2 \times 5 = 10$)

Thus, the digit in unit's place of the product $25 \times 252 \times 37 = 0$

=> Ans - (C)

Question 53

What is the value of $13 + 14 + \dots + 20$?

A 182

B 144

C 132

D 124

Answer: C

Explanation:

Expression : $13 + 14 + \dots + 20$

The above series is an A.P. with first term, $a = 13$, last term, $l = 20$ and common difference, $d = 1$

=> Number of terms be = $n = (20 - 13) + 1 = 8$

Sum of A.P. = $\frac{n}{2}(a + l)$

= $\frac{8}{2}(13 + 20)$

= $4 \times 33 = 132$

=> Ans - (C)

Question 54

What is the value of $8\frac{1}{7} + 5\frac{3}{7} + 4\frac{2}{7} + 3\frac{1}{7}$?

A 22

B 23

C 24

D 21

Answer: D

Explanation:

Expression : $8\frac{1}{7} + 5\frac{3}{7} + 4\frac{2}{7} + 3\frac{1}{7}$

= $(8 + 5 + 4 + 3) + (\frac{1}{7} + \frac{3}{7} + \frac{2}{7} + \frac{1}{7})$

= $(20) + (\frac{7}{7})$

= $20 + 1 = 21$

=> Ans - (D)

Question 55

A number when divided by 18 leaves remainder 15. What is the remainder when the same number is divided by 6?

- A 3
- B 2
- C 1
- D 4

Answer: A

Explanation:

The number when divided by 18 leaves remainder 15, \Rightarrow Number is of the form $= N = 18k + 15$, where k is a whole number.

Now, when N is divided by 6, we get : $\frac{18k+15}{6}$

$$= \left(\frac{18k}{6}\right) + \left(\frac{15}{6}\right)$$

$18k$ is completely divisible by 6, hence the second term will determine the remainder.

\Rightarrow Remainder when 15 is divided by 6 is $15\%6 = 3$

\Rightarrow Ans - (A)

Question 56

If 123457Y is completely divisible by 8, then what will be the digit in place of Y?

- A 4
- B 5
- C 8
- D 6

Answer: D

Explanation:

Number : 123457Y

If a number is completely divisible by 8, then the last three digits of the number must also be divisible by 8.

$\Rightarrow 57Y$ must be divisible by 8 and the only three digit number starting with '57' which is divisible by 8 is $= 576$

$\Rightarrow Y = 6$

\Rightarrow Ans - (D)

Question 57

P can do a piece of work in 36 days. If Q is 50% more efficient than P, then in how many days can Q do the same work?

- A 18
- B 24
- C 12
- D 21

Answer: B

Explanation:

P can do a piece of work in 36 days.

Now, Q is 50% more efficient than P, => P will take 50% more time than Q to finish the same work.

$$\Rightarrow \text{Days required by Q} = \frac{36}{(100+50)} \times 100$$

$$= \frac{36}{3} \times 2 = 24 \text{ days}$$

=> Ans - (B)

Question 58

P is twice as good as Q and together they finish a piece of work in 36 days. The number of days taken by P alone to finish the work?

A 48

B 60

C 54

D 72

Answer: C

Explanation:

Let Q's efficiency = x units/day

=> P's efficiency = $2x$ units/day

Together they finish the work in 36 days.

$$\Rightarrow \text{Total work} = 36 \times (x + 2x) = 36 \times 3x = 108x \text{ units}$$

$$\therefore \text{Days taken by P alone to finish the work} = \frac{108x}{2x} = 54 \text{ days}$$

=> Ans - (C)

Question 59

If the diagonal of a square is 10 cm, then what is the area ($incm^2$) of the square?

A 100

B $50\sqrt{2}$

C 50

D $100\sqrt{2}$

Answer: C

Explanation:

Let side of square = s cm and diagonal = 10 cm

$$\Rightarrow s^2 + s^2 = (10)^2$$

$$\Rightarrow 2s^2 = 100$$

$$\Rightarrow s^2 = \frac{100}{2} = 50 \text{ -----(i)}$$

$$\therefore \text{Area of square} = s^2 = 50 \text{ cm}^2$$

=> Ans - (C)

Question 60

The marked price of an article is Rs 750 and a customer pays Rs 600 for it. What is the discount percentage?

- A 20
- B 30
- C 15
- D 10

Answer: A

Explanation:

Marked price = Rs. 750

Selling price = Rs. 600

$$\Rightarrow \text{Discount \%} = \frac{(750-600)}{750} \times 100$$

$$= \frac{150}{750} = 20\%$$

=> Ans - (A)

Question 61

The marked price of an article is 50% more than its cost price. If a discount of 10% is given, then what is the profit percentage?

