



## SSC CHSL 7 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. Hirakund : Mahanadi :: Tehri Dam : ?

- A Damodar
- B Bhagirathi
- C Yamuna
- D Son

Answer: B

### Explanation:

Hirakund Dam is built across the Mahanadi river, similarly Tehri Dam is built across *Bhagirathi* river.

=> Ans - (B)

## SSC CHSL Free Mock Test

### Question 2

Select the related word/letters/number from the given alternatives. LG : WM :: DC : ?

- A IJ
- B EF
- C GE
- D LI

Answer: C

### Explanation:

Expression = LG : WM :: DC : ?

The pattern followed is that when we assign numerical value to the alphabets, we get :

$$L(12) \equiv 12 \times 2 - 1 = 23 \equiv W$$

$$G(7) \equiv 7 \times 2 - 1 = 13 \equiv M$$

$$\text{Similarly, } D(4) \equiv 4 \times 2 - 1 = 7 \equiv G$$

$$C(3) \equiv 3 \times 2 - 1 = 5 \equiv E$$

=> DC : GE

=> Ans - (C)

### Question 3

Select the related word/letters/number from the given alternatives. IM : RZ :: HF : ?

A MP

B OK

C PL

D QR

Answer: C

#### Explanation:

Expression = IM : RZ :: HF : ?

The pattern followed is that when we assign numerical value to the alphabets, we get :

$$I(9) \equiv 9 \times 2 = 18 \equiv R$$

$$M(13) \equiv 13 \times 2 = 26 \equiv Z$$

$$\text{Similarly, } H(8) \equiv 8 \times 2 = 16 \equiv P$$

$$F(6) \equiv 6 \times 2 = 12 \equiv L$$

=> HF : PL

=> Ans - (C)

### Question 4

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

16 : 40 :: 20 : ?

A 29

B 21

C 50

D 60

Answer: C

#### Explanation:

Expression = 16 : 40 :: 20 : ?

The pattern followed is =  $x : 2.5x$

Eg :-  $16 : 16 \times 2.5 = 16 : 40$

Similarly,  $20 \times 2.5 = 50$

=> Ans - (C)

## SSC CHSL Previous Papers (DOWNLOAD PDF)

### Question 5

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

- A Mohammad Azharuddin
- B Sunil Gavaskar
- C Dhyan Chand
- D Yuvraj Singh

**Answer:** C

### Explanation:

Mohammad Azharuddin, Sunil Gavaskar and Yuvraj Singh are all cricketers, while Dhyan Chand played hockey, hence he is the odd one out.

=> Ans - (C)

### Question 6

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

- A EV
- B GT
- C JQ
- D MO

**Answer:** D

### Explanation:

Each pair of words represent letters which are at the same position when counted from reverse alphabetical order.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
↓	↓	...																					...	↓	↓
Z	Y	X	W	V	U	T	S	R	Q	P	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A

E -> V

G -> T

J -> Q

M -> N

=> Ans - (D)

#### Question 7

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

A 4246

B 8314

C 9546

D 7284

Answer: B

#### Explanation:

The pattern followed is that the product of first and last digit is equal to the middle digits, but  $8 \times 4 \neq 31$ , hence 8314 is the odd one out.

=> Ans - (B)

## SSC CGL MTS Previous Papers (DOWNLOAD PDF)

#### Question 8

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

A 78, 26

B 19, 20

C 20, 40

D 36, 12

Answer: B

#### Explanation:

Of the given pair of numbers, only (19,20) are co-prime which have no other common factors than 1, hence (19,20) is the odd one out.

=> 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. Constable, Head constable, ? , Inspector

- A Deputy Superintendent of Police
- B Superintendent of Police
- C Sub-inspector
- D Assistant Commissioner of Police

**Answer: C**

#### **Explanation:**

The given series is of successive order of posts in police departments.

= Constable -> Head constable -> Sub-inspector -> Inspector

=> Ans - (C)

### Question 10

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

3, 6, 9, 36, 41, ?

- A 244
- B 225
- C 246
- D 410

**Answer: C**

#### **Explanation:**

The pattern followed is :

$$3 \times 2 = 6$$

$$6 + 3 = 9$$

$$9 \times 4 = 36$$

$$36 + 5 = 41$$

$$41 \times 6 = 246$$

=> Ans - (C)

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

### Question 11

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) Some scooters are trucks.

(II) All trucks are trains.

Conclusion:

(I) Some scooters are trains.

