



## **SSC CPO 05 June 2016 Morning Shift**

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## Reasoning

### Instructions

For the following questions answer them individually

### Question 1

In the following question, a series is given with one or more alphabet missing. Choose the correct alternative from the given options.

ACF, BEI, CGL, DIO, ?

- A EGJ
- B EKQ
- C EHL
- D EKR

**Answer:** D

### Explanation:

Expression : ACF, BEI, CGL, DIO, ?

The pattern followed in each letter of the terms is :

1st letter : A (+1) = B (+1) = C (+1) = D (+1) = **E**

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

3rd letter : F (+3) = I (+3) = L (+3) = O (+3) = **R**

Thus, missing term : **EKR**

=> Ans - (D)

## Free SSC Study Material (18,000 Solved Questions)

### Question 2

In the following questions, a series is given with one or more terms missing. Choose the correct alternative from the given options.

Cube > Square > ?

- A Line
- B Triangle
- C Rectangle
- D Circle

**Answer:** A

### Explanation:

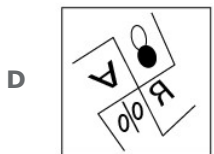
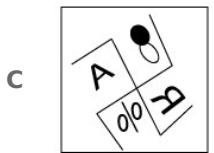
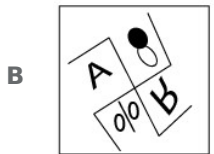
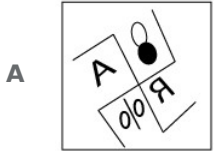
Expression : Cube > Square > ?

Cubes are made by combination of squares (6), similarly a square is a made of lines (4).

=> Ans - (A)

Question 3

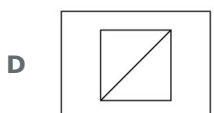
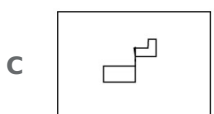
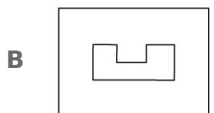
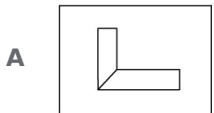
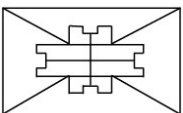
In the following questions, a mirror is placed on the line MN, then which of the answers figures is the right images of the given figure ?



Answer: C

Question 4

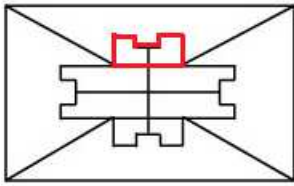
Which of the given answer figures is hidden in the question figure ?



Answer: B

**Explanation:**

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

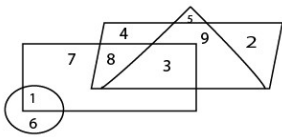


=> Ans - (B)

## SSC CPO Free Mock Test (Latest Pattern)

**Question 5**

Study the given figure and answer the following question



- A 15
- B 13
- C 26
- D 14

Answer: A

**Question 6**

In the following question, a word is represented by only one set of numbers as given in any one of the alternatives. The set of numbers given in the alternatives are represented by two classes of alphabet as in two matrices given below. The columns and rows of Matrix I are numbered 0 to 4 and that of Matrix II are numbered 5 to 9. A letter from these matrices can be represented first by its row and then by its column, for example, P can be represented by 55, 69 etc. and L can be represented by 59, 68 etc. Similarly, you have to identify the set for the word MASTER.

Matrix - I

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

Matrix - II

	5	6	7	8	9
5	P	E	R	I	L
6	E	R	I	L	P
7	R	I	L	P	E
8	I	L	P	E	R
9	L	P	E	R	I

- A 01, 43, 41, 04, 65, 44
- B 33, 11, 23, 41, 79, 98
- C 01, 43, 00, 42, 65, 44
- D 33, 11, 32, 03, 79, 98

Answer: A

**Explanation:**

(A) : 01, 43, 41, 04, 65, 44 : **MASTER**

(B) : 33, 11, 23, 41, 79, 98 : MASSER

(C) : 01, 43, 00, 42, 65, 44 : MASMER

(D) : 33, 11, 32, 03, 79, 98 : MASRER

=> Ans - (A)

### Question 7

Select the odd letters from the given alternatives.

A KMO

B UXA

C CEG

D LNP

Answer: B

### Explanation:

(A) :  $K (+2) = M (+2) = O$

(B) :  $U (+3) = X (+3) = A$

(C) :  $C (+2) = E (+2) = G$

(D) :  $L (+2) = N (+2) = P$

=> Ans - (B)

## SSC CPO Previous Papers

### Question 8

Select the odd number-pair from the given alternatives.

A 36-145

B 16-63

C 91-363

D 64-255

Answer: A

### Explanation:

Except the first option, the numbers are of the form  $n : 4n - 1$

(A) :  $(4 \times 36) - 1 = 143 \neq 145$

(B) :  $(4 \times 16) - 1 = 63$

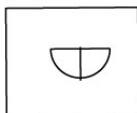
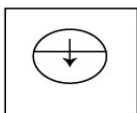
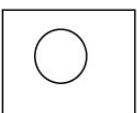
(C) :  $(4 \times 91) - 1 = 363$

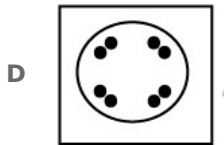
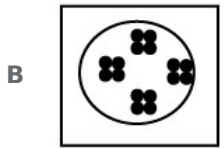
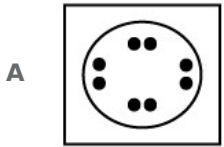
(D) :  $(4 \times 64) - 1 = 255$

=> Ans - (A)

### Question 9

A circular piece of paper is folded and punched as shown in the question figure. How will it appear when opened ?





Answer: B

#### Question 10

In the following question, a series is given with one or more word missing. Choose the correct alternatives from the given options.

Leaves, Twig, Branches, Trunk, ?

- A Soil
- B Roots
- C Fruits
- D Grass

Answer: B

#### Explanation:

Roots grow to develop trunk, Trunk gives rise to branches and twig. Leaves grow on twig.

Thus, the missing word is **roots**.

=> Ans - (B)

## 1500 + Free Must Solved SSC Questions (With Solutions)

#### Question 11

Select the odd letters from the given alternatives.

- A AJDG
- B KTNQ
- C JMSP
- D UDXA

Answer: C

**Explanation:**

- (A) :  $A (+9) = J (-6) = D (+3) = G$
- (B) :  $K (+9) = T (-6) = N (+3) = Q$
- (C) :  $J (+3) = M (+6) = S (-3) = P$
- (D) :  $U (+9) = D (-6) = X (+3) = A$

=> Ans - (C)

**Question 12**

Select the related letters from the given alternatives.

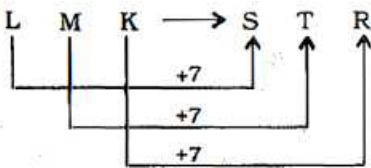
LMK : STR :: IJH : ?

- A QSR
- B SUT
- C ZAY
- D ADC

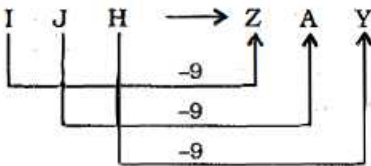
**Answer: C**

**Explanation:**

Expression = LMK : STR :: IJH : ?



There is uniform distance between the letters, this is possible only in IJH : ZAY



=> Ans - (C)

**Question 13**

Select the missing number from the given responses.

- 8 5 4
- 7 6 8
- 12 20 12
- 44 10 ?

- A 40
- B 30
- C 20
- D 35

**Answer: C**

**Explanation:**

The pattern followed in each column is :

1st :  $(8 \times 7) - 12 = 44$

$$2\text{nd} : (5 \times 6) - 20 = 10$$

$$3\text{rd} : (4 \times 8) - 12 = 20$$

=> Ans - (C)

## SSC CGL Free Mock Test (Latest Pattern)

### Question 14

Select the odd word from the given alternatives

- A Green
- B Black
- C Laterite
- D Alluvial

Answer: A

### Explanation:

Black, Laterite and Alluvial represent different types of soils. Thus, **green** (a colour) is different from the other three.

=> Ans - (A)

### Question 15

Select the related letters from the given alternatives.

PRT : QSU :: VXZ : ?

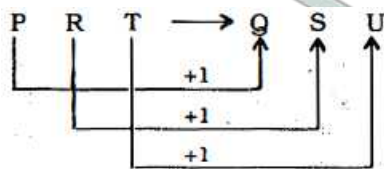
- A WYB
- B WYA
- C ACE
- D VYB

Answer: B

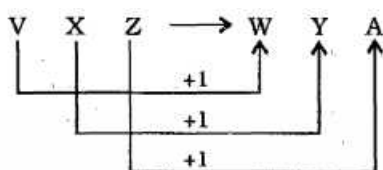
### Explanation:

Expression = PRT : QSU :: VXZ : ?

The pattern followed is :



Similarly, for VXZ : WYA

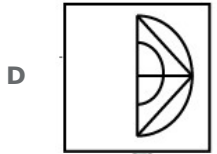
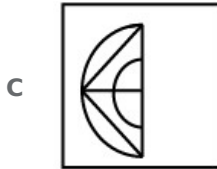
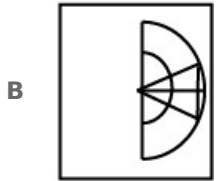
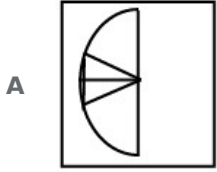
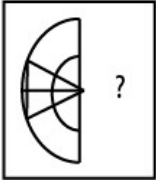


=> Ans - (B)



**Question 16**

Find the answer figure which will complete the pattern in the question figure.



**Answer:** B

**Explanation:**

The answer image must have two vertical concentric semi circles, thus the first option is eliminated.

Also, it will have a triangle, with one vertex at the centre and the other two vertices at the circumference (not at the ends of diameter), hence the last two options are also not possible.

=> Ans - (B)

**SSC CGL Previous Papers (DOWNLOAD PDF)**

**Question 17**

The set of numbers below follows a particular pattern. Which of the numbers in the options does not follow the pattern?

**Number set:**

**60, 120, 210, 336, 1716**

A 720

B 990

C 504

D 1310

**Answer:** D

**Explanation:**

The sum of digits in the numbers are multiples of 3

$$60 ; 6 + 0 = 6$$

$$120 ; 1 + 2 + 0 = 3$$

$$210 ; 2 + 1 + 0 = 3$$

$$336 ; 3 + 3 + 6 = 12$$

$$1716 ; 1 + 7 + 1 + 6 = 15$$

Similarly, sum of digits 720, 990 and 504 is also divisible by 3.

But 1310 ;  $1 + 3 + 1 + 0 = 4$  is not divisible by 3.

=> Ans - (D)

**Question 18**

If  $x\%y = y^2 - x^2$ ,  $x\$y = x \div y^2$ ,  $x \# y = 2xy$ , then value of  $\{(13\%5)\$6\}\#15$  is

A 480

B 720

C -360

D -120

**Answer: D**

**Explanation:**

Expression :  $\{(13\%5)\$6\}\#15$

$$\equiv [(5^2 - 13^2) \div 6^2] \times 2 \times 15$$

$$= [(25 - 169) \div 36] \times 30$$

$$= \frac{-144}{36} \times 30$$

$$= -4 \times 30 = -120$$

=> Ans - (D)

**Question 19**

Six friends are sitting in a circle and are facing the centre of the circle. Runa, Charu and Pari are females. Varun, Manu and Prakash are males. Manu is between Varun and Prakash, Charu is between Pari and Runa. Varun and Pari are opposite to each other. Person sitting to the right of Runa is male. Who is sitting just right to Prakash ?

A Manu

B Charu

C Pari

D Varun

**Answer: C**

**Explanation:**

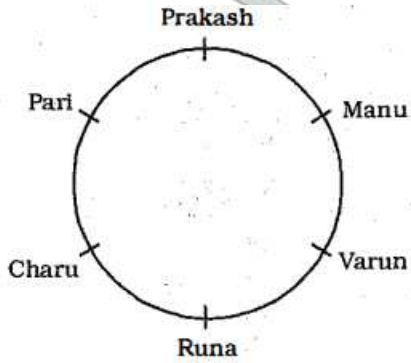
Charu is between Pari and Runa, also person sitting to the right of Runa is male, => Pari is sitting to the immediate left of Charu and Runa to the immediate right of Charu.

Varun and Pari are opposite to each other, => Varun is sitting to the immediate right of Runa.

Manu is between Varun and Prakash, => Manu is sitting to the immediate right of Varun and Prakash is sitting

opposite to Runa.

Hence, final arrangement :



Thus, **Pari** is sitting just right to Prakash.

=> Ans - (C)

## Daily Free SSC Practice Set

### Question 20

If  $\div$  means  $+$ ,  $+$  means  $\times$ ,  $\times$  means  $-$  and  $-$  means  $\div$ , then what is the value of :  
[[1440 - 36 x 16) + 15] + 5  $\div$  (144-12) + 25 = ?

- A 1500
- B 2100
- C 1200
- D 4800

Answer: B

Explanation:

$+$ $\Rightarrow$ $+$	$+$ $\Rightarrow$ $\times$
$\times$ $\Rightarrow$ $-$	$-$ $\Rightarrow$ $\div$

Expression : [(1440 - 36 x 16) + 15] + 5  $\div$  (144-12) + 25 = ?

$$\equiv [(1440 \div 36 - 16) \times 15] \times 5 + (144 \div 12) \times 25$$

$$= [(40 - 16) \times 15] \times 5 + (12 \times 25)$$

$$= (360 \times 5) + 300$$

$$= 1800 + 300 = 2100$$

=> Ans - (B)

### Question 21

In the following question, a series is given with one or more alphabet missing. Choose the correct alternative from the given options.