- A 25
- B 30
- C 35
- D 20

Answer: C

Explanation:

Let cost price of the article = Rs. 100

$$\Rightarrow \text{Marked price} = 100 + \left(\frac{50}{100} \times 100\right)$$

$$= 100 + 50 = \text{Rs. } 150$$

Discount % = 10%

$$\Rightarrow \text{Selling price} = 150 - \left(\frac{10}{100} \times 150\right)$$

$$= 150 - 15 = \text{Rs. } 135$$

$$\therefore \text{Profit \%} = \frac{(135-100)}{100} \times 100 = 35\%$$

=> Ans - (C)

Question 62

Two numbers are in the ratio of 3 : 4. If 8 be subtracted from each, then the new ratio becomes 17 : 24. What are the two numbers?

- A 42 and 56
- B 30 and 40
- C 45 and 60
- D 60 and 80

Answer: A

Explanation:

Let the numbers be $3x$ and $4x$ respectively.

According to ques,

$$\Rightarrow \frac{3x-8}{4x-8} = \frac{17}{24}$$

$$\Rightarrow 72x - (24 \times 8) = 68x - (17 \times 8)$$

$$\Rightarrow 72x - 68x = (24 \times 8) - (17 \times 8)$$

$$\Rightarrow 4x = 7 \times 8$$

$$\Rightarrow x = \frac{56}{4} = 14$$

\therefore Numbers are $= 3 \times 14$ and $4 \times 14 = 42$ and 56

\Rightarrow Ans - (A)

Question 63

If $\frac{2}{3}$ of $P = \frac{1}{5}$ of Q , then what is $P : Q$?

- A 3 : 5
- B 3 : 10
- C 3 : 7
- D 3 : 9

Answer: B

Explanation:

Expression : $\frac{2}{3}$ of $P = \frac{1}{5}$ of Q

$$\Rightarrow \frac{2}{3} \times P = \frac{1}{5} \times Q$$

$$\Rightarrow \frac{P}{Q} = \frac{1}{5} \times \frac{3}{2}$$

$$\Rightarrow \frac{P}{Q} = \frac{3}{10}$$

\Rightarrow Ans - (B)

Question 64

The average of 6 numbers is 18. If one number is excluded, the average becomes 17. What is the excluded number?

- A 22
- B 23

C 21

D 20

Answer: B

Explanation:

Average of 6 numbers = 18

=> Total sum of the numbers = $(18 \times 6) = 108$

Let excluded number = x

New average = $\frac{108-x}{5} = 17$

=> $108 - x = 17 \times 5 = 85$

=> $x = 108 - 85 = 23$

=> Ans - (B)

Question 65

If the ratio of the cost price and selling price of an article is 5 : 6, then what will be the profit percentage?

A 10

B 12

C 15

D 20

Answer: D

Explanation:

Let C.P. = Rs. 5 and S.P. = Rs. 6

\therefore Profit % = $\frac{(S.P.-C.P.)}{C.P.} \times 100$

= $\frac{(6-5)}{5} \times 100$

= $\frac{100}{5} = 20\%$

=> Ans - (D)

Question 66

If the rice is sold at Rs 48 per kg, then there would be a 20% loss. To earn a profit of 20% what should be the price of rice (per kg)

A 72

B 76

C 78

D 84

Answer: A

Explanation:

Selling price = Rs. 48

Loss % = 20%

=> Cost price = $\frac{48}{(100-20)} \times 100$

$$= \frac{480}{8} = \text{Rs. } 60$$

Now, to earn 20% profit, \Rightarrow Selling price = $60 + \left(\frac{20}{100} \times 60\right)$

$$= 60 + 12 = \text{Rs. } 72$$

\Rightarrow Ans - (A)

Question 67

When 80 is subtracted from 20% of a number, the result is 30. What is the value of the number?

A 330

B 440

C 550

D 220

Answer: C

Explanation:

Let the number = x

According to ques,

$$\Rightarrow \left(\frac{20}{100} \times x\right) - 80 = 30$$

$$\Rightarrow \frac{x}{5} = 30 + 80 = 110$$

$$\Rightarrow x = 110 \times 5 = 550$$

\Rightarrow Ans - (C)

Question 68

A number is first decreased by 30% and then increased by 30%. If the number so obtained is 72 less than the original number, then what is the value of the original number?

