



## SSC CHSL 10 Jan 2017 Morning Shift

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# Reasoning

## Instructions

For the following questions answer them individually

### Question 1

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

Ctrl+X : Cut :: Ctrl+C : ?

- A Undo
- B Paste
- C Redo
- D Copy

**Answer:** D

### Explanation:

Expression = Ctrl+X : Cut :: Ctrl+C : ?

'Ctrl+X' operation is used to perform 'cut' task, similarly 'Ctrl+C' is used to 'copy'.

=> Ans - (D)

## SSC CHSL Free Mock Test

### Question 2

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

DI : M :: CR : ?

- A Y
- B Q
- C P
- D U

**Answer:** D

### Explanation:

Expression = DI : M :: CR : ?

The pattern followed is :

(4) (9) (13)  
D I → M

(3) (18) (21)  
C R → U

Thus, CR : U

=> Ans - (D)

### Question 3

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

TU : MN :: JK : ?

A CD

B RS

C TM

D KL

Answer: A

### Explanation:

Expression = TU : MN :: JK : ?

The pattern followed is :



Thus, JK : CD

=> Ans - (A)

### Question 4

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

36 : 25 :: 100 : ?

A 81

B 30

C 35

D 40

Answer: A

**Explanation:**

Expression =  $36 : 25 :: 100 : ?$

The pattern followed is =  $x^2 : (x - 1)^2$

Eg :-  $6^2 : (6 - 1)^2 = 36 : 25$

Similarly,  $10^2 : (10 - 1)^2 = 100 : 81$

=> Ans - (a)

## SSC CHSL Previous Papers (DOWNLOAD PDF)

### Question 5

Find out the odd word/letters/number/number pair from the given alternatives.

- A Herb
- B Shrub
- C Tree
- D Root

**Answer:** D

**Explanation:**

Herb, shrub and trees are all types of plants, hence root is the odd one out.

=> Ans - (D)

### Question 6

Find out the odd word/letters/number/number pair from the given alternatives.

- A MS
- B RX
- C BI
- D JP

**Answer:** C

**Explanation:**

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

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

(C) : B (+7 letters) = I

(D) : J (+6 letters) = P

=> Ans - (C)

#### Question 7

Find out the odd word/letters/number/number pair from the given alternatives.

A 82

B 75

C 64

D 31

**Answer:** C

#### **Explanation:**

Among the given numbers, only  $64 = 8^2$  is a perfect square, hence it is the odd one out.

=> Ans - (C)

## SSC CGL MTS Previous Papers (DOWNLOAD PDF)

#### Question 8

Find out the odd word/letters/number/number pair from the given alternatives.

A 512

B 100

C 125

D 216

**Answer:** B

#### **Explanation:**

$$512 = (8)^3$$

$$100 = (10)^2$$

$$125 = (5)^3$$

$$216 = (6)^3$$

=> Ans - (B)

### Question 9

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

Cell, Tissue, Organ, ?

- A Respiratory system
- B Organ system
- C Digestive system
- D Nervous system

**Answer:** B

### Explanation:

Number of cells make a tissue, similarly number of organs make an organ system.

=> Ans - (B)

### Question 10

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

ZA, TG, NM, ?

- A HS
- B SH
- C GT
- D TG

**Answer:** A

### Explanation:

Expression : ZA, TG, NM, ?

The pattern followed in each letter of the terms is :

1st letter : Z (-6 letters) = T (-6 letters) = N (-6 letters) = H

2nd letter : A (+6 letters) = G (+6 letters) = M (+6 letters) = S

Thus, missing term = **HS**

=> Ans - (A)

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

**Question 11**

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

NM, PK, SI, ?

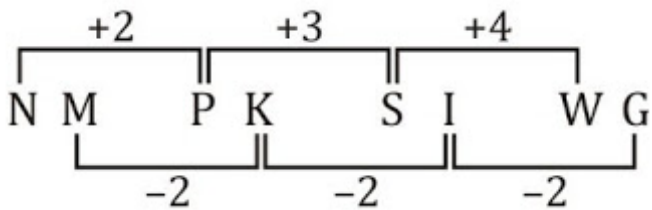
- A VE
- B WF
- C VG
- D WG

**Answer:** D

**Explanation:**

Expression : NM, PK, SI, ?

The pattern followed is :



Thus, missing term = WG

=> Ans - (D)

**Question 12**

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

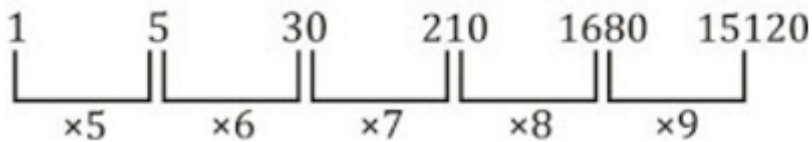
1, 5, 30, 210, 1680, ?

- A 15120
- B 13440
- C 11760
- D 8400

**Answer:** A

**Explanation:**

Consecutive integers are multiplied.



Thus, missing number = 15120

=> Ans - (A)

### Question 13

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

**Statements:**

(I)  $1 < 2$

(II)  $2 < 3$

**Conclusion:**

(I)  $1 < 3$

(II)  $2 < 3$

- A Conclusion I follows
- B Conclusion II follows
- C Neither I nor II follows
- D Both I and II follows

**Answer:** D

## SSC Stenographer Previous Papers (DOWNLOAD PDF)

### Question 14

The sum of the ages of Rohit and Ankit is 78. Rohit's age is twice the age of Ankit. What is the age (in years) of Rohit?