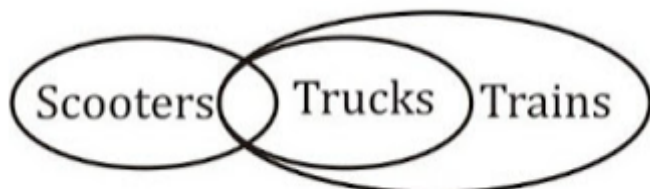
(II) No truck is a scooter.

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

Answer: A

Explanation:

The venn diagram for above statements is :



Conclusion:

(I) Some scooters are trains = true

(II) No truck is a scooter = false

Thus, only conclusion I follows.

=> Ans - (A)

### Question 12

A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. JLN, RTV, ZBD, ?

- A SUW
- B HJL

C GHI

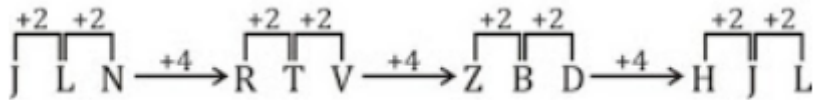
D TVX

**Answer: B**

**Explanation:**

Expression : JLN, RTV, ZBD, ?

The pattern followed is :



Thus, missing term = **HJL**

=> Ans - (B)

**Question 13**

**A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. XV, BA, JK, ?**

A MP

B VS

C VZ

D UD

**Answer: C**

**Explanation:**

Expression : XV, BA, JK, ?

The pattern followed in each letter of the terms is :

1st letter : X (+4 letters) = B (+8 letters) = J (+12 letters) = V

2nd letter : V (+5 letters) = A (+10 letters) = K (+15 letters) = Z

Thus, missing term = **VZ**

=> Ans - (C)

## SSC Stenographer Previous Papers (DOWNLOAD PDF)

**Question 14**

**If yesterday was Tuesday, then what day of the week will the tenth day from today be?**

A Friday



- B Sunday
- C Monday
- D Saturday

**Answer: D**

**Explanation:**

If yesterday was Tuesday, then today is = Wednesday

Also, 7th day from today is = Wednesday

Now, 10th day = Wednesday (+3) = Saturday

=> Ans - (D)

**Question 15**

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

- i. Collaborate
- ii. Constant
- iii. Correspondence
- iv. Combination

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

**Answer: D**

**Explanation:**

As per the order of dictionary :

= Collaborate -> Combination -> Constant -> Correspondence

≡ i, iv, ii, iii

=> Ans - (D)

**Question 16**

In a certain code language, 'TAPRECORDER' is written as '!#&@^@?%^+@^'. How is 'REPORT' written in that code language?

- A ^@&^%!
- B ^@&%!

C ^@&%^!

D ^@%&^!

Answer: C

**Explanation:**

The codes for each letter is given :

R -> ^

E -> @

P -> &

O -> %

R -> ^

T -> !

Thus, REPORT : ^@&%^!

=> Ans - (C)

## SSC CGL Previous Papers (DOWNLOAD PDF)

**Question 17**

In the following questions select the missing number from the given series.

13	169	961
15	?	2601
12	144	441

A 81

B 361

C 289

D 225

Answer: D

**Explanation:**

In each row, the number in the middle is the square of the first number.

Eg :-  $13^2 = 169$  and  $12^2 = 144$

Similarly,  $15^2 = 225$

=> Ans - (D)

### Question 18

If "\*" denotes "added to", "&" denotes "divided by", "@" denotes "multiplied by" and "%" denotes "subtracted from", then  $153 \& 17 @ 6 \% 9 * 18 = ?$

- A 63
- B 98
- C 93
- D 10

Answer: A

#### Explanation:

Expression =  $153 \& 17 @ 6 \% 9 * 18 = ?$

$$\equiv 153 \div 17 \times 6 - 9 + 18$$

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

$$= 54 + 9 = 63$$

=> Ans - (A)

### Question 19

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

d\_fde\_\_deee\_

- A eeff
- B cdef
- C ddee
- D deee

Answer: A

#### Explanation:

The pattern followed is that, the term 'def' is repeated and number of e's is also increased in each term.

= def deef deeff

=> Ans - (A)

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

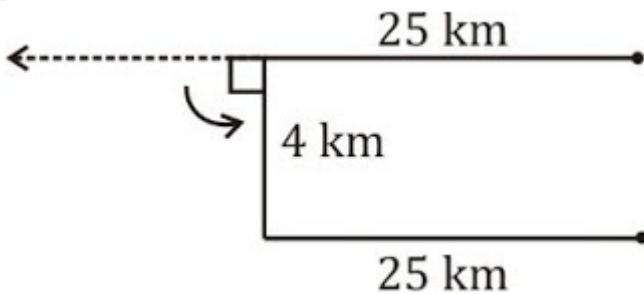
**Question 20**

A man travels 25 km towards the west and then turns 90° to his left and travels another 4 km. Finally, he turns left and covers 25 km. In which direction is he now from his original position?