A 720

B 800

C 960

D 1080

Answer: B

Explanation:

Let the original number = $100x$

If number is first decreased by 30%, then number = $100x - \left(\frac{30}{100} \times 100x\right)$

$$= 100x - 30x = 70x$$

Now, the number is again increased by 30%, number = $70x + \left(\frac{30}{100} \times 70x\right)$

$$= 70x + 21x = 91x$$

According to ques,

$$\Rightarrow 100x - 91x = 72$$

$$\Rightarrow 9x = 72$$

$$\Rightarrow x = \frac{72}{9} = 8$$

$$\therefore \text{Original number} = 100 \times 8 = 800$$

\Rightarrow Ans - (B)

Question 69

Speeds of a boat along the current and against the current are 16 km/hr and 12 km/hr respectively. What is the speed (in km/hr) of the current?

A 1

B 2

C 3

D 4

Answer: B

Explanation:

Downstream speed of boat = 16 km/hr

Upstream speed of boat = 12 km/hr

$$\Rightarrow \text{Speed of current (in km/hr)} = \frac{1}{2} \times (16 - 12)$$

$$= \frac{4}{2} = 2 \text{ km/hr}$$

\Rightarrow Ans - (B)

Question 70

A person goes from point L to N and comes back. His average speed for the whole journey is 100 km/hr. If his speed while coming back from N to L is 65 km/hr, then what will be the speed of the person (in km/hr) while going from L to N?

A 135

B 146.31

C 150.62

D 216.67

Answer: D

Explanation:

Speed of the person from point N to L = 65 km/hr

Let speed of the first journey = s km/hr

Since, equal distances are covered, average speed = harmonic mean of both speeds = $\frac{2xy}{x+y}$

$$\Rightarrow \frac{2 \times s \times 65}{s+65} = 100$$

$$\Rightarrow \frac{130s}{s+65} = 100$$

$$\Rightarrow \frac{13s}{s+65} = 10$$

$$\Rightarrow 13s = 10s + 650$$

$$\Rightarrow 13s - 10s = 3s = 650$$

...

$$\Rightarrow s = \frac{650}{3} = 216.67$$

∴ Speed of the person (in km/hr) while going from L to N = 216.67 km/hr

⇒ Ans - (D)

Question 71

An amount invested at simple interest gives Rs 2550 interest at rate of 17% per annum in 3 years. What is the principal (in Rs)

- A 4000
- B 5000
- C 6000
- D 4500

Answer: B

Explanation:

Let the principal be = Rs. $100x$

Rate of interest = 17% and time period = 3 years

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

$$\Rightarrow \frac{100x \times 17 \times 3}{100} = 2550$$

$$\Rightarrow 51x = 2550$$

$$\Rightarrow x = \frac{2550}{51} = 50$$

∴ Principal sum = $100 \times 50 = \text{Rs. } 5000$

⇒ Ans - (B)

Instructions

The line chart given below shows the sales (in crores) of company A and B from July to December.



Question 72

The sales of company A in November is how much percent more than the sales of company B in November?

- A 5
- B 10
- C 8

D 15

Answer: A

Explanation:

Sales of company A in November (in crores) = 105

Sales of company B in November (in crores) = 100

$$\Rightarrow \text{Required \%} = \frac{(105-100)}{100} \times 100$$

$$= 5\%$$

\Rightarrow Ans - (A)

Question 73

The sales of company B is same in which two months?

A September and October

B October and November

C August and November

D July and August

Answer: A

Explanation:

The sales of company B is same in *September and October* = 170 crores

\Rightarrow Ans - (A)

Question 74

What is the average sale (in crore Rs) of company B in the given six months?

A 147

B 140

C 154

D 135

Answer: A

Explanation:

Total sale (in crore Rs) of company B in the given six months

$$= 112 + 125 + 170 + 170 + 105 + 205 = 887$$

$$\Rightarrow \text{Average sales} = \frac{887}{6} = 147.3$$

i.e approximately 147

\Rightarrow Ans - (A)

Question 75

For how many months the sales of company B has major growth than the sales of company A?

A 2

B 3

C 1

D 4

Answer: B

Explanation:

The sales of company B has major growth than the sales of company A in 3 months, i.e. September, October and December.

=> Ans - (B)

General Awareness

Instructions

For the following questions answer them individually

Question 76

What is the full form of GNP?

A Great Net Product

B Gross National Product

C Great National Product

D Gross Net Product

Answer: B

Question 77

Development promises a real growth by enhancing _____ of a person.