- A 26
- B 52
- C 54
- D 48

**Answer:** B

**Explanation:**

Let Ankit's age =  $x$  years



=> Rohit's age =  $2x$  years

According to ques, =>  $x + 2x = 3x = 78$

$$\Rightarrow x = \frac{78}{3} = 26$$

∴ Rohit's age =  $2 \times 26 = 52$  years

=> Ans - (B)

### Question 15

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

- i. Translucent
- ii. Transparent
- iii. Transport
- iv. Transistor

A iv, i, ii, iii

B iv, i, iii, ii

C i, iii, ii, iv

D i, ii, iii, iv

Answer: A

### Explanation:

As per the order of dictionary :

= Transistor -> Translucent -> Transparent -> Transport

≡ iv, i, ii, iii

=> Ans - (A)

### Question 16

In a certain code language, "INSTANT" is written as "IOUWESZ". How is "FORGET" written in that code language?

A FPOGX I

B FOSIGX

C FPSKHW

D FPTJIY

Answer: D

### Explanation:

"INSTANT" is written as "IOUWESZ"

The pattern followed is :

I N S T A N T  
↓ ↓+1 ↓+2 ↓+3 ↓+4 ↓+5 ↓+6  
I O U W E S Z

Similarly, for FORGET :

F O R G E T  
↓ ↓+1 ↓+2 ↓+3 ↓+4 ↓+5  
F P T J I Y

=> Ans - (D)

## SSC CGL Previous Papers (DOWNLOAD PDF)

### Question 17

In the following Question, select the missing number from the series.

?	198	120
9	11	12
4	18	10

A 32

B 30

C 28

D 36

Answer: D

#### Explanation:

The first number in each column is obtained by multiplying the other two.

Eg :-  $11 \times 18 = 198$  and  $12 \times 10 = 120$

Similarly,  $9 \times 4 = 36$

=> Ans - (D)

### Question 18

If "A" means "plus", "B" means "divide", "C" means "multiply" and "D" means "minus", then  $187 \text{ B } 17 \text{ C } 4 \text{ A } 7 \text{ D } 17 = ?$

A 30

**B** 44

**C** 33

**D** 34

**Answer:** D

**Explanation:**

Expression :  $187 \div 17 \times 4 + 7 - 17 = ?$

$$\equiv 187 \div 17 \times 4 + 7 - 17$$

$$= (11 \times 4) - 10$$

$$= 44 - 10 = 34$$

=> Ans - (D)

**Question 19**

Which set of letters when sequentially placed at the gaps in the given letter series shall complete it?

**l\_n\_o\_m\_lm\_o**

**A** mnoln

**B** mlnmn

**C** monln

**D** mnmno

**Answer:** C

**Explanation:**

The pattern followed is that in groups of 4, the term 'lmno' and its reverse are alternatively repeated.

= **lmno onml lmno**

=> Ans - (C)

## SSC CGL Free Mock Test (Latest Pattern)

**Question 20**

A boy travels 4 km towards south and then takes a left turn and travels another 3 km in that direction. How far and in which direction is he now from his original position?

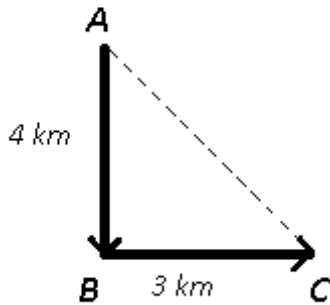
**A** 6 km, south

**B** 5 km, south-east

- C 4 km, north
- D 5 km, north-west

Answer: B

Explanation:



Let the boy starts from point A and travels 4 km towards south to reach B and then takes a left turn and travels another 3 km east wards to finally reach point C.

$$\text{Thus, } (AC)^2 = (AB)^2 + (BC)^2$$

$$\Rightarrow (AC)^2 = (4)^2 + (3)^2$$

$$\Rightarrow (AC)^2 = 16 + 9 = 25$$

$$\Rightarrow AC = \sqrt{25} = 5 \text{ km}$$

∴ He is 5 km in the south-east direction from his original position.

⇒ Ans - (B)

**Question 21**

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix-1 are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9. A letter from these matrices can be presented first by its row and next by its column, for example, 'r' can be represented by 32, 42 etc. and 'M' can be represented by 88, 68 etc. Similarly, you have to identify the set for the word 'TEST'.

**Matrix - I**

	0	1	2	3	4
0	P	S	H	H	E
1	D	T	S	L	I
2	E	G	T	S	E
3	E	L	F	T	S
4	L	G	F	S	E

**Matrix - II**

	5	6	7	8	9
5	I	R	B	T	O
6	R	I	T	M	S
7	R	T	B	I	O
8	T	S	B	M	I
9	S	T	B	M	O

- A 96, 20, 34, 77
- B 58, 30, 69, 79

C 76, 44, 23, 11

D 85, 04, 88, 33

**Answer: C**

**Explanation:**

(A) : 96, 20, 34, 77 = TESB

(B) : 58, 30, 69, 79 = TESO

(C) : 76, 44, 23, 11 = **TEST**

(D) : 85, 04, 88, 33 = TEMT

=> Ans - (C)

**Question 22**

**Kishan is the son-in-law of Rajesh's father-in-law. Rajesh's wife has a younger sister. How is Rajesh related to Kishan?**

A Brother-in-law

B Brother

C Father

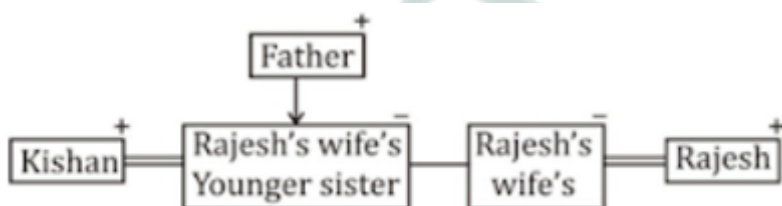
D Cousin

**Answer: A**

**Explanation:**

Kishan is the son-in-law of Rajesh's father-in-law. Rajesh's wife has a younger sister.