A, ?, I, O, ?

- A D, T
- B F, V
- C E, U
- D C, W

**Answer: C**

**Explanation:**

Expression : A, ?, I, O, ?

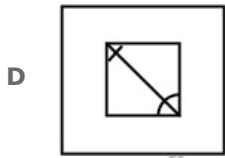
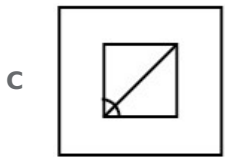
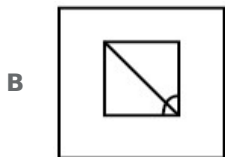
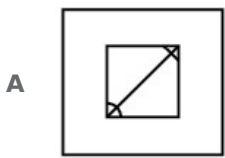
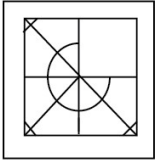
The above series is the combination of vowels.

Hence, missing vowels = **E, U**

=> Ans - (C)

**Question 22**

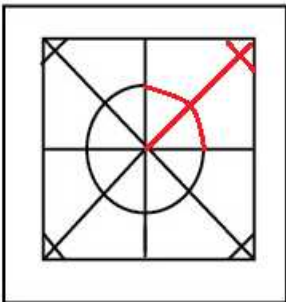
**Find the answer figure which will complete the pattern in the question figure.**



**Answer: A**

**Explanation:**

The question figure will be completed by :



=> Ans - (A)

**SSC CHSL Previous Papers (DOWNLOAD PDF)**

**Question 23**

**Select the odd number from the given alternatives.**

- A 169
- B 196
- C 255
- D 289

**Answer:** C

**Explanation:**

Except 255, all other perfect squares.

$$(13)^2 = 169, (14)^2 = 196 \text{ and } (17)^2 = 289$$

=> Ans - (C)

**Question 24**

The set of alphabets below follows a particular pattern. Which option does not follow the pattern ?

**Alphabet set:**

**AE, GK, YC, MQ**

- A XB
- B WZ
- C RV
- D LP

**Answer:** B

**Explanation:**

The pattern followed is :

- A  $\xrightarrow{+4}$  E
- G  $\xrightarrow{+4}$  K
- Y  $\xrightarrow{+4}$  C
- M  $\xrightarrow{+4}$  Q
- X  $\xrightarrow{+4}$  B
- R  $\xrightarrow{+4}$  V
- L  $\xrightarrow{+4}$  P

(A) :  $X (+4) = B$

(B) :  $W (+3) = Z$

(C) :  $R (+4) = V$

(D) :  $L (+4) = P$

=> Ans - (B)

**Question 25**

In a certain language "REKHA" is written as "NOPST", "RESHAM" is written as "NOHSTQ" and "SHYAM" is written as "HSLTQ". What will be "SHAME" written as ?

- A SHQTO
- B HSTQO
- C HSTOQ

D SHQOT

Answer: B

**Explanation:**

The codes for each letter is given :

- S -> H
- H -> S
- A -> T
- M -> Q
- E -> O

Thus, SHAME : **HSTQO**

=> Ans - (B)

## SSC CHSL Free Mock Test (Latest Pattern)

### Question 26

In the following question, a word is represented by only one set of numbers as given in any one of the alternatives. The set of numbers given in the alternatives are represented by two classes of alphabet as in two matrices given below. The columns and rows of Matrix I are numbered 0 to and that of Matrix II are numbered 5 to 9. A letter from these matrices can be represented first by its row and then by its column, for example, C can be represented by 55, 69 etc. and D can be represented by 59, 68 etc. Similarly, you have to identify the set for the word given in the question. **ROUND**

Matrix - I

	0	1	2	3	4
0	B	N	R	T	H
1	N	R	T	H	B
2	R	T	H	B	N
3	T	H	B	N	R
4	H	B	N	R	T

Matrix - II

	5	6	7	8	9
5	C	L	O	U	D
6	L	O	U	C	D
7	O	U	D	C	L
8	U	D	C	L	O
9	D	C	L	O	U

A 02, 57, 67, 23, 95

B 34, 66, 58, 33, 95

C 20, 56, 99, 33, 77

D 11, 75, 59, 42, 86

Answer: B

**Explanation:**

(A) : 02, 57, 67, 23, 95 : ROUBD

(B) : 34, 66, 58, 33, 95 : **ROUND**

(C) : 20, 56, 99, 33, 77 : RLUND

(D) : 11, 75, 59, 42, 86 : RODND

=> Ans - (B)

**Question 27**

Two statements are given, followed by two conclusions, 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 follow from the given statements.

**Statements:**

- No pencil is eraser
- All erasers are sharpeners

**Conclusions:**

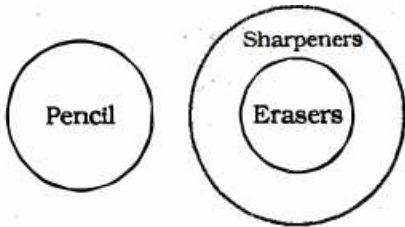
- I. All sharpeners are pencils
- II. All sharpeners are erasers

- A Only conclusions I follows
- B Only conclusion II follows
- C Either conclusion I or conclusion II follows
- D Neither conclusion I nor conclusion II follows

**Answer: D**

**Explanation:**

The venn diagram for above statements is :



Conclusions :

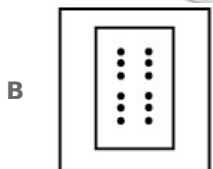
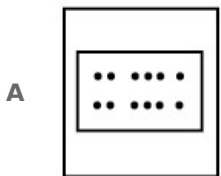
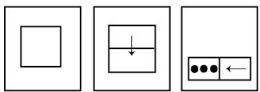
- I : All sharpeners are pencils = false
- II : All sharpeners are erasers = false

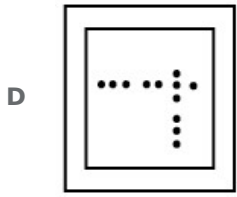
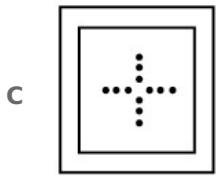
Thus, neither conclusion I nor conclusion II follows.

=> Ans - (D)

**Question 28**

A square sheet of paper is folded and punched as shown in the question figures. You have to figure out from amongst the four answer figures how it will appear when unfolded.



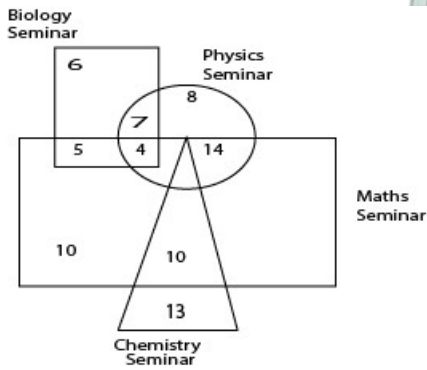


Answer: A

## General Science Notes (Download PDF)

### Question 29

The Venn diagram below who attended seminars on Physics, Chemistry, Maths and Biology. What is the number of people who attended exactly two seminars?

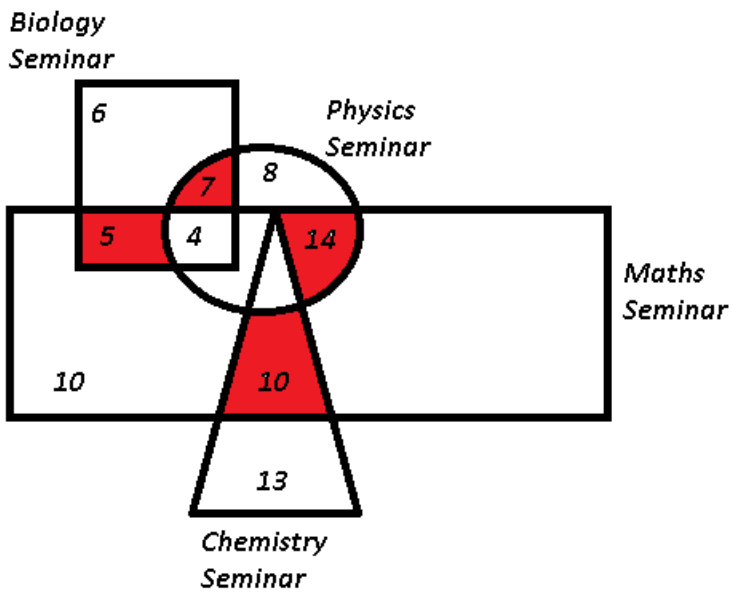


- A 21
- B 36
- C 38
- D 42

Answer: B

Explanation:





Number of people who attended exactly any two seminars =  $7 + 5 + 14 + 10 = 36$

=> Ans - (B)

**Question 30**

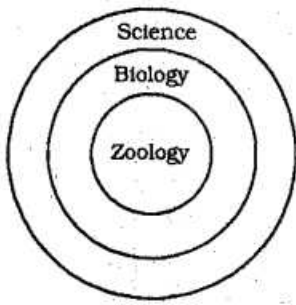
Which of the following represents the relationship between Science, Biology and Zoology ?

- A
- B
- C
- D

**Answer:** A

**Explanation:**

Zoology is a part of Biology and, in turn, Biology is a branch of Science. Hence the venn diagram that best describes above relationship is :



=> Ans - (A)

### Question 31

In the following question, a series is given with one or more number (s) missing. Choose the correct alternative from the given options.

0.2, 0.16, 0.072, 0.0256, ?

- A 0.0016
- B 0.004
- C 0.00512
- D 0.008

Answer: D

## SSC GD Constable Previous Papers

### Question 32

Select the related word from the given alternatives.

Colour : Red :: Language : ?

- A Grammar
- B English
- C Lingual
- D History

Answer: B

### Explanation:

The second term is a type of the first. Red is a colour. Similarly, **English** is a language.

=> Ans - (B)

### Question 33

From the given alternative words, select the word which cannot be formed using the letters of the given word.

**GRANDMOTHER**

- A TREND
- B THERMAL
- C MODERN
- D RANDOM

Answer: B

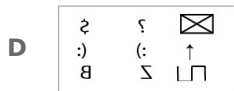
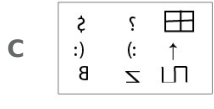
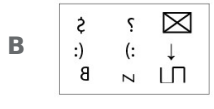
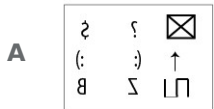
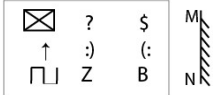
**Explanation:**

The word GRANDMOTHER does not contain any 'L', thus the term **Thermal** cannot be formed.

=> Ans - (B)

**Question 34**

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



Answer: D

**Explanation:**

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

So the square with 'X' sign at top left will now appear at top right, thus the third option will be eliminated. Also, the arrow underneath it will still face upwards, and thus the second option is also eliminated.

Also, in the question figure, in the middle row, at rightmost side, '(' will be changed to ')', hence fourth option is the right image.

=> Ans - (D)

## SSC MTS Previous Papers (DOWNLOAD PDF)

**Question 35**

Two statements are given followed by two conclusions. 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.

**Statements:**

Some monkeys are dogs.

All dogs are cats.

**Conclusions:**

I. Some monkeys are cats

II. No dog is cat

**A** Only conclusion I follows

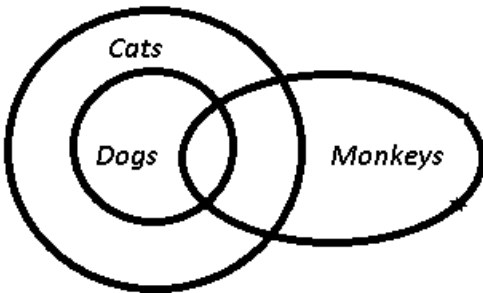
**B** Only conclusion II follows

- C Either conclusion I nor conclusion II follows
- D Neither conclusion I nor conclusion II follows

**Answer: A**

**Explanation:**

The venn diagram for above statements is :



Conclusions:

- I. Some monkeys are cats = true
- II. No dog is cat = false

Thus, only conclusion I follows.

=> Ans - (A)

**Question 36**

In a certain code language **ABSOLUTE** is written as **ESBLOTUA**. How will **CALENDAR** to written in that code language ?

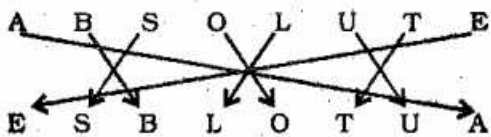
- A RLAENADC
- B RLANEADC
- C RALNEADC
- D RANLAEDC

**Answer: B**

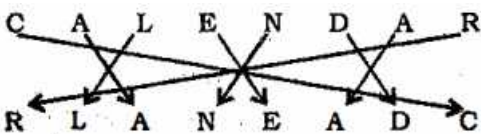
**Explanation:**

ABSOLUTE is written as ESBLOTUA

The pattern followed is :



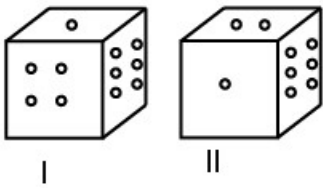
Similarly, CALENDAR : RLANEADC



=> Ans - (B)

**Question 37**

In the diagrams below, faces of dice are shown from two different directions. Which number will be opposite to 4 ?



- A 2
- B 3
- C 1
- D 5

**Answer:** A

**Explanation:**

It is clear from the two views of the same dice that from first figure to second figure, the dice has been rotated downward. Therefore, the number 2 lies opposite the number 4.

=> Ans - (A)

## SSC Stenographer Previous Papers (DOWNLOAD PDF)

**Question 38**

Select the related word from the given alternatives.