A Total income

B Standard of living

C Total income and standard of living boths

D Neither total income nor standard of living

Answer: C

Question 78

How many fundamental duties does part IV-A of Indian constitution specifies?

A 5

B 7

C 11

D 31

Answer: C

Question 79

In order to make a bill into a law it is required to pass through ____.

- A** Only Lok Sabha
- B** Only Rajya Sabha
- C** Both Lok and Rajya Sabha
- D** Either Lok Sabha or Rajya Sabha

Answer: C

Question 80

Which ancient city of Indus-Valley Civilization was famous for its dock yard?

- A** Dholavira
- B** Lothal
- C** Chanhudaro
- D** Mohenjo-daro

Answer: B

Question 81

In which year did Mahatma Gandhi give a call for a Satyagraha against the Rowlatt Act?

- A** 1915
- B** 1919
- C** 1923
- D** 1909

Answer: B

Question 82

Winter solstice occurs on which date of the year?

- A** 21 March
- B** 23 September
- C** 21 June
- D** 22 December

Answer: D

Question 83

Which is the second largest continent of the world after Asia?

- A** North America
- B** South America
- C** Africa
- D** Europe

Answer: C

Question 84

What is small leaf like structures of a flower called?

- A** Sepals
- B** Petals
- C** Pistil
- D** Stamens

Answer: A

Question 85

The balance of CO₂ and O₂ in atmosphere is due to ____.

- A** Transportation
- B** Photosynthesis
- C** Respiration
- D** Evaporation

Answer: B

Question 86

Excretion means ____.

- A** Removal of substances present in excess
- B** Formation of those substances that have some role in the body
- C** Removal of such substances that have never been part of the body
- D** All options are correct

Answer: A

Question 87

Which is the correct order of decreasing friction?

- A Static friction > Sliding friction > Rolling friction
- B Static friction > Rolling friction > Sliding friction
- C Rolling friction > Sliding friction > Static friction
- D Sliding friction > Rolling friction > Static friction

Answer: A

Question 88

A steam engine converts the heat energy of steam into ____.

- A Electrical energy
- B Chemical energy
- C Mechanical energy
- D Thermal energy

Answer: C

Question 89

What is the full form of ASCII?

- A American Standard Code for Internet Interchange
- B American Standard Code for Information Interchange
- C American Standard Code for Information International
- D American Standard Code for Internet International

Answer: B

Question 90

Metallurgy is the process of ____.

- A Extracting metals from the Ore
- B Roasting the Ore
- C Liquefaction of metals
- D Adding metal to the Ore in blast furnace

Answer: A

Question 91

Metals have ____.

- A High melting and boiling point

- B** Low melting and boiling point
- C** High melting and low boiling point
- D** Low melting and high boiling point

Answer: A

Question 92

What is the water which is suitable for drinking called?

- A** Potable water
- B** Portable water
- C** Pure water
- D** Sterile water

Answer: B

Question 93

Which among the following considered to be the financial turn around and rival package for electricity distribution companies of India?

- A** VAT
- B** UDAAN
- C** UDAY
- D** UJALA

Answer: C

Question 94

Who invented the first modern electrical air conditioning unit?

- A** Karl Benz
- B** Robert W. Wilson
- C** Willis Carrier
- D** Charles M. Hall

Answer: C

Question 95

Which country will host the 2018 FIFA Football World Cup?

- A** Brazil

- B** Russia
- C** Germany
- D** England

Answer: B

Question 96

Alpana is a traditional folk art of which state?

- A** Maharashtra
- B** West Bengal
- C** Karnataka
- D** Rajasthan

Answer: B

Question 97

Which former Union Minister has been awarded with the Japan's imperial decoration 'Order of the Rising Sun' award?

- A** Ashwani Kumar
- B** Manmohan Singh
- C** L. K. Advani
- D** Sharad Yadav

Answer: A

Question 98

Who is the author of book named "Alice in the Wonderland"?

- A** William Shakespeare
- B** Paul Kennedy
- C** Lewis Carrol
- D** George Orwell

Answer: C

Question 99

What is the group of rural women solar engineers from African countries trained under India's developmental support for harnessing solar energy called?

- A** Solar Sangathan
- B** Solar Samiti

C Solar Mamas

D Solar System

Answer: C

Question 100

The 250 km Tamu-Kalewa-Kalemyo highway is a gift to Myanmar is built by _____.

A National Highway Authority of India

B Military of Myanmar

C Border Roads Organisation

D None of these

Answer: C