Relation is :



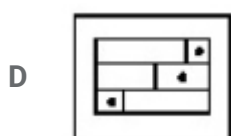
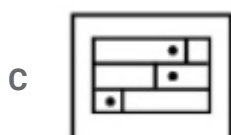
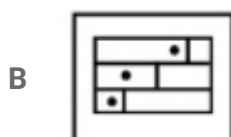
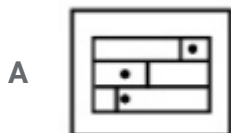
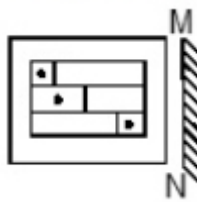
Thus, Rajesh is Kishan's brother-in-law.

=> Ans - (A)

**SSC Stenographer Previous Papers (Latest Pattern)**

Question 23

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



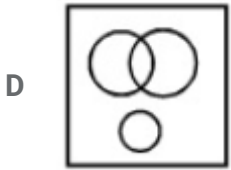
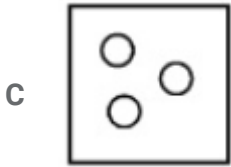
Answer: D

Question 24

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

Mammals, Dogs, Humans

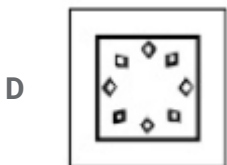
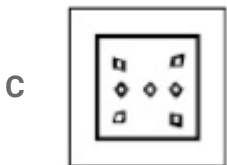
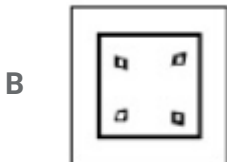
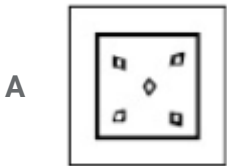
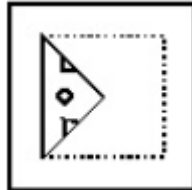
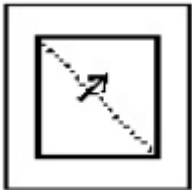




Answer: B

Question 25

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



Answer: B

# General Awareness

## Instructions

For the following questions answer them individually

### Question 26

**Syntax Errors are determined by**

- A Interpreter
- B ALU
- C Logic Unit
- D Control Unit

**Answer: D**

## SSC MTS Free Mock Test (Latest Pattern)

### Question 27

**Arithmometer was invented by**

- A Evangelista Torricelli
- B Charles Xavier Thomas
- C Edward Teller
- D Gustav Tauschek

**Answer: B**

### Question 28

**Which of the following is induced by Oncogene?**

- A Polio
- B Cancer
- C Diarrhoea
- D Dengue

**Answer: B**



**Question 29**

**Azadirachata indica is the scientific name of**

- A Neem
- B Teak
- C Silver Oak
- D Tulsi

**Answer: A**

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

**Question 30**

**Octopus belongs to the phylum**

- A Mollusca
- B Cnidaria
- C Echinodermata
- D Chordata

**Answer: A**

**Question 31**

**What is the full form of PVC?**

- A Phosponil vinyl Carbonate
- B Polyvinyl S Carbonate
- C Polyvinyl Carbonate
- D Polyvinyl Chloride

**Answer: D**

**Question 32**

**Aromatic hydrocarbons contain at least how many benzene rings in their molecules?**

- A four
- B three
- C two
- D one

**Answer: D**

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### Question 33

**Ranthambhore Fort is in**

- A Maharashtra
- B Orissa
- C Rajasthan
- D Sikkim

**Answer: C**

### Question 34

**Dogri is primarily spoken in which State?**

- A Assam
- B West Bengal
- C Meghalaya
- D Jammu & Kashmir

**Answer: D**

### Question 35

**A beedi making workshop can hire 5 women by paying them Rs. 300 per day. The 6th woman demands Rs. 350 per day. If this woman is hired then all other women must be paid Rs. 350. The marginal resource (labour) cost of the 6th woman is**

- A Rs. 600

- B Rs. 50
- C Rs. 300
- D Rs. 100

**Answer: A**

## **SSC CHSL Important Questions and Answers (Download PDF)**

### **Question 36**

**Stagflation is defined as**

- A low inflation, low growth, low unemployment
- B high inflation, low growth, high unemployment
- C high inflation, high growth, high unemployment
- D low inflation, high growth, low unemployment

**Answer: B**

### **Question 37**

**A living part of the organisms environment is known as**

- A Abiotic Factor
- B Habitat
- C Biotic Factor
- D Non-living factor

**Answer: C**

### **Question 38**

**Chromite is an ore/mineral of**

- A Zinc
- B Uranium
- C Chromium

**D** Titanium

**Answer: C**

## SSC CHSL Free Videos (Youtube)

### Question 39

**Who played Gandhi in 1982's Oscar Winning Movie of the same name?**

**A** Ben Kingsley

**B** Saeed Jaffrey

**C** Marlon Brando

**D** Richard Attenborough

**Answer: A**

### Question 40

**What percentage of India's population is employed in agriculture?**

**A** 85%

**B** 70%

**C** 55%

**D** 40%

**Answer: B**

### Question 41

**Which is the closest star to our solar system?**

**A** Alpha Centauri

**B** Beta Centauri

**C** Proxima Centauri

**D** Barnard

**Answer: C**

## SSC CHSL Syllabus

### Question 42

East India Company was established in \_\_\_\_\_.

- A 1400
- B 1500
- C 1600
- D 1700

**Answer: C**

### Question 43

Who was the eldest brother among the Pandavas?

- A Yudhishtira
- B Bhima
- C Sahadeva
- D Nakula

**Answer: A**

### Question 44

\_\_\_\_\_ is the 2016 Oscar Winner for Best Actress.