**Baking : Bread :: ? : Curd**

- A Brewing
- B Coagulation
- C Fermentation
- D Boiling

**Answer:** C

**Explanation:**

Bread is prepared by baking the dough. Similarly, curd is manufactured by the **fermentation** of milk.

=> Ans - (C)

**Question 39**

**Mr. A travelled from a point 'X' straight towards east at a distance 80 m. He turned to his right and walked 40 m. He again turned to his right and again walked 80 m. He then turned his left and walked 20 m and took left and again walked 80m. Now he turned towards his left and walked 60 m and stopped. How far and in which direction is he from the starting point 'X' ?**

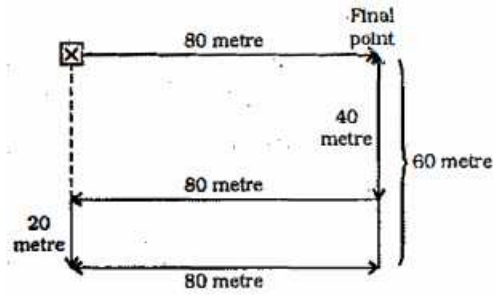
- A 80 m towards North
- B 60 m towards East
- C 80 m towards West

D 80 m towards East

**Answer:** D

**Explanation:**

Mr. A started from point X and travelled 80 m towards east, his entire movement is shown by :



Thus, his final position is **80 m towards East** from his starting point.

=> Ans - (D)

**Question 40**

In the following question, a series is given with one or more number (s) missing. Choose the correct alternative from the given options.

7, 51, 8, 65, 9, ?

A 79

B 80

C 81

D 82

**Answer:** C

**Explanation:**

The pattern followed is :

$$(7)^2 + 2 = 51$$

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

$$(9)^2 + 0 = 81$$

=> Ans - (C)

## SSC Stenographer Previous Papers (Latest Pattern)

**Question 41**

From the given alternatives words, select the word which cannot be formed using the letters of the given word:

**ADMINISTRATORS**

A STARDOM

B TRAITOR

C DORMANT

D MINISTER

**Answer:** D

**Explanation:**

The word ADMINISTRATORS does not contain any 'E', thus the term **Minister** cannot be formed.

=> Ans - (D)

**Question 42**

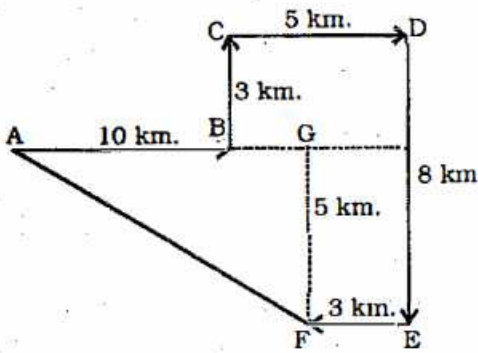
Rahul travels 10 km towards East, then he takes left turn and travels 3 km. He then takes right turn and travels 5 km, he again takes right turn and travels 8 km and finally takes right turn one more time and travels 3 km. How far is he from his starting point and in which direction ?

- A 12 km towards South-East
- B 13 km towards North-West
- C 12 km towards North-West
- D 13 km towards South-East

**Answer:** D

**Explanation:**

Let Rahul start from point A and travels 10 km towards East to reach point B, then he takes left turn and travels 3 km towards north point C. He then takes right turn and travels 5 km and reaches D, he again takes right turn and travels 8 km south to reach point E and finally takes right turn one more time and travels 3 km to stop at point F.



Thus, distance  $(AF)^2 = (AG)^2 + (FG)^2$

$$\Rightarrow (AF)^2 = (12)^2 + (5)^2$$

$$\Rightarrow (AF)^2 = 144 + 25 = 169$$

$$\Rightarrow AF = \sqrt{169} = 13$$

∴ Rahul is **13 km towards South-East** from his starting position.

=> Ans - (D)

**Question 43**

If + means x, - means +, x means ÷, ÷ means -, then what is the value of  $50 + 10 - 50 \times 10 \div 125$  ?

- A 380
- B 56
- C 180
- D -125

**Answer:** A

**Explanation:**

Expression :  $50 + 10 - 50 \times 10 \div 125$  ?

$$\equiv 50 \times 10 + 50 \div 10 - 125$$

$$= (50 \times 10) + \left(\frac{50}{10}\right) - 125$$

$$= 500 + 5 - 125 = 380$$

=> Ans - (A)

## SSC GD Constable Free Mock Test (Latest Pattern)

### Question 44

If  $34 = 39304$ ,  $27 = 19683$ , then  $13 = ?$

A 2197

B 10648

C 56743

D 17576

**Answer:** A

#### Explanation:

The number on the right is the cube of first number.

$$(34)^3 = 39304$$

$$(27)^3 = 19683$$

$$(13)^3 = 2197$$

=> Ans - (A)

### Question 45

Select the odd word from the given alternatives ?

A Cardiology

B Psychology

C Neurology

D Nephrology

**Answer:** B

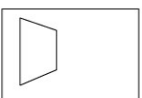
#### Explanation:

Except Psychology, all others are related to medical science. Psychology is related with study of mind.

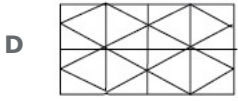
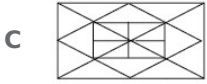
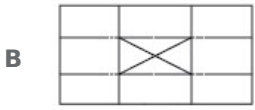
=> Ans - (B)

### Question 46

Find out the correct alternatives figure which contains the given question figure.



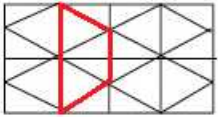




**Answer:** D

**Explanation:**

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



=> Ans - (D)

## SSC MTS Free Mock Test (Latest Pattern)

**Question 47**

Select the related letters from the given alternatives.

**YAC: CEG :: NOQ: ?**

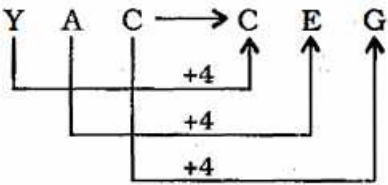
- A** RSU
- B** RUS
- C** STV
- D** SVT

**Answer:** A

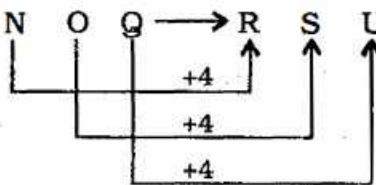
**Explanation:**

Expression = YAC: CEG :: NOQ: ?

The pattern followed is :



Similarly, for NOQ : **RSU**



=> Ans - (A)

**Question 48**

In the following question, a series is given in which one or more alphabet is missing. Choose the correct alternatives from the given options.

ADC, EHC, ILK, ?

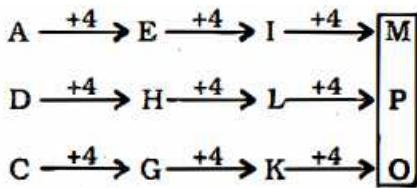
- A MNO
- B MPO
- C MON
- D MPQ

**Answer:** B

**Explanation:**

Expression : ADC, EHC, ILK, ?

The pattern followed in each letter of the terms is :



Thus, missing term = MPO

=> Ans - (B)

**Question 49**

Select the odd number from the given alternatives.

- A 95
- B 145
- C 114
- D 152

**Answer:** B

**Explanation:**

Except 145, all other numbers are multiples of 19.

$19 \times 5 = 95$ ,  $19 \times 6 = 114$  and  $19 \times 8 = 152$

=> Ans - (B)

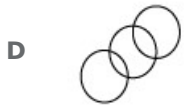
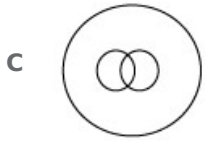
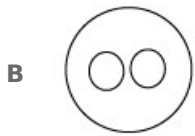
**SSC CGL Tier-2 Previous Papers PDF**

**Question 50**

Which of the following Venn diagrams represents the given information ?

Sea, Fish, Boat

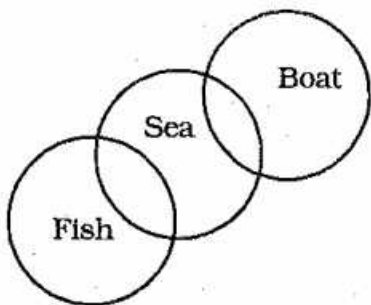




**Answer: D**

**Explanation:**

Fish is different from boat, but both can be found in sea. Hence, the venn diagram that best describes above relationship is :



=> Ans - (D)

## SSC Exam Free Videos (Youtube)

### English

**Instructions**

In the following question, a part of the sentence is printed in bold. Below are given alternatives to the bold part which may improve the sentence. Choose the correct alternative. In case no improvement is required. Choose "No Improvement" option.

**Question 51**

**It is normal part of growth and development for a young child to be wary with strangers.**

- A** of
- B** from
- C** at
- D** No improvement

**Answer: A**

## SSC Study Material

**Instructions**

Choose the word opposite in meaning to the given word.

**Question 52**

**Pliable**

- A rigid
- B friendly
- C flexible
- D applicable

**Answer:** A

**Instructions**

In the following question, a part of the sentence is printed in bold. Below are given alternatives to the bold part which may improve the sentence. Choose the correct alternative. In case no improvement is required, choose "No Improvement" option.

**Question 53**

**She told me she has a headache.**

- A had
- B is having
- C will have
- D No improvement

**Answer:** A

**Instructions**

In the following question, some part of the sentence has errors and some are correct. Find out of which part of the sentence has an error and choose corresponding to the appropriate option. If sentence is free from error choose corresponding to "No Error".

**Question 54**

**The scissors, which (1)/ are on the table, (2)/ belongs to Radha (3)/ No error (4).**

- A The scissors, which
- B are on the table,
- C belongs to Radha
- D No error

**Answer:** C

**SSC Daily Practice Set**

**Instructions**

For the following questions answer them individually

**Question 55**

**A sentence is given with blanks to be filled in with appropriate words. Four alternatives are suggested. Choose the correct alternative out of the four. Mr. Naimi, the chief secretary, was unceremoniously \_\_\_ after party's \_\_\_ defeat in general elections.**

- A exiled, predictable
- B ousted, disastrous
- C recommended, unexpected
- D honoured, stupendous

**Answer: B**

#### Question 56

Four alternatives are given for the Idiom/Phrase printed in bold. Choose the alternatives which best expresses the meaning of Idiom/Phrase.

**To beat the rap**

- A to destroy stereotypes
- B to be more successful than others
- C to be acquitted of a crime
- D to involve someone in a crime

**Answer: C**

#### Question 57

In the following question, some part of the sentence has errors and some are correct. Find out of which part of a sentence has an error and choose corresponding to the appropriate option. If the sentence is free from error choose corresponding to 'No Error'.

**My brother, along with his friends, have gone to watch a movie at the nearest cinema hall.**

- A at the nearest cinema hall
- B My brother, along with his friends
- C have gone to watch a movie
- D No Error

**Answer: C**

## SSC GK Free Tests

#### Question 58

In the following question, a part of the sentence is printed in bold. Below are given alternatives to the bold part which may improve the sentence. Choose the correct alternative. In case no improvement is required, choose "No Improvement" option.

**Finished my homework, I went out to play.**

- A The work was finished
- B Homework completed
- C Having completed my homework
- D No improvement

**Answer: C**

**Question 59**

Four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.

- A heirachy
- B hierarchy
- C heirarchy
- D hairarrchy

**Answer: B**

**Question 60**

Four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.

- A liaison
- B liason
- C laison
- D liaizon

**Answer: A**

## Current Affairs Question and Answers (Download PDF)

**Question 61**

Out of the four alternatives, choose the one which beest expresses the meaning of the given word.  
**Altruistic**

- A hostile
- B outdated
- C selfish
- D philanthropic

**Answer: D**

**Question 62**

A sentence is given with blanks to be filled in with appropriate words. Four alternatives are suggested. Choose the correct alternative out of the four.

The king plans to move the kingdom away from \_\_\_ domestic energy consumption, a change that will allow the Saudis to \_\_\_ oil exports in the years to come.

- A extravagant. Decrease
- B wasteful. Increase
- C unnecessary. Minimize
- D substantial. moderate

**Answer: B**

**Question 63**

A sentence is given with blanks to be filled in with appropriate words. Four alternative out of the four. I \_\_\_ his contribution to my book \_\_\_ it was substantial.

- A admitted; although
- B confessed to; but
- C debunked; and
- D acknowledged; because

**Answer:** D

## Daily and Monthly Current Affairs (Download PDF)

**Question 64**

Out of the four alternatives, choose the one which best expresses the meaning of the given word. Arcane

- A ancient
- B new
- C simple
- D mysterious

**Answer:** D

**Question 65**

Out of the four alternatives, choose the one which can be substituted for the given words/sentence. To send someone back to his or her own country

- A Extirpate
- B Repatriate
- C Expropriate
- D Exile

**Answer:** B

**Question 66**

Out of the four alternatives, choose the one which can be substituted for the given words/sentence. A person of great learning in several languages.

- A Polycarp
- B Polyglot
- C Polychrome
- D Polymath

**Answer:** B

## 285 SSC Mocks - Just RS. 249

### Question 67

Four alternatives are given for the Idiom/Phrase printed in bold. Choose the Alternative which best expresses the meaning of Idiom/Phrase.

The team captain was at sixes and sevens regarding his winning strategy.

- A careless
- B confident
- C confused
- D courageous

Answer: C

### Question 68

Four alternatives are given for the Idiom/Phrase printed in bold. Choose the alternative which best expresses the meaning of Idiom/Phrase.

Many of us have seen the dog who is full of beans outside the ring but, after stepping across the threshold of the ring, walks as if his feet are made of lead.

- A successful
- B popular
- C lacks energy
- D energetic

Answer: D

### Question 69

Four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.