- A West
- B East
- C South
- D North

**Answer: C**

**Explanation:**



The man travels 25 km towards the west and then turns 90° to his left and travels another 4 km towards south direction. Finally, he turns left and travels east to cover 25 km.

Thus, he is in south direction from his original position.

=> Ans - (C)

**Question 21**

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix I are numbered from 0 to 4 and that of Matrix II are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column, for example, 'N' can be represented by 21, 67 etc. and 'W' can be represented by 66, 57 etc. Similarly, you have to identify the set for the word 'HUNT'.

**Matrix - I**

	0	1	2	3	4
0	T	R	A	N	B
1	W	U	N	H	U
2	E	N	S	G	U
3	N	Y	P	U	M
4	H	T	U	F	A

**Matrix - II**

	5	6	7	8	9
5	T	A	R	I	H
6	X	R	N	W	B
7	C	S	Y	E	U
8	S	N	T	M	S
9	G	B	E	R	H

- A 40, 33, 03, 88
- B 99, 23, 56, 00

C 59, 42, 12, 79

D 13, 11, 30, 41

**Answer: D**

**Explanation:**

(A) : 40, 33, 03, 88 = HUNM

(B) : 99, 23, 56, 00 = HGAT

(C) : 59, 42, 12, 79 = HUNU

(D) : 13, 11, 30, 41 = **HUNT**

=> Ans - (D)

**Question 22**

Introducing a girl, a man says, "She is the daughter of the daughter of my wife". How is man related to the girl?

A Maternal uncle

B Son

C Maternal grandfather

D Father

**Answer: C**

**Explanation:**

Daughter of man's wife = Man's daughter

Now, the girl is daughter of man's daughter, => The girl is his granddaughter.

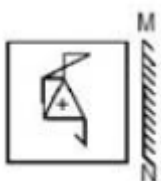
Thus, the man is the maternal grandfather of the girl.

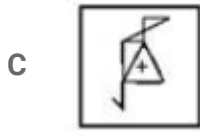
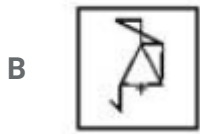
=> Ans - (C)

## 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?

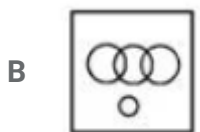




Answer: D

Question 24

Identify the diagram that best represents the relationship among the given classes. Olympic games, Tennis, Wrestling, Ludo

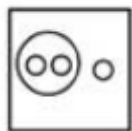


Answer: A

Explanation:

Tennis and wrestling are both Olympic games but Ludo is not an Olympic game. Hence will not intersect anyone.

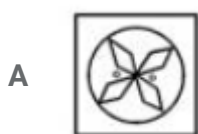
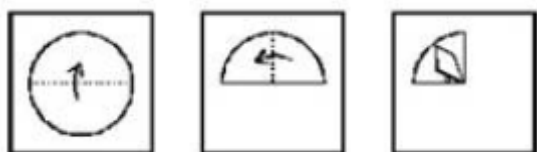
Thus, the venn diagram that best describes above relationship is :



=> Ans - (A)

### Question 25

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



Answer: C

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

### General Awareness

#### Instructions

For the following questions answer them individually

**Question 26**

**Group of 4 bits forms a**

- A Byte
- B Nibble
- C Gigabyte
- D Terabyte

**Answer: B**

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

**Question 27**

**Barograph was invented by**

- A Lucien Vidi
- B John Venn
- C Theophilus Van Kannel
- D Lewis Urry

**Answer: A**

**Question 28**

**Diabetes is caused by**

- A Excess of insulin
- B Low production of Insulin
- C Malfunction of liver
- D Higher production of bilirubin

**Answer: B**

**Question 29**

**Tectona grandis Linn is the scientific name of**



- A Guava
- B Teak
- C Amla
- D Chiku

**Answer: B**

## SSC CPO Free Mock Test (Latest Pattern)

### Question 30

Sea-Anemones belongs to the phylum

- A Arthropoda
- B Cnidaria
- C Porifera
- D Mollusca

**Answer: B**

### Question 31

Which among the following is present inside the nucleus of an atom?

- A Protons and Neutrons
- B Electrons and Protons
- C Neutrons and Electrons
- D Neutrons, Protons, Electrons

**Answer: A**

### Question 32

What is baking soda?