- A Brie Larson
- B Cate Blanchett
- C Jennifer Lawrence
- D Charlotte Rampling

**Answer: A**

**SSC CHSL Expected Cutt off**

**Question 45**

If an object is thrown upwards, what will be its velocity, when it reaches its maximum height?

- A 0 m/s
- B 4.9 m/s
- C 14.7 m/s
- D 20 m/s

**Answer: A**

**Question 46**

If a force acts upon two objects at rest, and having different masses for the same amount of time, then which will be the same for both the objects?

- A Acceleration
- B Kinetic Energy
- C Velocity
- D Momentum

**Answer: D**

**Question 47**

During an emergency all of the following fundamental rights are suspended, except

- A freedom of association
- B freedom of speech and expression
- C personal liberty
- D freedom of assembly without arms

**Answer: C**

**SSC CHSL Study Material**

**Question 48**

From which of the following are the Fundamental duties adopted?

- A French Constitution
- B Indian Constitution
- C Spanish Constitution
- D USSR Constitution

**Answer: D**

**Question 49**

“Sultan Johor Cup” is associated with \_\_\_\_\_.

- A Hockey
- B Cricket
- C Football
- D Golf

**Answer: A**

**Question 50**

Who wrote the book, 'Indian Home Rule'?

- A M K Gandhi
- B Jawaharlal Nehru
- C Subhash Chandra Bose
- D Babasaheb Ambedkar

**Answer: A**

**SSC CHSL Free App**

## Mathematics

**Instructions**

For the following questions answer them individually

**Question 51**

Raj sells a machine for Rs 51 lakhs at a loss. Had he sold it for Rs 60 lakh, his gain would have been 8 times the earlier loss. What is the cost price of the machine?

- A Rs 59 lakhs
- B Rs 52 lakhs
- C Rs 66.375 lakhs
- D Rs 45 lakhs

**Answer:** B

**Explanation:**

Let cost price of the machine = Rs.  $x$  lakhs

When selling price = Rs. 51 lakhs

=> Loss = Rs.  $(x - 51)$  lakhs

If selling price = Rs. 60 lakhs

=> Profit = Rs.  $(60 - x)$  lakhs

According to ques, Profit =  $8 \times$  loss

=>  $(60 - x) = 8 \times (x - 51)$

=>  $60 - x = 8x - 408$

=>  $8x + x = 408 + 60 = 468$

=>  $x = \frac{468}{9} = \text{Rs. } 52 \text{ lakhs}$

=> Ans - (B)

## SSC CHSL Free Mock Test

### Question 52

A does 75% of a work in 50 days. He then calls in B and they together finish the remaining work in 10 days. How long B alone would take to complete the whole work?

- A 200 days
- B 50 days
- C 100 days
- D 125 days

**Answer:** C

**Explanation:**

Let total work to be done = 200 units



Work done by A in 50 days =  $\frac{75}{100} \times 200 = 150$  units

A's efficiency =  $\frac{150}{50} = 3$  units/day

Remaining work =  $200 - 150 = 50$  units

Let B's efficiency =  $x$  units/day

Now, A and B complete remaining work in 10 days

$$\Rightarrow (3 + x) \times 10 = 50$$

$$\Rightarrow 3 + x = \frac{50}{10} = 5$$

$$\Rightarrow x = 5 - 3 = 2$$

$\therefore$  Time taken by B to complete the whole work alone =  $\frac{200}{2} = 100$  days

$\Rightarrow$  Ans - (C)

### Question 53

If  $2\cos A \sin B = x$ , then the value of  $x$  is?

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

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

C  $\sin(A+B) - \sin(A-B)$

D  $\cos(A-B) - \cos(A+B)$

Answer: C

### Explanation:

Expression :  $2\cos A \sin B = x$

$$= \cos A \sin B + \cos A \sin B$$

Adding and subtracting ( $\sin A \cos B$ )

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

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

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

$\Rightarrow$  Ans - (C)

### Question 54

Factors of  $48x^3 - 8x^2 - 93x - 45$  are

A  $(4x + 3)(4x - 3)(3x - 5)$

B  $(4x - 3)(4x - 3)(3x - 5)$

C  $(4x + 3)(4x + 3)(3x - 5)$

D  $(4x - 3)(4x + 3)(3x + 5)$

**Answer: C**

**Explanation:**

(A) :  $(4x + 3)(4x - 3)(3x - 5)$

$= (16x^2 - 12x + 12x - 9)(3x - 5)$

$= (16x^2 - 9)(3x - 5)$

$= 48x^3 - 80x^2 - 27x + 45$

(B) :  $(4x - 3)(4x - 3)(3x - 5)$

$= (16x^2 - 24x + 9)(3x - 5)$

$= 48x^3 - 80x^2 - 72x^2 + 120x + 27x - 45$

$= 48x^3 - 152x^2 + 147x - 45$

(C) :  $(4x + 3)(4x + 3)(3x - 5)$

$= (16x^2 + 24x + 9)(3x - 5)$

$= 48x^3 - 80x^2 + 72x^2 - 120x + 27x - 45$

$= 48x^3 - 8x^2 - 93x - 45$

=> Ans - (C)

## SSC CHSL Previous Papers (DOWNLOAD PDF)

**Question 55**

x and y are two numbers such that their mean proportion is 8 and third proportion is 512. What is the value of x and y?

A 2 and 16

B 2 and 32

C 4 and 32

D 4 and 16

**Answer: B**

**Explanation:**

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

Mean proportion of two numbers x and y = 8

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

Third proportion = 512

$$\Rightarrow y^2 = x \times 512 \text{ -----(ii)}$$

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

$$\Rightarrow y^2 = \frac{64}{y} \times 512$$

$$\Rightarrow y^3 = (2)^6 \times (2)^9 = (2)^{15}$$

$$\Rightarrow y = (2)^{\frac{15}{3}} = 2^5 = 32$$

$$\text{Substituting it in equation(i), } \Rightarrow x = \frac{64}{32} = 2$$

$\Rightarrow$  Ans - (B)

### Question 56

The difference between simple and compound interests compounded annually on a certain sum of money for 2 years at 12% per annum is Rs 72. What is the value of given sum (in Rs)?