- A rhapsodic
- B rapsodic
- C rapcodic
- D rapsodich

Answer: A

## SSC GK Questions

### Question 70

Out of the four alternatives, choose the one which best expresses the meaning of the given word.

**Contrite**

- A concise
- B regretful
- C compassionate



D unapologetic

**Answer: B**

**Question 71**

A sentence is given with blanks to be filled in with appropriate words. Four alternatives are suggested. Choose the correct alternative out of the four.

He is \_\_\_\_\_ rich, yet he \_\_\_\_\_ about high taxes.

A obscenely; whines

B very; is careless

C newly; is calm

D not; worries

**Answer: A**

**Question 72**

Out of the four alternatives choose the one which best expresses the meaning of the given word. **Bashful**

A shy

B extrovert

C courageous

D broad-minded

**Answer: A**

**SSC Free Preparation App**

**Instructions**

Out of the four alternatives, choose the one which can be substituted for the given words/sentences.

**Question 73**

**One who hates people.**

A Misandrist

B Misologist

C Misanthrope

D Misogynist

**Answer: C**

**Question 74**

**A person with strong desire to steal.**

A Nelomania

B Kleptomania

- C Kosmomania
- D Melanomania

**Answer:** B

**Question 75**

Four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.

- A challange
- B chalenge
- C challenge
- D chalange

**Answer:** C

## Free SSC Study Material (18,000 Solved Questions)

**Instructions**

In the following questions, some parts of the sentences have errors and part of a sentence has an error and choose corresponding to the appropriate option. If a sentence is free from error choose corresponding to 'No Error' option.

**Question 76**

The teachers, who I worked with, were very insensitive towards children's needs.

- A The teachers, who I worked with
- B were very insensitive
- C towards children's needs
- D No Error

**Answer:** A

**Question 77**

Bradbury, one of the most versatile writer ever lived, was a school dropout.

- A Bradbury, one of the most
- B versatile writer ever lived,
- C was a school dropout.
- D No Error

**Answer:** B

**Instructions**

For the following questions answer them individually

**Question 78**

Choose the word opposite in meaning to the given word.

**Alacrity**

- A liveliness
- B indifference
- C promptness
- D doubt

**Answer: B**

## SSC CPO Free Mock Test (Latest Pattern)

### Question 79

Out of the four alternatives, choose the one which can be substituted for the given words.  
To renounce one's throne

- A Abdicate
- B Arrogate
- C Abstain
- D Abrogate

**Answer: A**

### Question 80

Out of the four alternatives, choose the one which best expresses the meaning of the given word.  
Belligerent

- A peaceful
- B noisy
- C hostile
- D cautious

**Answer: C**

### Question 81

In the following questions, a part of the sentence is printed in bold. Below are given alternatives to the bold part which may improve the sentence. Choose the correct alternative. In case no improvement is required, choose "No Improvement" option.

We waited in six option.

- A within
- B for
- C during
- D No improvement

**Answer: B**

**Question 82**

In the following questions, some part of the sentence has errors and some are correct. Find out of which part of the sentence has an error and choose corresponding to the appropriate option. If a sentence is free from error choose corresponding to 'No Error' option.

Each of the girls in my class sing well.

- A Each of the girls
- B sing well
- C in my class
- D No Error

**Answer:** B

**Question 83**

In the following questions, a part of the sentence is printed in bold. Below are given alternatives to the bold part which may improve the sentence. Choose the correct alternative. In case no improvement is required, choose "No Improvement" option.

- A go
- B had gone
- C gone
- D No improvement

**Answer:** D

**Question 84**

A sentence is given with blanks to be filled in with an appropriate word. Four alternatives are suggested. Choose the correct alternative out of the four.

A BBC reporter was \_\_\_ for what North Korea deemed a disrespectful portrayal of the country and its leader.

- A welcomed
- B recognized
- C celebrated
- D expelled

**Answer:** D

## 1500 + Free Must Solved SSC Questions (With Solutions)

**Question 85**

Four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.

- A rambunktious
- B rumbanctious
- C rambuncsious

**D** rambunctious

**Answer:** D

**Instructions**

Four alternatives are given for the Idiom/Phrase printed in bold. Choose the alternative which best expresses the meaning of Idiom/Phrase.

**Question 86**

**The only good news in this tale is that Hinson, who could be an all hat and no cattle poster boy, ultimately lost his job.**

**A** one who puts others in trouble

**B** one who is hardworking

**C** one who doesn't want to spend his own money

**D** one who is full of big talk but lacks substance and action

**Answer:** D

**Question 87**

**At twenty, he was already going as bald as a cue ball.**

**A** partially bald

**B** not bald

**C** completely bald

**D** crazy

**Answer:** C

## SSC CGL Free Mock Test (Latest Pattern)

**Instructions**

For the following questions answer them individually

**Question 88**

**Choose the word opposite in meaning to the given word.**

**Impeccable**

**A** perfect

**B** rude

**C** inexact

**D** predict

**Answer:** C

**Instructions**

In the following passage some of the words have been left out. Read the passage carefully and choose the correct answer to each question out of the four alternatives and fill in the blanks.

The Dalmatian of the sole surviving (semi-) speaker, Tuone Udaina, was surveyed in the late 1870s and again towards the end of his life in the late 1890s. These fairly extensive records curiously suggest that a systematic 189 change

took place in those two decades such that by the 1980s the distinction between present and imperfect indicative had largely been neutralized (a development unique among Romance languages) in favour of the imperfect tense forms. I argue that the data are authentic and that the change, whether it occurred just in Udina's head or was already underway in the last years of Dalmatian as a spoken language, is purely 'internal' and not 190 by contact with other languages. I explore its internal mechanisms and show that what is involved is a kind of analogical form-meaning levelling whose signatum is an 'empty' element of 191 structure. Reinforcement of this essentially 'nonsensical' 192 of paradigmatic structure constitutes further evidence for my general view that intrapadigmatic coherence may be no less important than extra morphological transparency. It also suggests that such a development can as easily 193 in a dying language as anywhere else.

**Question 89**

- A morphological
- B misleading
- C nonsensical
- D common

**Answer: A**

**Question 90**

- A deters
- B motivated
- C encourages
- D restores

**Answer: B**

**SSC CGL Previous Papers (DOWNLOAD PDF)**

**Question 91**

- A vulnerable
- B paradigmatic
- C indifferent
- D unsuitable

**Answer: B**

**Question 92**

- A hazard
- B aberration
- C fluke
- D oddity

**Answer: D**

**Question 93**

- A occur
- B defy
- C ensured
- D occurrence

**Answer:** A

## Daily Free SSC Practice Set

### Instructions

In the following questions, you have two passages with 5 questions in each passage. Read the passages carefully and choose the best answer top each question out of the four alternatives.

A dolphin is an aquatic mammal. Dolphins are extremely intelligent and sociable animals and have their own way to communicate with each other using special sounds.

Although they are often mistaken for fis, dolphins are actually mammals. They are members of the Cataca (pronounced se-ayshia) family, which also contains whales and porpoises.

One way of telling the difference between a cetacean and a fish is by looking at their tails. You can tell a cetacean because their tail fins (called flukes) are horizontal and move up and down. Fish have vertical tails which move from side to side.

A dolphin's body is designed to help them move quickly and easily through water. On its back is a curved dorsal fin and on each side of the dolphin is a pectoral fin. The bump on a dolphins head is known as the melon. They trap their prey by using their teeth.

Dolphins use a type of sonar to detect where objects are around them. This is called echolocation. Echolocation works when a dolphin bounces a high pitched sound off an object and then listens for the echo to come back. It is a very useful way for dolphins to find food and navigate.

Dolphins communicate with each other through clicks, squeaks and whistles. They use these special sounds to greet each other and to indicate if they are in distress.

Dolphins live in the sea, but they can't breathe under water. They breathe through a blowhole and have to come up for air every 15 minutes.

### Question 94

**Cetacea does not include:**

- A whales
- B sharks
- C dolphins
- D purposes

**Answer:** B

### Question 95

**To breathe dolphins use:**

- A fins
- B echolocation
- C flippers
- D blowhole

**Answer:** D

**Question 96**

**Dolphins use their teeth;**

- A** to eat their pray
- B** to trap their prey
- C** to scare their prey
- D** for aesthetic purposes

**Answer:** B

**SSC CHSL Prevoius Papers (DOWNLOAD PDF)**

**Question 97**

**Which of these help dolphins to navigate through the water ?**

- A** echolocation
- B** blowhole
- C** fluke
- D** smooth skin

**Answer:** C

**Question 98**

**Dolphins use echolocation to**

- A** breathe
- B** navigate
- C** communicate
- D** hunt

**Answer:** C

**Question 99**

**Four words are given, out of which only one word is correctly spelt. Find the correctly spelt word.**

- A** Lucious
- B** Luscious
- C** Lucsious
- D** Luscioucs

**Answer:** B

**SSC CHSL Free Mock Test (Latest Pattern)**



### Question 100

Out of the four alternatives, choose the one which best expresses the meaning of the given word.

- A Different
- B Identical
- C Parallel
- D Unfit

Answer: B

## General Science Notes (Download PDF)

### Quant

#### Instructions

For the following questions answer them individually

#### Question 101

Find the value of  $8 \cos 10^\circ \cos 20^\circ \cos 40^\circ$

- A  $\tan 80^\circ$
- B  $\tan 10^\circ$
- C  $\tan 80^\circ$  or  $\cot 10^\circ$
- D None of these

Answer: C

#### Explanation:

Expression :  $8 \cos 10^\circ \cos 20^\circ \cos 40^\circ$

Multiply  $\sin(10^\circ)$  in numerator and denominator.

$$= (2 \sin 10^\circ \cos 10^\circ) \times (4 \cos 20^\circ \cos 40^\circ) \times \frac{1}{\sin 10^\circ}$$

Similarly,

$$= (2 \sin 10^\circ \cos 10^\circ) \times (2 \sin 20^\circ \cos 20^\circ) \times (2 \sin 40^\circ \cos 40^\circ) \times \frac{1}{\sin 10^\circ \sin 20^\circ \sin 40^\circ}$$

Using,  $2 \sin A \cos A = \sin 2A$

$$= (\sin 20^\circ) \times (\sin 40^\circ) \times (\sin 80^\circ) \times \frac{1}{\sin 10^\circ \sin 20^\circ \sin 40^\circ}$$

$$= \frac{\sin(80^\circ)}{\sin(10^\circ)}$$

Also,  $\sin(90^\circ - \theta) = \cos \theta$

$$= \frac{\sin(90^\circ - 10^\circ)}{\sin(10^\circ)} = \frac{\cos 10^\circ}{\sin 10^\circ}$$

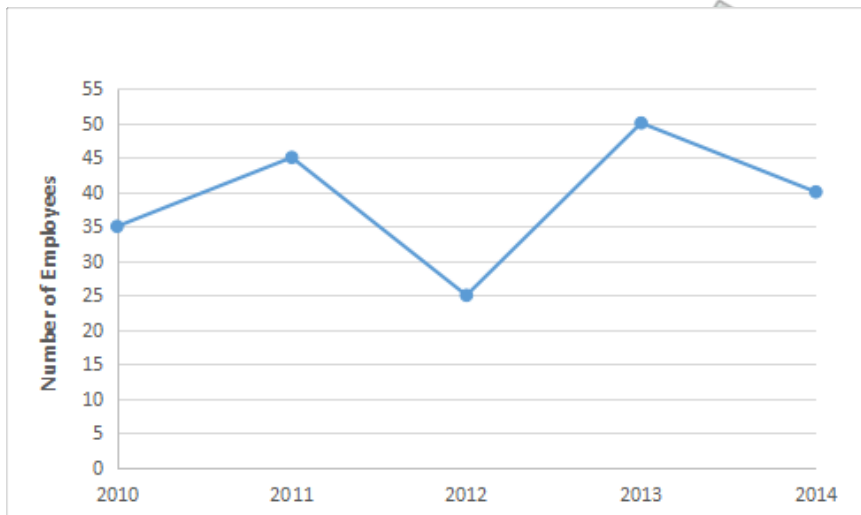
$$= \cot 10^\circ = \tan 80^\circ$$

=> Ans - (C)

## SSC GD Constable Previous Papers

#### Instructions

Study the following line chart carefully and answer the questions given below it. The following line chart represents the number of employees recruited in different years in a company.



**Question 102**

What was the ratio of number of employees recruited in the year 2010 to the number of employees recruited in the year 2013?

- A 2 : 3
- B 9 : 10
- C 10 : 9
- D 5 : 9

**Answer:** B

**Question 103**

The number of employees recruited in the year 2012 was what percent of the number employees recruited in the year 2014?

- A 50%
- B 60%
- C 62.55%
- D 70%

**Answer:** C

**Question 104**

If the total number of employees before the year 2010 was 640, then the total number of employees after 2014 was:

- A 820
- B 835
- C 815
- D 845

**Answer:** B

## SSC MTS Previous Papers (DOWNLOAD PDF)

### Question 105

If the number of employees before 2010 was 640, what was percentage increased in 2010 ?

- A 5%
- B 5.5%
- C 4%
- D 4.5%

Answer: B

### Question 106

The number of employees recruited in 2015 was 40% more than that recruited in 2014. How many employees were recruited in 2015 ?

- A 56
- B 16
- C 64
- D 60

Answer: A

### Instructions

For the following questions answer them individually

### Question 107

In a cricket match there are three types of tickets say A, B and C each costing Rs. 1000, Rs. 500 and Rs. 200 respectively. The ratio of the tickets sold of categories A, B and C is 3:2:5. If the total collection from selling the tickets is Rs. 2.5 crore, find the total number of tickets sold ?

- A 5000
- B 4800
- C 50000
- D 52000

Answer: C

### Explanation:

Let tickets sold of category  $A = 3x$ ,  $B = 2x$  and  $C = 5x$

Total cost of tickets =  $(3x \times 1000) + (2x \times 500) + (5x \times 200)$

$$\Rightarrow 3000x + 1000x + 1000x = 2,50,00,000$$

$$\Rightarrow x = \frac{2,50,00,000}{5000} = 5,000$$

$$\therefore \text{Total tickets sold} = 3x + 2x + 5x = 10x$$

$$= 10 \times 5000 = 50,000$$

$\Rightarrow$  Ans - (C)

## SSC Stenographer Previous Papers (DOWNLOAD PDF)

### Question 108

A prism with a right triangular base is 25 cm high. If the shorter sides of the triangle are in the ratio of 1 : 2 and the volume of the prism is  $100\text{cm}^3$ , what is the length of the longest side of the triangle?

- A  $\sqrt{5}$  cm
- B  $2\sqrt{5}$  cm
- C  $5\sqrt{2}$  cm
- D 5 cm

**Answer:** B

### Question 109

Arun buys one kilogram of apples for Rs. 120 and sells it to Swati gaining 25%. Swati sells it to Divya who again sells it for Rs. 198, making a profit of 10%. What is the profit percentage made by Swati ?

- A 25%
- B 20%
- C 16.67%
- D 15%

**Answer:** B

#### Explanation:

In 1st transaction,

Cost price for Arun = Rs. 120

Profit % = 25%

$$\begin{aligned} \Rightarrow \text{Selling price} &= 120 + \left(\frac{25}{100} \times 120\right) \\ &= 120 + 30 = \text{Rs. } 150 \end{aligned}$$

In 3rd transaction,

Selling price by Divya = Rs. 198

$\Rightarrow$  Profit % = 10%

$$\begin{aligned} \Rightarrow \text{Cost price for Divya} &= \frac{198}{(100+10)} \times 100 \\ &= \frac{198}{11} \times 10 = \text{Rs. } 180 \end{aligned}$$

Now, in 2nd transaction,

Cost price for Swati = Rs. 150

Selling price for Swati = Rs. 180

$$\begin{aligned} \Rightarrow \text{Profit \%} &= \frac{(180-150)}{150} \times 100 \\ &= \frac{30}{1.5} = 20\% \end{aligned}$$

$\Rightarrow$  Ans - (B)

**Question 110**

If  $a + \frac{1}{b} = 1$  and  $b + \frac{1}{c} = 1$  then  $c + \frac{1}{a}$  is equal to

- A 1
- B 0
- C -1
- D 2

**Answer:** A

**Explanation:**

Given :  $a + \frac{1}{b} = 1$

$$\Rightarrow \frac{1}{b} = 1 - a$$

$$\Rightarrow b = \frac{1}{1-a} \text{ -----(i)}$$

Also,  $b + \frac{1}{c} = 1$

Substituting value from equation (i) in above equation,

$$\Rightarrow \frac{1}{1-a} = 1 - \frac{1}{c}$$

$$\Rightarrow \frac{1}{1-a} = \frac{c-1}{c}$$

$$\Rightarrow c = c - 1 - ac + a$$

$$\Rightarrow ac + 1 = a$$

$$\Rightarrow \frac{ac}{a} + \frac{1}{a} = 1$$

$$\Rightarrow c + \frac{1}{a} = 1$$

$\Rightarrow$  Ans - (A)

## SSC Stenographer Previous Papers (Latest Pattern)

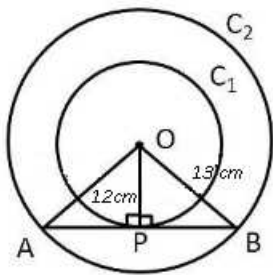
**Question 111**

Two concentric circles are drawn with radii 12 cm and 13 cm. What will be the length of any chord of the larger circle that is tangent to the smaller circle ?

- A 5 cm
- B 8 cm
- C 10 cm
- D 25 cm

**Answer:** C

**Explanation:**



Given :  $C_1$  and  $C_2$  be the two concentric circles having radius  $r_1 = 13$  cm and  $r_2 = 12$  cm respectively.

To find :  $AB = ?$

Solution :  $AB$  is the the tangent to the circle  $C_1$ , hence  $\angle OPB = 90^\circ$

Also, the perpendicular from the centre of a circle to a chord bisects the chord.

Thus, in  $\triangle OPB$ ,

$$\Rightarrow (PB)^2 = (OB)^2 - (OP)^2$$

$$\Rightarrow (PB)^2 = (13)^2 - (12)^2$$

$$\Rightarrow (PB)^2 = 169 - 144 = 25$$

$$\Rightarrow PB = \sqrt{25} = 5 \text{ cm}$$

$$\therefore AB = 2 \times 5 = 10 \text{ cm}$$

$\Rightarrow$  Ans - (C)

### Question 112

If  $(2a - 3)^2 + (3b + 4)^2 + (6c + 1)^2 = 0$ , then value of  $\frac{a^3 + b^3 + c^3 - 3abc}{a^2 + b^2 + c^2} + 3$  is:

A  $abc + 3$

B 6

C 0

D 3

Answer: C

### Explanation:

$$\text{Given : } (2a - 3)^2 + (3b + 4)^2 + (6c + 1)^2 = 0$$

Sum of three positive terms is zero, iff all the three terms are zero.

$$\Rightarrow 2a - 3 = 0$$

$$\Rightarrow a = \frac{3}{2}$$

$$\text{Similarly, } b = \frac{-4}{3} \text{ and } c = \frac{-1}{6}$$

$$\text{Now, } a + b + c = \frac{3}{2} - \frac{4}{3} - \frac{1}{6} = 0 \text{ -----(i)}$$

$$\text{Also, } a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ac)$$

Substituting value from equation (i), we get :

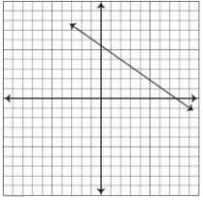
$$\Rightarrow a^3 + b^3 + c^3 - 3abc = 0 \text{ -----(ii)}$$

$$\therefore \frac{a^3 + b^3 + c^3 - 3abc}{a^2 + b^2 + c^2} = 0$$

$\Rightarrow$  Ans - (C)

**Question 113**

The slope of the given line is:



- A Positive
- B Negative
- C Undefined
- D Zero

**Answer:** B

## SSC GD Constable Free Mock Test (Latest Pattern)

**Question 114**

Two pipes can independently fill a bucket in 20 minutes and 25 minutes. Both are turned on together for 5 minutes after which the second pipe is turned off. What is the time taken by the first pipe alone to fill the remaining portion of the bucket ?

- A 11 minutes
- B 16 minutes
- C 20 minutes
- D 15 minutes

**Answer:** A

**Explanation:**

Let capacity of bucket = L.C.M. (20,25) = 100 litres

First pipe can fill it in 20 minutes, => first pipe's efficiency =  $\frac{100}{20} = 5$  l/min

Similarly, second pipe's efficiency =  $\frac{100}{25} = 4$  l/min

=> Volume of bucket filled by both in five minutes =  $(5 + 4) \times 5 = 45$  litres

∴ Time taken by the first pipe alone to fill the remaining portion of the bucket =  $\frac{(100-45)}{5} = 11$  minutes

=> Ans - (A)

**Question 115**

Which of the following statements is not correct ?

- A For a given radius and height, a right circular cone has the lesser volume among a right circular cone and a right circular cylinder.
- B If side of a cube is increased by 10%, the volume will increase by 33.1%.
- C If the radius of a sphere is increased by 20%, the surface area will increase by 40%.

D Cutting a sphere into 2 parts does not change the total volume.

**Answer:** C

**Explanation:**

(A) : Volume of cylinder =  $\pi r^2 h$

Volume of cone =  $\frac{1}{3} \pi r^2 h$

=> Volume of cone is lesser (one-third) than the volume of cylinder. Above statement is correct.

(B) : Let side of cube =  $a = 10$  cm

=> Volume of cube =  $(10)^3 = 1000 \text{ cm}^3$

New side after 10% increase =  $10 + \left(\frac{10}{100} \times 10\right) = 11$  cm

Thus, new volume =  $(11)^3 = 1331 \text{ cm}^3$

∴ Increase in volume =  $\frac{(1331-1000)}{1000} \times 100 = 33.1\%$

Thus, above statement is correct.

(C) : Let radius of sphere =  $r = 10$  cm

Surface area of sphere =  $4\pi r^2 = 4\pi(10)^2 = 400\pi \text{ cm}^2$

After increasing the radius by 20%, new radius =  $r' = 10 + \left(\frac{20}{100} \times 10\right) = 12$  cm

=> New surface area =  $4\pi(12)^2 = 576\pi \text{ cm}^2$

∴ Increase in surface area =  $\frac{(576-400)}{400} \times 100 = 44\%$

Thus, above statement is **not correct**.

(D) : Cutting a sphere into 2 parts does not change the total volume because the sum of volume of the two hemispheres will be equal to the volume of sphere. Hence, it is also correct.

=> Ans - (C)

### Question 116

**A shopkeeper purchases two items for Rs. 520. One of them is sold gaining 16% and the other at a loss of 10%, thus making no profit or loss. What is the selling price of the item sold at loss ?**

A Rs. 288

B Rs. 232

C Rs. 320

D Rs. 200

**Answer:** A

**Explanation:**

Let cost price of first item = Rs.  $100x$  and of second item = Rs.  $(520 - 100x)$

Profit % on first item = 16%

=> Selling price =  $100x + \left(\frac{16}{100} \times 100x\right) = \text{Rs. } 116x$

Similarly, selling price of item sold at 10% loss =  $(520 - 100x) - \frac{10}{100} \times (520 - 100x)$

=  $(520 - 100x) - 52 + 10x = \text{Rs. } (468 - 90x)$  -----(i)



Since, there is no profit and no loss, hence total cost price = total selling price

$$\Rightarrow 116x + 468 - 90x = 520$$

$$\Rightarrow 26x = 520 - 468 = 52$$

$$\Rightarrow x = \frac{52}{26} = 2$$

$\therefore$  Selling price of the item sold at loss [from equation (i)] =  $468 - (90 \times 2)$

$$= 468 - 180 = \text{Rs. } 288$$

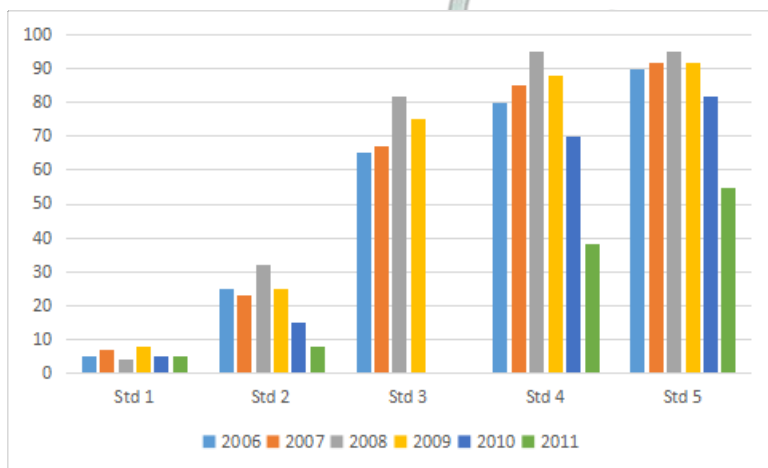
$\Rightarrow$  Ans - (A)

## SSC MTS Free Mock Test (Latest Pattern)

### Instructions

**Direction:** Study the following bar graph showing the percentage of children who can read at the first grade level, grouped by their grade level in an Indian state.

For example, in 2008, 82% of the children from Standard 3 could read a text from Standard 1. Now answer the following question based on this graph.



### Question 117

In the year 2010, what is the approximate value of average of all Std 1, 2, 3, 4, 5 children who could read the Std 1 text ?

- A 49.2%
- B 57%
- C 33%
- D Data Insufficient

**Answer:** D

### Instructions

For the following questions answer them individually

### Question 118

The diagonals of two squares are in the ratio of 3: 7. What is the ratio of their areas ?

- A 3 : 7
- B 9 : 49
- C 4 : 7

D 7 : 3

**Answer:** B

**Explanation:**

Ratio of square of diagonal to area of square = 2 : 1

Let diagonal of first square =  $d_1 = 3$  cm and  $d_2 = 7$  cm

Thus, ratio of areas =  $\frac{A_1}{A_2} = \left(\frac{d_1}{d_2}\right)^2$

$$= \frac{3^2}{7^2} = \frac{9}{49}$$

=> Ans - (B)

**Question 119**

**A store has an offer 'Buy 4 Get 1 Free'. What is the net percentage of discount ?**

A 25%

B 33.3%

C 20%

D Insufficient Data

**Answer:** C

**Explanation:**

The store is giving 1 item free on purchase of 4, i.e. we get 5 items and pay for 4.

$$\Rightarrow \text{Net discount \%} = \frac{1}{5} \times 100$$

$$= 20\%$$

=> Ans - (C)

## SSC CGL Tier-2 Previous Papers PDF

**Question 120**

**If  $a + b + c = 1$ ,  $ab + bc + ca = -1$  and  $abc = -1$ , then the value of  $a^3 + b^3 + c^3$  is:**

A 1

B -1

C 2

D -2

**Answer:** A

**Explanation:**

Given :  $(a + b + c) = 1$  -----(i) and  $(ab + bc + ca) = -1$  and  $abc = -1$  -----(ii)

Squaring equation (i), we get :

$$\Rightarrow (a + b + c)^2 = a^2 + b^2 + c^2 + 2(ab + bc + ca)$$

$$\Rightarrow (1)^2 = (a^2 + b^2 + c^2) + 2(-1)$$

$$\Rightarrow a^2 + b^2 + c^2 = 1 + 2 = 3 \text{ -----(iii)}$$

$$\text{Also, } a^3 + b^3 + c^3 = 3abc + (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ca)$$

$$= 3(-1) + (1) \times [3 - (-1)]$$

$$= -3 + 4 = 1$$

=> Ans - (A)

### Question 121

The average of the first 7 integers in a series of 13 consecutive odd integers is 37. What is the average of the entire series ?