A 10000

B 20000

C 5000

D 15000

**Answer: C**

### Explanation:

Let the given sum = Rs.  $100x$

Rate of interest = 12% and time period = 2 years

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

$$= 100x \left[ \left( 1 + \frac{12}{100} \right)^2 - 1 \right]$$

$$= 100x \left[ \left( \frac{112}{100} \right)^2 - 1 \right] = 100x \left( \frac{12544 - 10000}{10000} \right)$$

$$= \frac{2544x}{100}$$

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

$$= \frac{100x \times 12 \times 2}{100} = 24x$$

$$\Rightarrow \text{Difference between simple and compound interests} = \frac{2544x}{100} - 24x = 72$$

$$\Rightarrow \frac{2544x - 2400x}{100} = 72$$

$$\Rightarrow 144x = 72 \times 100$$

$$\Rightarrow x = \frac{72 \times 100}{144} = \frac{100}{2} = 50$$

∴ Value of given sum =  $100 \times 50 = Rs.5000$

**Question 57**

The average weight of Shivshankar, Gopesh and Reena is 97 kg. If the average weight of Shivshankar and Gopesh is 93 kg and that of Gopesh and Reena is 82 kg, then the weight of Gopesh is

- A 72
- B 56
- C 59
- D 63

**Answer: C**

**Explanation:**

Let respective weights of Shivshankar, Gopesh and Reena is  $s, g, r$  kg

$$\text{Average weight of the three} = \frac{s+g+r}{3} = 97$$

$$\Rightarrow s + g + r = 97 \times 3 = 291 \text{ kg} \text{ -----(i)}$$

$$\text{Similarly, Total weight of Shivshankar and Gopesh} = s + g = 93 \times 2 = 186 \text{ kg} \text{ -----(ii)}$$

$$\text{Total weight of Gopesh and Reena} = g + r = 82 \times 2 = 164 \text{ kg} \text{ -----(iii)}$$

$$\text{Adding equations(ii) and (iii),} \Rightarrow s + 2g + r = 186 + 164 = 350 \text{ -----(iv)}$$

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

$$\Rightarrow g = 350 - 291 = 59 \text{ kg}$$

$\Rightarrow$  Ans - (C)

## SSC CGL MTS Previous Papers (DOWNLOAD PDF)

**Question 58**

If  $\operatorname{cosec}^4 A - \operatorname{cosec}^2 A = x$ , then value of  $x$  is?

- A  $\tan^4 A + \tan^2 A$
- B  $\cot^4 A + \cot^2 A$
- C  $\cot^4 A - \cot^2 A$
- D  $\tan^4 A - \tan^2 A$

**Answer: B**

**Explanation:**

$$\begin{aligned} \text{Expression : } & \operatorname{cosec}^4 A - \operatorname{cosec}^2 A = x \\ & = \operatorname{cosec}^2 A(\operatorname{cosec}^2 A - 1) \\ & = \operatorname{cosec}^2 A\left(\frac{1}{\sin^2 A} - 1\right) \\ & = \operatorname{cosec}^2 A\left(\frac{1 - \sin^2 A}{\sin^2 A}\right) = \operatorname{cosec}^2 A\left(\frac{\cos^2 A}{\sin^2 A}\right) \\ & = \operatorname{cosec}^2 A(\cot^2 A) \\ \therefore & \operatorname{cosec}^2 A - \cot^2 A = 1 \\ & = (\cot^2 A + 1)\cot^2 A \\ & = \cot^4 A + \cot^2 A \\ \Rightarrow & \text{Ans - (B)} \end{aligned}$$

**Question 59**

What is the measure of an interior angle of a regular Octagon?

- A 135°
- B 120°
- C 140°
- D 144°

Answer: A

**Explanation:**

Sum of all interior angles of a polygon having  $n$  sides =  $(n - 2) \times 180^\circ$

Number of sides of octagon,  $n = 8$

$$\Rightarrow \text{Sum of interior angles} = (8 - 2) \times 180^\circ$$

$$= 6 \times 180 = 1080^\circ$$

$$\therefore \text{Measure of each interior angle} = \frac{1080}{8} = 135^\circ$$

$\Rightarrow$  Ans - (D)

**Question 60**

If  $4(2x - 4) - 2 > 3x - 1 \geq 4x - 7$ , then  $x$  can take which of the following values?

- A 7
- B 6
- C 2

D 0

Answer: B

Explanation:

Expression 1 :  $4(2x - 4) - 2 > 3x - 1$

$$\Rightarrow 8x - 16 - 2 > 3x - 1$$

$$\Rightarrow 8x - 3x > -1 + 18$$

$$\Rightarrow x > \frac{17}{5} \text{ -----(i)}$$

Expression 2 :  $3x - 1 \geq 4x - 7$

$$\Rightarrow 4x - 3x \leq -1 + 7$$

$$\Rightarrow x \leq 6 \text{ -----(ii)}$$

Combining inequalities (i) and (ii), we get :  $\frac{17}{5} < x \leq 6$

The only value that  $x$  can take among the options = 6

$\Rightarrow$  Ans - (B)

## SSC CGL GD Constable Previous Papers (DOWNLOAD PDF)

Question 61

Chords PQ and RS of a circle extended externally intersect at point T. Length of the segment PT, if lengths of QT, RT and ST are 9 cm, 18 cm and 6 cm respectively, is

A 18 cm

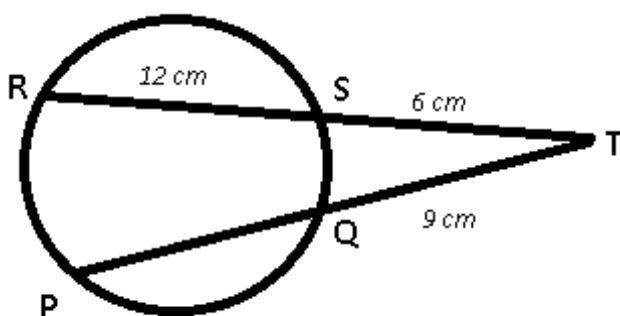
B 16 cm

C 9 cm

D 12 cm

Answer: D

Explanation:



Given : QT = 9 cm , RT = 18 cm and ST = 6 cm

To find :  $PT = ?$

Solution : Using properties of secant in circle

$$\Rightarrow (PT) \times (QT) = (RT) \times (ST)$$

$$\Rightarrow (PT) \times 9 = 18 \times 6$$

$$\Rightarrow PT = \frac{108}{9} = 12 \text{ cm}$$

$\Rightarrow$  Ans - (D)

### Question 62

If  $a + b = 11$  and  $a^2 + b^2 = 61$ , then value of  $ab$  is

A 12

B 96

C 24

D 30

Answer: D

### Explanation:

Given :  $(a + b) = 11$  and  $a^2 + b^2 = 61$

Using  $(a + b)^2 = a^2 + b^2 + 2ab$

$$\Rightarrow (11)^2 = 61 + (2 \times ab)$$

$$\Rightarrow 2ab = 121 - 61 = 60$$

$$\Rightarrow ab = \frac{60}{2} = 30$$

$\Rightarrow$  Ans - (D)

### Question 63

What is the value of  $\tan^{-1}240^\circ$ ?

A  $-\sqrt{3}$

B  $\frac{1}{\sqrt{3}}$

C  $\frac{-1}{\sqrt{3}}$

D  $\sqrt{3}$

Answer: A

### Explanation:

Expression :  $\tan(-240^\circ)$

$$\because \tan(-x) = -\tan(x)$$

$$\Rightarrow \tan(-240^\circ) = -\tan(240^\circ)$$

$$= -\tan(180 + 60) = -\tan(60^\circ)$$

$$= -\sqrt{3}$$

$\Rightarrow$  Ans - (A)

## SSC Stenographer Previous Papers (DOWNLOAD PDF)

### Question 64

Rakesh goes on a trip on his motor-cycle and rides for 368 kms. If he rides for 5 hours at a speed of 49 km/hr, at what speed he travels for the remaining 3 hours of the journey?

A 58 km/hr

B 41 km/hr

C 54 km/hr

D 46 km/hr

**Answer:** B

### Explanation:

Total distance covered = 368 km

He rides for 5 hours at a speed of 49 km/hr

$$\Rightarrow \text{Distance covered} = 5 \times 49 = 245 \text{ km}$$

$$\text{Distance left} = 368 - 245 = 123 \text{ km}$$

$$\therefore \text{Speed he should travel for the remaining 3 hours of the journey} = \frac{123}{3} = 41 \text{ km/hr}$$

$\Rightarrow$  Ans - (B)

### Question 65

What is the total surface area (in sq cm) of a hollow cylinder open at both ends, if its length is 22 cm, external radius is 7 cm and thickness is 1 cm? (Take  $\pi = 22/7$ )

A 1879.43

B 3758.86

C 939.715

D 2819.145



**Answer: A**

**Explanation:**

Let the external radius, the internal radius and the height of the hollow cylinder be  $R$ ,  $r$  and  $h$  respectively.

$\Rightarrow R = 7 \text{ cm}$ ,  $h = 22 \text{ cm}$  and  $r = 7 - 1 = 6 \text{ cm}$

Total surface area of hollow cylinder =  $(2\pi Rh) + (2\pi rh) + 2\pi(R^2 - r^2)$

$= (2 \times \frac{22}{7})[(7 \times 22) + (6 \times 22) + (7^2 - 6^2)]$

$= (\frac{44}{7}) \times (154 + 132 + 13)$

$= \frac{44}{7} \times 299 = 1879.428 \approx 1879.43 \text{ cm}^2$

$\Rightarrow$  Ans - (A)

**Question 66**

**What is the distance between the points (4,7) and (-1,-5)?**

**A** 10 units

**B** 13 units

**C** 5 units

**D** 11 units

**Answer: B**

**Explanation:**

Distance between two points  $(x_1, y_1)$  and  $(x_2, y_2) = \sqrt{(y_2 - y_1)^2 + (x_2 - x_1)^2}$

Now, distance between points (-1,-5) and (4,7)

$= \sqrt{(7 + 5)^2 + (4 + 1)^2} = \sqrt{(12)^2 + (5)^2}$

$= \sqrt{144 + 25} = \sqrt{169}$

$= 13 \text{ units}$

$\Rightarrow$  Ans - (B)

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

**Question 67**

**At 22% discount the selling price of a refrigerator is Rs 26000, what is the selling price if the discount is 40%?**

**A** Rs 12000

**B** Rs 14640

**C** Rs 21840

**D** Rs 20000

**Answer: D**

**Explanation:**

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

If discount is 22%, Selling price =  $\frac{100-22}{100} \times 100x = 78x$

According to ques,  $\Rightarrow 78x = 26000$

$$\Rightarrow x = \frac{26000}{78} = \frac{1000}{3}$$

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

$$= 60 \times \frac{1000}{3} = Rs.20,000$$

$\Rightarrow$  Ans - (D)