A 37

B 39

C 41

D 43

**Answer:** D

### Explanation:

Average of first 7 consecutive odd integers in the series = 37

=> 4th integer is 37

Thus, series of integers = 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55

Average of 13 integers is the 7th integer = 43

=> Ans - (D)

### Question 122

A sum of Rs. 2800 is divided into two parts in such a way that the interest on both the parts is equal. If the first part is lent at 9% p.a for 5 years and second part is for 6 years at 10% p.a., find the two sums.

A Rs. 1800, Rs. 1000

B Rs. 1600, Rs. 1200

C Rs. 1400, Rs. 1400

D Rs. 1300, Rs. 1500

**Answer:** B

### Explanation:

Let the principal sum for first part = Rs.  $x$  and for second part = Rs.  $(2800 - x)$

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

First part is lent at 9% for 5 years and second part at 10% for 6 years

According to ques,

$$\Rightarrow \frac{x \times 9 \times 5}{100} = \frac{(2800 - x) \times 10 \times 6}{100}$$

$$\Rightarrow 45x = (2800 - x) \times 60$$

$$\Rightarrow 3x = (2800 - x) \times 4$$

$$\Rightarrow 3x = 11200 - 4x$$

$$\Rightarrow 3x + 4x = 7x = 11200$$

$$\Rightarrow x = \frac{11200}{7} = 1600$$

$$\text{Other sum} = 2800 - 1600 = 1200$$

∴ The two sums are = **Rs. 1600** and **Rs. 1200**

=> Ans - (B)

## SSC Exam Free Videos (Youtube)

### Question 123

On a certain sum of money, the simple interest for 2 years is Rs. 350 at the rate of 4% per annum. It was invested at compound interest at the same rate for the same duration as before, how much more interest would be earned ?

- A Rs. 3.50
- B Rs. 7
- C Rs. 14
- D Rs. 35

**Answer:** B

#### Explanation:

Rate of interest = 4% and time period = 2 years

Let principal sum = Rs.  $x$

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

$$\Rightarrow \frac{x \times 4 \times 2}{100} = 350$$

$$\Rightarrow x = \frac{35000}{8} = 4375$$

Now, interest earned under compound interest =  $P[(1 + \frac{R}{100})^T - 1]$

$$= 4375[(1 + \frac{4}{100})^2 - 1]$$

$$= 4375[(\frac{26}{25})^2 - 1]$$

$$= 4375 \times \frac{676 - 625}{625}$$

$$= 7 \times 51 = \text{Rs. } 357$$

∴ Difference in interest =  $357 - 350 = \text{Rs. } 7$

=> Ans - (B)

### Question 124

The average marks of a class of 35 children is 35. The marks of one of the students, who got 35, was incorrectly entered as 65. What is the correct average of the class ?

- A 33.76
- B 34.14
- C 35.24
- D 36.50

**Answer:** B

#### Explanation:

Average marks of 35 children = 35

$$\Rightarrow \text{Sum of marks of 35 children} = 35 \times 35 = 1225$$

After correcting the mistake new sum =  $1225 - 65 + 35 = 1195$

=> Correct average =  $\frac{1195}{35} = 34.14$

=> Ans - (B)

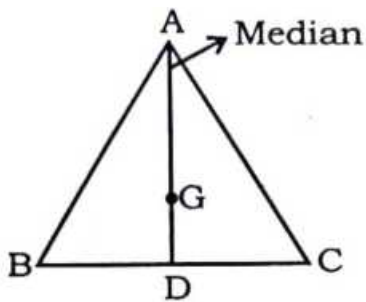
### Question 125

In  $\triangle ABC$ , D is the mid-point of BC and G is the centroid. If  $GD = 5$  cm, then the length of AD is:

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

Answer: C

Explanation:



Given : G is the centroid of  $\triangle ABC$  and  $GD = 5$  cm

To find :  $AD = ?$

Solution : A centroid divides a median in the ratio 2 : 1

=>  $AG : GD = 2 : 1$

=>  $AG = \frac{2}{1} \times 5 = 10$  cm

$\therefore AD = AG + GD$

$= 10 + 5 = 15$  cm

=> Ans - (C)

## SSC Study Material

### Question 126

What is the value of  $\frac{(\cot \theta + \operatorname{cosec} \theta - 1)}{(\cot \theta - \operatorname{cosec} \theta + 1)}$ ?

- A  $\cot \theta + \operatorname{cosec} \theta$
- B 1
- C -1
- D 0

Answer: A

Explanation:

Expression :  $\frac{(\cot \theta + \operatorname{cosec} \theta - 1)}{(\cot \theta - \operatorname{cosec} \theta + 1)}$

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

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

Rationalizing the denominator, we get :

$$= \frac{\cos\theta - (\sin\theta - 1)}{\cos\theta + (\sin\theta - 1)} \times \frac{\cos\theta - (\sin\theta - 1)}{\cos\theta - (\sin\theta - 1)}$$

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

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

$$= \frac{\cos^2\theta + \sin^2\theta + 1 - 2\sin\theta - 2\cos\theta\sin\theta + 2\cos\theta}{\cos^2\theta - \sin^2\theta - 1 + 2\sin\theta}$$

$$= \frac{2 - 2\sin\theta - 2\sin\theta\cos\theta + 2\cos\theta}{-\sin^2\theta - \sin^2\theta + 2\sin\theta}$$

$$= \frac{1 - \sin\theta - \sin\theta\cos\theta + \cos\theta}{-\sin^2\theta + \sin\theta}$$

$$= \frac{(1 - \sin\theta) + \cos\theta(1 - \sin\theta)}{\sin\theta(1 - \sin\theta)}$$

$$= \frac{1 + \cos\theta}{\sin\theta}$$

$$= \cot\theta + \operatorname{cosec}\theta$$

=> Ans - (A)

### Question 127

If  $\sqrt{5} = 2.236$ , then what is the value of  $\frac{\sqrt{5}}{2} + 3\sqrt[5]{5} - \sqrt{45}$ ?

A -8.571

B -4.845

C -2.987

D -6.261

Answer: B

### Explanation:

Given :  $\sqrt{5} = 2.236$

To find :  $\frac{\sqrt{5}}{2} + 3\sqrt[5]{5} - \sqrt{45}$

$$= \frac{\sqrt{5}}{2} + \frac{\sqrt{5}}{3} - 3\sqrt{5}$$

$$= \sqrt{5} \left( \frac{1}{2} + \frac{1}{3} - 3 \right)$$

$$= \sqrt{5} \left( \frac{3+2-18}{6} \right)$$

$$= 2.236 \times \frac{-13}{6} \approx -4.845$$

=> Ans - (B)

### Question 128

If  $\frac{a}{b} = \frac{1}{2}$ , find the value of the expression  $\frac{(2a-5b)}{(5a+3b)}$

A -32

B 11

C  $-\frac{8}{11}$

D 17

Answer: C

Explanation:

$$\text{Given : } \frac{a}{b} = \frac{1}{2}$$

Let  $a = 1$  and  $b = 2$

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

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

$$= \frac{2-10}{5+6} = \frac{-8}{11}$$

=> Ans - (C)

## SSC Daily Practice Set

### Question 129

A merchant marks an article 20% above cost price. He then sells it at a discount of 20%. The sale given him.

A No loss or gain

B 4% loss

C 2% gain

D 4% gain

Answer: B

Explanation:

Let cost price = Rs. 100

$$\Rightarrow \text{Marked price} = 100 + \left(\frac{20}{100} \times 100\right)$$

$$= 100 + 20 = \text{Rs. } 120$$

Discount % = 20%

$$\Rightarrow \text{Selling price} = 120 - \left(\frac{20}{100} \times 120\right)$$

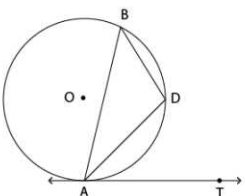
$$= 120 - 24 = \text{Rs. } 96$$

$$\therefore \text{Loss \%} = \frac{(100-96)}{100} \times 100 = 4\%$$

=> Ans - (B)

### Question 130

In the figure below, AB is a chord of a circle with center O. A tangent AT is drawn at point A so that  $\angle BAT = 50^\circ$ . Then  $\angle ADB = ?$



- A  $120^\circ$
- B  $130^\circ$
- C  $140^\circ$
- D  $150^\circ$

**Answer: B**

**Question 131**

Anil started a business with an investment of Rs. 25,000. After 3 months, Vishal joined his business with a capital of Rs. 30,000. At the end of the year, they have made a profit of Rs. 19,000. What will be Anil's share in the profit ?

- A Rs. 10,000
- B Rs. 12,500
- C Rs. 10,250
- D Rs. 14,000

**Answer: A**

**Explanation:**

Anil invested Rs. 25,000 for 12 months and Vishal invested Rs. 30,000 for 9 months

$$\Rightarrow \text{Ratio of profits} = (25,000 \times 12) : (30,000 \times 9)$$

$$= 300 : 270 = 10 : 9$$

Total profit = Rs. 19,000

$$\therefore \text{Anil's share in the profit} = \frac{10}{10+9} \times 19,000$$

$$= 10 \times 1000 = \text{Rs. } 10,000$$

$\Rightarrow$  Ans - (A)

## SSC GK Free Tests

**Question 132**

Find the value of  $\frac{(243)^{\frac{n}{5}} \times 3^{2n+1}}{9^n \times 3^{n-1}}$

- A 3
- B 9
- C 27
- D 4

**Answer: B**

**Explanation:**

$$\text{Expression : } \frac{(243)^{\frac{n}{5}} \times 3^{2n+1}}{9^n \times 3^{n-1}}$$

$$= \frac{(3^5)^{\frac{n}{5}} \times 3^{2n} \times 3}{3^{2n} \times 3^n \times 3^{-1}}$$



$$\begin{aligned}
 &= \frac{3^{n+2n} \times 3}{3^{n+2n} \times 3^{-1}} \\
 &= \frac{3^{3n}}{3^{3n}} \times 3 \times \frac{1}{3} \\
 &= 3 \times 3 = 9 \\
 &\Rightarrow \text{Ans - (B)}
 \end{aligned}$$

**Question 133**

If for a non-zero  $x$ ,  $3x^2 + 5x + 3 = 0$ , then the value of  $x^3 + \frac{1}{x^3}$  is:

- A  $\frac{10}{27}$
- B  $-\left(\frac{10}{27}\right)$
- C  $\frac{2}{3}$
- D  $-\left(\frac{2}{3}\right)$

**Answer:** A

**Explanation:**

Given :  $3x^2 + 5x + 3 = 0$

Divide by  $x$ ,  $\Rightarrow 3x + \frac{3}{x} = -5$

$\Rightarrow x + \frac{1}{x} = \frac{-5}{3}$  .....(i)

Cubing both sides, we get :

$\Rightarrow \left(x + \frac{1}{x}\right)^3 = \left(\frac{-5}{3}\right)^3$

$\Rightarrow x^3 + \frac{1}{x^3} + 3\left(x\right)\left(\frac{1}{x}\right)\left(x + \frac{1}{x}\right) = \frac{-125}{27}$

$\Rightarrow x^3 + \frac{1}{x^3} + 3(1)\left(x + \frac{1}{x}\right) = \frac{-125}{27}$

$\Rightarrow x^3 + \frac{1}{x^3} + 3\left(\frac{-5}{3}\right) = \frac{-125}{27}$

$\Rightarrow x^3 + \frac{1}{x^3} = \frac{-125}{27} + 5$

$\Rightarrow x^3 + \frac{1}{x^3} = \frac{-125+135}{27}$

$\Rightarrow x^3 + \frac{1}{x^3} = \frac{10}{27}$

$\Rightarrow$  Ans - (A)

**Question 134**

The ratio of the volume of a cube to that of a sphere which will fit inside the cube is

- A  $4 : \pi$
- B  $4 : 3\pi$
- C  $6 : \pi$
- D  $2 : \pi$

**Answer:** C

**Explanation:**

Let edge of cube be  $2a$  cm and thus diameter of sphere =  $2a$  cm

$\Rightarrow$  Radius of sphere =  $\frac{2a}{2} = a$  cm

$$\text{Volume of cube} = (2a)^3 = 8a^3 \text{ cm}^3 \text{ -----(i)}$$

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

$$= \frac{4}{3} \pi \times (a)^3 = \frac{4a^3 \pi}{3} \text{ cm}^3 \text{ -----(ii)}$$

Dividing equation (i) by (ii), we get :

$$\Rightarrow \text{Required ratio} = \frac{8a^3}{\frac{4a^3 \pi}{3}}$$

$$= \frac{8 \times 3}{4\pi} = \frac{6}{\pi}$$

\(\therefore\) Ratio of the volume of a cube to that of a sphere which will fit inside the cube =  $6 : \pi$

\(\Rightarrow\) Ans - (C)

## Current Affairs Question and Answers (Download PDF)

### Question 135

A string of length 24 cm is bent first into a square and then into a right-angled triangle by keeping one side of the square fixed as its base. Then the area of triangle equals to:

A  $24 \text{ cm}^2$

B  $60 \text{ cm}^2$

C  $40 \text{ cm}^2$

D  $28 \text{ cm}^2$

**Answer:** A

#### Explanation:

String of length 24 cm is bent into square, \(\Rightarrow\) Perimeter of square = 24 cm

Let side of square =  $a$  cm

$$\Rightarrow 4a = 24$$

$$\Rightarrow a = \frac{24}{4} = 6 \text{ cm}$$

Let the other side of triangle be  $b$  and hypotenuse be  $c$  cm

$$\Rightarrow \text{Perimeter of triangle} = a + b + c = 24$$

$$\Rightarrow b + c = 24 - 6 = 18$$

$$\Rightarrow c = 18 - b \text{ -----(i)}$$

Also, using Pythagoras Theorem

$$\Rightarrow 6^2 + b^2 = c^2$$

$$\Rightarrow c^2 - b^2 = 36 \text{ -----(ii)}$$

Solving equations (i) and (ii), we get :  $b = 8$  cm and  $c = 10$  cm

$$\therefore \text{Area of triangle} = \frac{1}{2} ab$$

$$= \frac{1}{2} \times 6 \times 8 = 24 \text{ cm}^2$$

\(\Rightarrow\) Ans - (A)

**Question 136**

The red blood cells in a blood sample grows by 10% per hour in first two hours, decreases by 10% in next one hour, remains constant in next one hour and again increases by 5% per hour in next two hours. If the original count of the red blood cells in the sample is 40000, find the approximate red blood cell count at the end of 6 hours.