**Question 68**

**26 is 0.4% of which number?**

**A** 6500

**B** 650

**C** 13000

**D** 16250

**Answer: A**

**Explanation:**

Let the number be  $x$

According to ques, 0.4% of  $x = 26$

$$\Rightarrow \frac{0.4}{100} \times x = 26$$

$$\Rightarrow \frac{1}{250} \times x = 26$$

$$\Rightarrow x = 26 \times 250 = 6500$$

$\Rightarrow$  Ans - (A)

**Question 69**

**Divide 20 into two parts such that the sum of the square of the parts is 232. What is the value of the two parts?**

- A 6, 14
- B 8, 12
- C 4, 16
- D 10, 10

**Answer:** A

**Explanation:**

Let the first part =  $x$  and second part =  $(20 - x)$

According to ques,  $\Rightarrow (x)^2 + (20 - x)^2 = 232$

$$\Rightarrow x^2 + (x^2 + 400 - 40x) = 232$$

$$\Rightarrow 2x^2 - 40x + 400 - 232 = 0$$

$$\Rightarrow x^2 - 20x + 84 = 0$$

$$\Rightarrow x^2 - 6x - 14x + 84 = 0$$

$$\Rightarrow x(x - 6) - 14(x - 6) = 0$$

$$\Rightarrow (x - 6)(x - 14) = 0$$

$$\Rightarrow x = 6, 14$$

$\Rightarrow$  Ans - (A)

## SSC CGL Free Mock Test (Latest Pattern)

### Question 70

What will be the equation of the perpendicular bisector of segment joining the points (5,-3) and (0,2)?

- A  $x + y = 2$
- B  $x - y = -3$
- C  $x + y = -2$
- D  $x - y = 3$

**Answer:** D

**Explanation:**

Let line  $l$  perpendicularly bisects line joining A(5,-3) and B(0,2) at C, thus C is the mid point of AB.

$$\Rightarrow \text{Coordinates of C} = \left( \frac{5+0}{2}, \frac{-3+2}{2} \right)$$

$$= \left(\frac{5}{2}, \frac{-1}{2}\right)$$

$$\text{Now, slope of AB} = \frac{y_2 - y_1}{x_2 - x_1} = \frac{(2+3)}{(0-5)}$$

$$= \frac{5}{-5} = -1$$

Let slope of line  $l = m$

Product of slopes of two perpendicular lines = -1

$$\Rightarrow m \times -1 = -1$$

$$\Rightarrow m = 1$$

Equation of a line passing through point  $(x_1, y_1)$  and having slope  $m$  is  $(y - y_1) = m(x - x_1)$

$\therefore$  Equation of line  $l$

$$\Rightarrow \left(y + \frac{1}{2}\right) = 1\left(x - \frac{5}{2}\right)$$

$$\Rightarrow x - y = \frac{5}{2} + \frac{1}{2} = \frac{6}{2}$$

$$\Rightarrow x - y = 3$$

$\Rightarrow$  Ans - (D)

#### Question 71

$4 \times (-0.1(5.5 + 8.5))$  of  $0.5 = ?$

A -2.8

B -1.68

C -1.28

D -0.84

**Answer:** A

#### Explanation:

Expression :  $4 \times (-0.1(5.5 + 8.5))$  of  $0.5 = ?$

$$= 4 \times 0.5[-0.1(14)]$$

$$= 2 \times (-1.4)$$

$$= -2.8$$

$\Rightarrow$  Ans - (A)

Question 72

Refer the below data table and answer the following Question.

	Weight (kg)	Height (m)
<b>Archita</b>	67	1.63
<b>Arpana</b>	67	1.51
<b>Arpita</b>	57	1.56
<b>Arundhati</b>	73	1.59

Who has the least weight to height ratio?

- A Archita
- B Arpana
- C Arpita
- D Arundhati

**Answer:** C

**Explanation:**

Ratio of weight to height

$$\text{Archita} : \frac{67}{1.63} = 41.1$$

$$\text{Arpana} : \frac{67}{1.51} = 44.3$$

$$\text{Arpita} : \frac{57}{1.56} = 36.5 \quad \text{[LEAST]}$$

$$\text{Arundhati} : \frac{73}{1.59} = 45.9$$

=> Ans - (C)

## SSC Stenographer Previous Papers (Latest Pattern)

Question 73

Refer the below data table and answer the following Question.

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

What was the revenue of the company if its expenditure was Rs 550 crore in the year when its % profit was the least?

- A 605

B 577.5

C 632.5

D 550

**Answer: B**

**Explanation:**

Profit % was least in 2011 = 5%

Let revenue = Rs.  $x$  crore and expenditure = Rs. 550 crore

$$\Rightarrow \text{Profit \%} = \frac{x-550}{550} \times 100 = 5$$

$$\Rightarrow \frac{x-550}{550} = \frac{5}{100} = \frac{1}{20}$$

$$\Rightarrow x - 550 = \frac{550}{20} = 27.5$$

$$\Rightarrow x = 550 + 27.5 = 577.5 \text{ crore}$$

$\Rightarrow$  Ans - (B)

**Question 74**

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

Number of Children	Number of Houses
0	7
1	11
2	15
3	5

What is the average number of children per house?

A 1.97

B 1.72

C 1.47

D 1.22

**Answer: C**

**Explanation:**

Total number of houses =  $7 + 11 + 15 + 5 = 38$

Total children =  $(0 \times 7) + (1 \times 11) + (2 \times 15) + (3 \times 5)$

$= 11 + 30 + 15 = 56$

$\therefore$  Average number of children per house =  $\frac{56}{38} = 1.47$

$\Rightarrow$  Ans - (C)

### Question 75

Refer the below data table and answer the following Question.

Partners	Present % Share
Anand	10
Basu	15
Chinmay	10
Dhiraj	15
Ejaz	50

If the company has issued six lakh shares between its five partners and if Chinmay offers to sell 15,000 of his shares to Dhiraj, then Dhiraj will have how many shares?

- A 120000 shares
- B 90000 shares
- C 105000 shares
- D 75000 shares

**Answer:** C

#### **Explanation:**

Total shares = 6,00,000

Original shares with Dhiraj =  $\frac{15}{100} \times 600000 = 90,000$

If Chinmay offers to sell 15,000 of his shares to Dhiraj,

=> Shares with Dhiraj = 90,000 + 15,000 = 1,05,000

=> Ans - (C)

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

### English

#### **Instructions**

For the following questions answer them individually

#### **Question 76**

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

\_\_\_\_\_ around the bush.

- A To hit

- B To beat
- C To circle
- D To hide

Answer: B

## SSC MTS Free Mock Test (Latest Pattern)

### Question 77

Select the antonym of adulterate

- A attenuated
- B purify
- C vitiated
- D dilute

Answer: B

### Question 78

Rearrange the parts of the sentence in correct order.

In punishment for the uprising,  
P-called tributes, to participate  
Q-each of the twelve districts must provide  
R-one girl and one boy,

- A PRQ
- B PQR
- C RQP
- D QRP

Answer: D

### Question 79

Select the antonym of conjoined

- A sever



B adjoin

C meld

D affix

Answer: A

## SSC CPO Free Mock Test (Latest Pattern)

### Question 80

In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

It was obviously for everyone (A)/that grandfather was (B)/hiding something from all of us.(C)/ No error(D)

A A

B B

C C

D D

Answer: A

### Question 81

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

an event or a group of events occurring as part of a sequence

A stanza

B episode

C series

D lesson

Answer: B

### Question 82

Select the synonym of consolidate

A centralize

- B variate
- C declare
- D announce

**Answer: A**

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### Question 83

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

**A dime a dozen**

- A Strength is in numbers
- B People who say bad things have no value
- C Very common and of no particular value
- D You save more if you buy in large numbers

**Answer: C**

### Question 84

Improve the bracketed part of the sentence.

The public vent their anger on social media to protest (toward) police brutality.

- A for
- B against
- C regards
- D no improvement

**Answer: B**

### Question 85

Select the word with the correct spelling.

- A missible

B saosages

C emullator

D abdicate

Answer: D

## SSC CHSL Important Questions and Answers (Download PDF)

### Question 86

In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

Recently I visited Kerala(A)/and found the sceneries(B)/to be breathtaking.(C)/No error(D)

A A

B B

C C

D D

Answer: B

### Question 87

Rearrange the parts of the sentence in correct order.

The twenty-four tributes

P-that could hold anything from a

Q-will be imprisoned in a vast outdoor arena

R-burning desert to a frozen wastelan

A PQR

B PRQ

C QPR

D RQP

Answer: C

**Question 88**

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

**Have the car stolen!**

- A Steal the car.
- B You should have the stolen car.
- C Get someone to steal the car.
- D They have stolen the car.

**Answer: C**

## SSC CHSL Free Videos (Youtube)

**Question 89**

**Improve the bracketed part of the sentence.**

**Look at this video clip in which (I, my friend and you) are enjoying a boat ride.**

- A you, my friend and I
- B I, you and my friend
- C my friend, you and I
- D no improvement

**Answer: A**

**Question 90**

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

**The teacher said to the students, "Don't make noise."**

- A The teacher asked the students not to make noise.
- B The teacher scolded the students, they should not make noise.
- C The teacher warned the students not to make noise.
- D The teacher told the students that don't make noise.

Answer: C

**Question 91**

Select the word with the correct spelling.

- A eraseable
- B probabble
- C secretes
- D esteemeed

Answer: C

**SSC CHSL Syllabus**

**Question 92**

Select the synonym of inscription

- A scrubbed
- B rivet
- C jaded
- D engrave

Answer: D

**Question 93**

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

Every evening a \_\_\_\_\_ of wolves descends into the valley to hunt.

- A pack
- B gang
- C company
- D herd

Answer: A

#### Question 94

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

**A drop in the bucket**

- A So much silence that even a drop can be heard
- B A very small amount compared with what is needed
- C The final act before the task is done
- D A small favour is worth a lot to a person in trouble

**Answer: B**

### SSC CHSL Expected Cutt off

#### Question 95

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

**Represent something as being less important than it really is.**

- A discriminant
- B stride
- C underplay
- D imperious

**Answer: C**

#### Instructions

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

Instead of finding the root cause of \_\_\_(1)\_\_\_ of Indians, the British government took to more \_\_\_(2)\_\_\_ measures. Under the Defense of India Act, it gave more power to the police to arrest persons to stop processions with \_\_\_(3)\_\_\_ movements and actions. The Act brought in the Central Legislative Assembly was defeated by one vote. Even then it was to be passed in the form of an ordinance in the "interest of the public." Bhagat Singh who was in hiding all this while, volunteered to throw a bomb in the Central Legislative Assembly where the meeting to pass the ordinance was being held. It was a carefully laid out \_\_\_(4)\_\_\_, not to cause death or injury but to \_\_\_(5)\_\_\_ the attention of the government, that the modes of its suppression could no more be tolerated. It was decided that Bhagat Singh and Batukeshwar Dutt would court arrest after throwing the bomb.

**Question 96**

(1)

- A discontent
- B problem
- C sadness
- D protest

**Answer: A**

**Question 97**

(2)

- A drastic
- B angrier
- C repressive
- D damaging

**Answer: C**

**SSC CHSL Study Material**

**Question 98**

(3)

- A out of the ordinary
- B suspicious
- C cautious
- D skeptical

**Answer: B**

**Question 99**

(4)

- A scam
- B trick
- C trap
- D plot

**Answer: D**

**Question 100**

**(5)**

- A draw
- B bring
- C get
- D notice

**Answer: A**

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