- A 40000
- B 45025
- C 48025
- D 50025

**Answer:** C

**Explanation:**

Original count = 40,000

In the next 2 hours, it increases by 10%

$$\Rightarrow \text{Blood cell count after 2 hours} = 40,000\left(1 + \frac{10}{100}\right)^2 = 40,000\left(\frac{11}{10}\right)^2$$

$$= 40,000 \times \frac{121}{100} = 48,400$$

It decreases by 10% in next hour

$$\Rightarrow \text{Blood cell count after 3 hours} = 48,400\left(1 - \frac{10}{100}\right)^1$$

$$= 48,400 \times \frac{9}{10} = 43,560$$

It remains constant in the next hour,  $\Rightarrow$  Blood cell count after 4 hours = 43,560

In the next 2 hours, it increases by 5%

$$\Rightarrow \text{Blood cell count after 6 hours} = 43,560\left(1 + \frac{5}{100}\right)^2 = 43,560\left(\frac{21}{20}\right)^2$$

$$= 43,560 \times \frac{441}{400} = 48,024.9 \approx 48,025$$

$\Rightarrow$  Ans - (C)

**Question 137**

The compound interest on a sum of Rs. 5000 at 8% per annum for 9 months when interest is compound quarterly is:

- A Rs. 300
- B Rs. 300.12
- C Rs. 306.04
- D Rs. 308

**Answer:** C

**Explanation:**

Principal sum = Rs. 5000

Rate of interest = 8% and time period =  $\frac{9}{12} = \frac{3}{4}$  years

Compound interest when interest is compound quarterly =  $P\left[\left(1 + \frac{R}{400}\right)^{4T} - 1\right]$

$$= 5000\left[\left(1 + \frac{8}{400}\right)^{3 \times 4} - 1\right]$$

$$= 5000\left[\left(1 + \frac{1}{50}\right)^3 - 1\right]$$

$$\begin{aligned}
&= 5000\left[\left(\frac{51}{50}\right)^3 - 1\right] \\
&= 5000 \times \left(\frac{132651 - 125000}{125000}\right) \\
&= \frac{7651}{25} = \text{Rs. } 306.04 \\
&\Rightarrow \text{Ans - (C)}
\end{aligned}$$

## Daily and Monthly Current Affairs (Download PDF)

### Question 138

A man rows to a place 35 km in distant and back in 10 hours 30 minutes. He found that he could row 5 km with the flow of stream in the same time as he can row 4 km against the stream. Find the rate of flow of the stream.

- A 1 km/hr
- B 0.5 km/hr
- C 0.75 km/hr
- D 1.5 km/hr

**Answer: C**

#### Explanation:

Let speed of man in still water =  $x$  km/hr and speed of stream =  $y$  km/hr

Speed downstream =  $(x + y)$  km/hr and speed upstream =  $(x - y)$  km/hr

The man can row 35 km to and back in 10 hours 30 minutes.

Using, time = distance/speed

$$\Rightarrow \frac{35}{x+y} + \frac{35}{x-y} = 10.5$$

$$\Rightarrow \frac{1}{x+y} + \frac{1}{x-y} = \frac{10.5}{35}$$

$$\Rightarrow \frac{1}{x+y} + \frac{1}{x-y} = 0.3 \text{ -----(i)}$$

$$\text{Also, } \frac{5}{x+y} = \frac{4}{x-y}$$

$$\Rightarrow 5x - 5y = 4x + 4y$$

$$\Rightarrow 5x - 4x = 4y + 5y$$

$$\Rightarrow x = 9y \text{ -----(ii)}$$

Substituting above value in equation (i), we get :

$$\Rightarrow \frac{1}{9y+y} + \frac{1}{9y-y} = 0.3$$

$$\Rightarrow \frac{1}{10y} + \frac{1}{8y} = 0.3$$

$$\Rightarrow \frac{10+8}{80} = 0.3y$$

$$\Rightarrow 0.3y \times 80 = 18$$

$$\Rightarrow y = \frac{18}{24} = 0.75$$

$\therefore$  Rate of flow of the stream = **0.75 km/hr**

$\Rightarrow$  Ans - (C)

**Question 139**

On a rainy day, 60 cm of rain is recorded in a region. What is the volume of water collected in an open and empty rectangular water tank that measures 12 m (length) x 10 m (width) and 50 cm (depth) ?

- A  $120 \text{ m}^3$
- B  $72 \text{ m}^3$
- C  $60 \text{ m}^3$
- D  $48 \text{ m}^3$

**Answer: C**

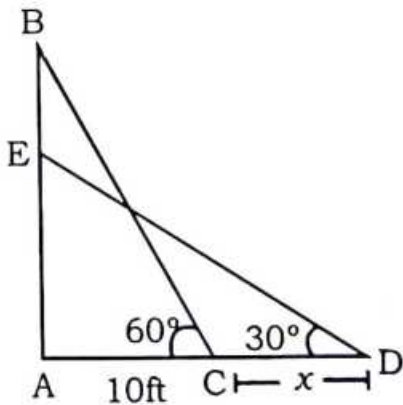
**Question 140**

A ladder is placed along a wall such that its upper end is touching the top of the wall. The foot of the ladder is 10 ft away from the wall and the ladder is making an angle of  $60^\circ$  with the ground. When a man starts climbing on it, it slips and now ladder makes an angle of  $30^\circ$  with ground. How much did the ladder slip from the top of the wall?

- A 12 ft
- B 20 ft
- C 7.32 ft
- D 18 ft

**Answer: C**

**Explanation:**



Given : BC is the initial position of the ladder, and DE is its final position. So,  $DE = BC$  (as both are the same ladders)

To find :  $CD = x = ?$

Solution : In  $\triangle ABC$ ,

$$\Rightarrow \cos(60^\circ) = \frac{AC}{BC}$$

$$\Rightarrow \frac{1}{2} = \frac{10}{BC}$$

$$\Rightarrow BC = 10 \times 2 = 20$$

Thus,  $DE = BC = 20$

Similarly, in  $\triangle ADE$ ,

$$\Rightarrow \cos(30^\circ) = \frac{AD}{DE}$$

$$\Rightarrow \frac{\sqrt{3}}{2} = \frac{x+10}{20}$$

$$\Rightarrow x + 10 = 10\sqrt{3}$$

$$\Rightarrow x = 10(\sqrt{3} - 1)$$

$$\Rightarrow x = 10 \times 0.732 = 7.32$$

∴ The ladder slipped **7.32 ft**

⇒ Ans - (C)

## 285 SSC Mocks - Just RS. 249

### Question 141

A group of workers can complete a piece of work in 50 days, when they are working individually. On the first day one person works, on the second day another person joins him, on the third day one more person joins them and this process continues till the work is completed. How many approximate days are needed to complete the work ?

- A 8 days
- B 9 days
- C 10 days
- D 11 days

**Answer:** C

#### Explanation:

Let a man complete '1' piece of work in a day.

⇒ Total work = 50 units

Then on 1st day, work done = 1 unit

On 2nd day = 2 units and so on.

Let the whole work will be completed in  $n$  days.

⇒ Total work =  $1 + 2 + 3 + \dots + n = 50$

$$\Rightarrow \frac{n(n+1)}{2} = 50$$

$$\Rightarrow n(n+1) = 100$$

∴ Number of days  $\approx$  **10**

⇒ Ans - (C)

### Question 142

Find out the wrong number in the series

**190 166 145 128 112 100 91**

- A 100
- B 166
- C 145
- D 128

**Answer:** D

#### Explanation:

In the above series, consecutive multiples of 3 in decreasing order are subtracted.

$$190 - 24 = 166$$

$$166 - 21 = 145$$

$$145 - 18 = \mathbf{127}$$

$$127 - 15 = 112$$

$$112 - 12 = 100$$

$$100 - 9 = 91$$

=> Ans - (D)

### Question 143

ABCD is a square. Draw an equilateral triangle PBC on side BC considering BC is a base and an equilateral triangle QAC on diagonal AC considering AC is a base. Find the value of  $\frac{\text{Area of } \triangle PBC}{\text{Area of } \triangle QAC}$

A  $\frac{1}{2}$

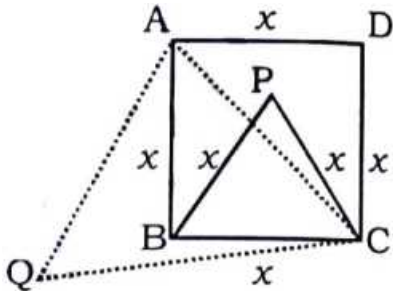
B 1

C  $\frac{1}{3}$

D  $\frac{1}{4}$

Answer: A

Explanation:



Let side of the square be  $x$  cm

=> Side of equilateral  $\triangle PBC = x$  cm

In right  $\triangle ABC$ ,

$$\Rightarrow (AC)^2 = (AB)^2 + (BC)^2$$

$$\Rightarrow (AC)^2 = (x)^2 + (x)^2 = 2x^2$$

$$\Rightarrow AC = \sqrt{2}x$$

$$\therefore \frac{\text{ar}(\triangle PBC)}{\text{ar}(\triangle QAC)}$$

$$= \left[ \frac{\sqrt{3}}{4} \times (x)^2 \right] \div \left[ \frac{\sqrt{3}}{4} \times (\sqrt{2}x)^2 \right]$$

$$= \frac{x^2}{2x^2} = \frac{1}{2}$$

=> Ans - (A)

## SSC GK Questions

### Question 144

What will be the value of  $x^3 + y^3 + z^3 - 3xyz$  when  $x + y + z = 9$  and  $x^2 + y^2 + z^2 = 31$  ?

- A 27
- B 3
- C 54
- D 9

**Answer: C**

**Explanation:**

Given :  $x + y + z = 9$  -----(i)

and  $x^2 + y^2 + z^2 = 31$  -----(ii)

Squaring equation (i), we get :

$$\Rightarrow (x + y + z)^2 = (9)^2$$

$$\Rightarrow (x^2 + y^2 + z^2) + 2(xy + yz + zx) = 81$$

$$\Rightarrow 31 + 2(xy + yz + zx) = 81$$

$$\Rightarrow 2(xy + yz + zx) = 81 - 31 = 50$$

$$\Rightarrow xy + yz + zx = \frac{50}{2} = 25$$
 -----(iii)

To find :  $x^3 + y^3 + z^3 - 3xyz = (x + y + z)(x^2 + y^2 + z^2 - xy - yz - zx)$

$$= (9) \times (31 - 25)$$

$$= 9 \times 6 = 54$$

$\Rightarrow$  Ans - (C)

**Question 145**

**A trader purchased a gift box for Rs. 150. What should be the marked price on the gift box so that after allowing a discount of 10%, he makes a profit of 10% ?**

- A Rs. 180
- B Rs. 183.3
- C Rs. 186.6
- D Rs. 190

**Answer: B**

**Explanation:**

Cost price of gift = Rs. 150

Profit % = 10%

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

$$= 150 + 15 = \text{Rs. } 165$$

Discount % = 10%

$$\Rightarrow \text{Marked price} = \frac{165}{(100-10)} \times 100$$

$$= \frac{1650}{9} = \text{Rs. } 183.3$$

$\Rightarrow$  Ans - (B)



**Question 146**

A vegetable seller sells his vegetables at 20% profit. At the same time he uses false weights, which is 10% less than the actual weight. What will be his total gain percentage ?

- A 25%
- B 30%
- C 33.33%
- D  $18\frac{7}{9}\%$

**Answer:** C

**Explanation:**

Let cost price of vegetables = Re 1/gm = Rs. 1000/kg

Selling price = after 20% profit =  $1000 + \left(\frac{20}{100} \times 1000\right) = Rs. 1200$

Similarly, weight used while selling =  $1000 - \left(\frac{10}{100} \times 1000\right) = 900$  gm

=> Selling price = Rs.  $\frac{1200}{900} = 1.33$  per gm

$\therefore$  Profit % =  $\frac{(1.33-1)}{1} \times 100 = 33.33\%$

=> Ans - (C)

## SSC Free Preparation App

**Question 147**

How many hemispherical balls can be made from a cylinder 56 cm high and 12 cm diameter, when every ball being 0.75 cm in radius ?

- A 1792
- B 3584
- C 4824
- D 7168

**Answer:** D

**Explanation:**

Radius of cylinder =  $r = 6$  cm and height =  $h = 56$  cm

=> Volume of cylinder =  $\pi r^2 h$

=  $\pi \times (6)^2 \times 56 = 2016\pi \text{ cm}^3$

Radius of hemisphere =  $R = 0.75$  cm

=> Volume of hemisphere =  $\frac{2}{3}\pi(R)^3$

=  $\frac{2}{3}\pi \times (0.75)^3 = 0.28125\pi \text{ cm}^3$

$\therefore$  Number of balls made =  $\frac{2016\pi}{0.28125\pi} = 7168$

=> Ans - (D)

**Question 148**

The population of a town is 9000. If the number of females increases by 5% and the males by 7.5%, what will be the total population after increase. The number of females currently is 3000.

- A 9600
- B 9200
- C 10500
- D 9540

**Answer: A**

**Explanation:**

Number of females = 3000 and number of males = 6000

Females increases by 5% and the males by 7.5%

$$\Rightarrow \text{Total population after increase} = [3000 + (\frac{5}{100} \times 3000)] + [6000 + (\frac{7.5}{100} \times 6000)]$$

$$= (3000 + 150) + (6000 + 450)$$

$$= 9600$$

$\Rightarrow$  Ans - (A)

**Question 149**

What is the digit in the unit's place in the number  $\frac{15!}{100}$

- A 5
- B 7
- C 3
- D 1

**Answer: D**

**Explanation:**

$$\text{Number} = \frac{15!}{100}$$

$$= 1.51$$

Thus, the unit digit is **1**

$\Rightarrow$  Ans - (D)

**Free SSC Study Material (18,000 Solved Questions)**

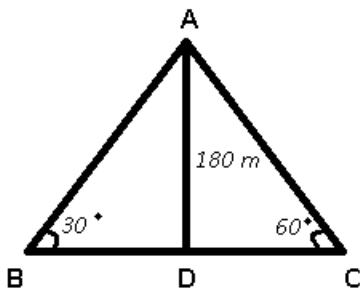
**Question 150**

The cliff of a mountain is 180 m high and the angles of depression of two ships on the either side of cliff are  $30^\circ$  and  $60^\circ$ . What is the distance between the two ships ?

- A 400 metre
- B  $400\sqrt{3}$  metre
- C 415.68 metre
- D 398.6 metre

**Answer: C**

**Explanation:**



Given : AD is the mountain = 180 m

To find : Distance between the ships = BC = ?

Solution : In  $\triangle ADC$

$$\Rightarrow \tan(60^\circ) = \frac{AD}{DC}$$

$$\Rightarrow \sqrt{3} = \frac{180}{DC}$$

$$\Rightarrow DC = \frac{180}{\sqrt{3}} \text{ m}$$

Similarly, in  $\triangle ABD$

$$\Rightarrow \tan(30^\circ) = \frac{AD}{BD}$$

$$\Rightarrow \frac{1}{\sqrt{3}} = \frac{180}{BD}$$

$$\Rightarrow BD = 180\sqrt{3} \text{ m}$$

$$\therefore BC = BD + DC$$

$$= (180\sqrt{3} + \frac{180}{\sqrt{3}})$$

$$= \frac{540+180}{\sqrt{3}} = \frac{720}{\sqrt{3}}$$

$$= 240\sqrt{3} = 240 \times 1.732 = 415.68 \text{ m}$$

$\Rightarrow$  Ans - (C)

## SSC CPO Free Mock Test (Latest Pattern)

### General Awareness

#### Instructions

For the following questions answer them individually

#### Question 151

The maximum biodiversity is found in

- A Tropical rain forests
- B Temperate forests
- C Coniferous forests
- D Arctic forest

**Answer:** A

SSC CPO Previous Papers

**Question 152**

**Who holds the highest law office in India ?**

- A** Attorney General
- B** Accountant General
- C** Lieutenant General
- D** Solicitor General

**Answer:** A

**Question 153**

**In the Union Government, the Council of Ministers is collectively responsible for the:**

- A** President
- B** Prime Minister
- C** Lok Sabha
- D** Parliament

**Answer:** C

**Question 154**

**Which international organisation observed the 125th birth anniversary of Shri. B. R. Ambedkar ?**

- A** International Monetary Fund (IMF)
- B** United Nations
- C** Asian Development Bank
- D** World Bank

**Answer:** B

**1500 + Free Must Solved SSC Questions (With Solutions)**

**Question 155**

**Cryogenics is:**

- A** A scientific study of dust
- B** Study of heat
- C** Scientific study of very low temperatures
- D** Study of genesis

**Answer:** C

**Question 156**

**Which one of the following schedules of the Constitution of India contains provisions regarding anti-defection Act ?**

- A Second Schedule
- B Fifth Schedule
- C Eighth Schedule
- D Tenth Schedule

**Answer:** D

**Question 157**

**Which of these statements is correct with regard to appointment of the Chairperson of the National Human Rights Commission ?**

- A He/She has to be a retired Chief Justice of India
- B He/She has to be a retired Supreme Court Judge
- C He/She has to be a serving/retired Chief Justice of a High Court
- D He/She should have demonstrated experience as a Human Rights activist

**Answer:** A

## SSC CGL Free Mock Test (Latest Pattern)

**Question 158**

**Who was the first Chairman of Indian Constitutions Drafting Committee ?**

- A B L Mitter
- B Madhav Rao
- C Dr B R Ambedkar
- D T T Krishnamachari

**Answer:** C

**Question 159**

**Which is the largest blood vessel in human body ?**

- A Aorta
- B Anatomises
- C Tunica Intima
- D Atrium

**Answer:** A

**Question 160**

**'El Nino' that affects our Monsoons, has its origins in**

- A The Indian Ocean

- B The Himalayan Plateau
- C The Pacific Ocean
- D The Arabian Peninsula

**Answer:** C

## SSC CGL Previous Papers (DOWNLOAD PDF)

### Question 161

When a ship enters the sea from a river what will be the effect ?

- A It lowers
- B It sways
- C It rises a little
- D It jolts

**Answer:** C

### Question 162

What is the brain of the computer called

- A CPU
- B Motherboard
- C HDD
- D Hardware

**Answer:** A

### Question 163

Name the first woman Chief Minister of Jammu and Kashmir ?

- A Sakina Itoo
- B Mehbooba Mufti
- C Asiya Naqash
- D Hina Shafi Bhat

**Answer:** B

## Daily Free SSC Practice Set

### Question 164

If in the east it is Guhar Moti, in north it is Siachen Glacier, then in south it is:

- A Kuttanad
- B Kanyakumari

**C** Rameshwaram

**D** Indira point

**Answer:** D

**Question 165**

**The person known for “Communication Revolution in India” is:**

**A** Prannoy Roy

**B** Petroda Ericson

**C** Craig wigginton

**D** Sam Pitroda

**Answer:** D

**Question 166**

**Which of the following countries has recently superseded**

**A** India

**B** Bangladesh

**C** China

**D** Indonesia

**Answer:** A

**SSC CHSL Prevoius Papers (DOWNLOAD PDF)**

**Question 167**

**Name the Indian State with the highest tax revenue.**

**A** Assam

**B** Sikkim

**C** Karnataka

**D** Maharashtra

**Answer:** D

**Question 168**

**The chief constituent of natural gas is:**

**A** Methane

**B** Helium

**C** Nitrogen

**D** Propane

**Answer:** A

**Question 169**

**How many bits are equal to one byte?**

- A** 8
- B** 10
- C** 12
- D** 14

**Answer:** A

**SSC CHSL Free Mock Test (Latest Pattern)**

**Question 170**

**Who was the 1st President of South Africa after apartheid ?**

- A** Zuma
- B** Nelson Mandela
- C** Kofi Anan
- D** Booker T. Washington

**Answer:** B

**Question 171**

**When was RBI established ?**

- A** 1943
- B** 1935
- C** 1939
- D** 1936

**Answer:** B

**Question 172**

**Hydroscope is an instrument that shows changes in:**

- A** Sound under water
- B** Atmospheric humidity
- C** Density of liquid
- D** Elevation of land

**Answer:** A



## General Science Notes (Download PDF)

### Question 173

Which Article of the Indian Constitution provides free legal aid and equal justice ?

- A 30
- B 25
- C 39-A
- D 33-B

**Answer:** C

### Question 174

Which one of the following reflects back more sunlight s compared to other three ?

- A Sand desert
- B Land covered with fresh snow
- C Prairie land
- D Paddy crop land

**Answer:** B

### Question 175

The magnitude of current flowing between two end points of a conductor is proportional to the potential difference between them and is called as:

- A Avogadro's law
- B Rault's law
- C Ohms law
- D Faraday's law

**Answer:** C

## SSC GD Constable Previous Papers

### Question 176

The quintessence of Gandhian thought is:

- A Satyagraha
- B Metaphysics
- C Spirtialism
- D Moksha

**Answer:** A

**Question 177**

**Abbreviation of Doctor of Philosophy is:**

- A** PH.D
- B** D Phil
- C** PH D
- D** Ph. D

**Answer: A**

**Question 178**

**Which monument is in pink colour ?**

- A** Taj Mahal
- B** Hawa Mahal
- C** Moti Mahal
- D** Mumtaz Mahal

**Answer: B**

**SSC MTS Previous Papers (DOWNLOAD PDF)**

**Question 179**

**Copper is associated with \_\_\_ mitochondrial enzymes**

- A** Cytochrome oxidase
- B** Succinic dehydrogenase
- C** Catalase
- D** Acid phosphatase

**Answer: A**

**Question 180**

**The second lightest of all gases is:**

- A** Nitrogen
- B** Hydrogen
- C** Helium
- D** Oxygen

**Answer: C**

**Question 181**

**Which of the following vitamins is generally excreted by human in urine ?**

- A Vitamin B
- B Vitamin C
- C Vitamin D
- D Vitamin E

**Answer:** B

## SSC Stenographer Previous Papers (DOWNLOAD PDF)

### Question 182

Metals can be \_\_\_ at room temperature.

- A Liquid only
- B Solid only
- C Solid or liquid
- D Solid, liquid or gas

**Answer:** C

### Question 183

Which Article of the Indian Constitution provides free and compulsory education to children ?

- A 21-A
- B 46
- C 39
- D 15

**Answer:** A

### Question 184

Which of the following public sector banks would receive the loans from New Development Bank of BRICS countries ?

- A Punjab National Bank
- B Canara Bank
- C Bank of Baroda
- D State Bank of India

**Answer:** B

## SSC Stenographer Previous Papers (Latest Pattern)

### Question 185

According to World Happiness Index what is the rank of India ?

- A 156
- B 123
- C 141
- D 118

**Answer:** D

**Question 186**

**An Equinox is when :**

- A Day and night are of equal length
- B Day is of the shortest duration during the year
- C Day is of the longest duration in the year
- D Day when maximum rainfall of the year occurs

**Answer:** A

**Question 187**

**The constitutional amendment through which the four regional languages namely Bodo, Dogri, Maithali and Santhali were included in the constitution is:**

- A 72nd
- B 92nd
- C 93rd
- D 94th

**Answer:** D

## **SSC GD Constable Free Mock Test (Latest Pattern)**

**Question 188**

**Who is the Chairman of BRICS ?**

- A M.V Kamath
- B K.V kamath
- C Sudeep Kamath
- D Sudhish Kamath

**Answer:** B

**Question 189**

**What is the name of the project launched by the Government of India for AIDS prevention in North-Eastern states in February 2016 ?**

- A Sunrise

- B Ujala
- C Surya
- D Sunshine

**Answer:** A

**Question 190**

**Which of these straits separates Asia from Africa ?**

- A Malacca
- B Hormuz
- C Bab-al-Mandeb
- D Bosphorus

**Answer:** C

## SSC MTS Free Mock Test (Latest Pattern)

**Question 191**

**Processors contain a control unit and a/an:**

- A Expansion slot
- B Port
- C Arithmetic logic unit (ALU)
- D CD drive

**Answer:** C

**Question 192**

**Which of the following was used as circuitry for first generation of computers ?**

- A Vacuum tube
- B Transistors
- C Integrated circuits
- D Microprocessors

**Answer:** A

**Question 193**

**In which pact, warm relations were established between "Garam dal" and "Naram dal", the two groups of the Indian National Congress ?**

- A Gandhi-Irwin Pact
- B Lucknow Pact
- C Karachi agreement

D Lahore

**Answer: B**

## SSC CGL Tier-2 Previous Papers PDF

### Question 194

Name the body which was established to provide safety and security of SC's and SC's social, economic, cultural and educational concerns after an amendment in the Indian constitution ?

A Law Commission of India

B National Commission for SC and ST

C Special officer for Linguistic Minorities

D Central Vigilance Commission

**Answer: B**

### Question 195

Which among the following city was given as guru dakshina by Pandavas to Guru Dronacharya ?

A Rawalpindi

B Nainital

C Hastinapur

D Gurgaon

**Answer: D**

### Question 196

Which one of the following is also called as milk sugar ?

A Glucose

B Fructose

C Maltose

D Lactose

**Answer: D**

## SSC Exam Free Videos (Youtube)

### Question 197

If Hwang Ho is the sorrow of China which river is sorrow of Bihar

A Damodar river

B Koshi River

C Yamuna river

**D** Ravi river

**Answer:** B

**Question 198**

**In which year did the first amendment of Indian Constitution take place ?**

**A** 1951

**B** 1950

**C** 1948

**D** 1949

**Answer:** A

**Question 199**

**Under which of the following amendment, education was made a fundamental right ?**

**A** 83rd amendment in 2003

**B** 83rd amendment in 2002

**C** 86rd amendment in 2002

**D** 87rd amendment in 2003

**Answer:** C

## SSC Study Material

**Question 200**

**What is the Statutory Liquidity Ratio (SLR) and CASH Reserve Ratio (CRR) for Indian banks in first two quarters of 2016?**

**A** 21.25%, 4%

**B** 22.25%, 4%

**C** 21.25%, 3%

**D** 22.25%, 3%

**Answer:** A

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