- A Aluminium bicarbonate
- B Sodium isolate

C Sodium bicarbonate

D Aluminium sulphate

**Answer: C**

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**Question 33**

**Elephanta Caves is in**

A Maharashtra

B Orissa

C Rajasthan

D Sikkim

**Answer: A**

**Question 34**

**Which of the following is a classical dance from North India?**

A Bharatanatyam

B Kuchipudi

C Kathak

D Kathakali

**Answer: C**

**Question 35**

**If demand curve for camping tents is  $D = 100000 - 17P$  and supply curve is  $S = 50000 + 8P$ , find the equilibrium Price?**

A Rs. 1000

B Rs. 2000

C Rs. 4000

D Rs. 500

Answer: B

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

### Question 36

Value of Total Goods and Services produced in a country is its .....

- A Gross Domestic Product
- B Gross Revenue Income
- C Total Goods Revenue
- D Total Income

Answer: A

### Question 37

Dissolved oxygen in rivers is close to .....parts per million.

- A 125
- B 25
- C 5
- D 0

Answer: C

### Question 38

Which of the following is also known as a Common Water Hyacinth?

- A Pistia
- B Opuntia
- C Aegilops
- D Eichhornia

Answer: D

## SSC CHSL Free Videos (Youtube)

### Question 39

Rukmini Devi Arundale is associated with .....

- A Kathak
- B Bharatnatyam
- C Kuchipudi
- D Bhangra

**Answer: B**

### Question 40

Which state does not share a common border with Haryana?

- A Uttar Pradesh
- B Madhya Pradesh
- C Himachal Pradesh
- D Rajasthan

**Answer: B**

### Question 41

Which planet is also referred to as a "Dwarf planet"?

- A Pluto
- B Mercury
- C Jupiter
- D Saturn

**Answer: A**

**SSC CHSL Syllabus**

**Question 42**

**Who was the founder of the Brahma Samaj, founded in 1828?**

- A Rabindranath Tagore
- B Subhash Chandra Bose
- C Sardar Vallabh Bhai Patel
- D Raja Ram Mohan Roy

**Answer: D**

**Question 43**

**Shah Jahan built Taj Mahal in memory of .....**

- A Ruqayya Sultan Begum
- B Jodha Bai
- C Mumtaz Mahal
- D Nur Jahan

**Answer: C**

**Question 44**

**Which actor won the best actor award in the 1st Filmfare Awards?**

- A Dev Anand
- B Rajesh Khanna
- C Dilip Kumar
- D Amitabh Bachchan

**Answer: C**

**SSC CHSL Expected Cutt off**

**Question 45**

**Which of the following physical quantities is a scalar quantity?**

- A Weight
- B Impulse
- C Young's Modulus
- D acceleration

**Answer: C**

**Question 46**

**Which among the following elements is a liquid at room temperature?**

- A Phosphorus
- B Mercury
- C Sodium
- D Aluminium

**Answer: B**

**Question 47**

**How many maximum terms, a person can serve as Prime Minister of India?**

- A 3
- B 5
- C 7
- D No limit

**Answer: D**

## **SSC CHSL Study Material**

**Question 48**

**If the president declares emergency then this proclamation must be approved by the Parliament within .....**

- A 1 year

- B 6 months
- C 3 months
- D one month

**Answer: D**

**Question 49**

**Deepika Kumari is associated with .....**

- A Archery
- B Wrestling
- C Boxing
- D Swimming

**Answer: A**

**Question 50**

**The Arthashastra was written by**

- A Chanakya
- B Kalidasa
- C Harsha Vardhana
- D Vatsyayana

**Answer: A**

**SSC CHSL Free App**

## **Mathematics**

**Instructions**

For the following questions answer them individually

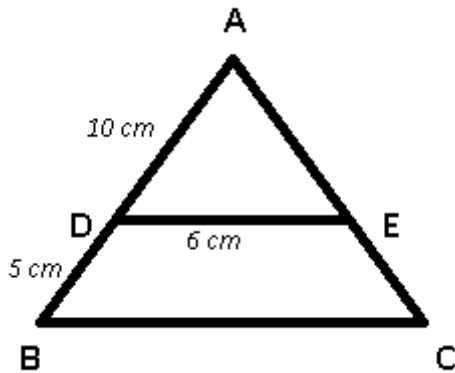
**Question 51**

In  $\Delta ABC$ , D and E are points on side AB and AC respectively. DE is parallel to BC. If lengths of AD, DB and DE are 10 cm, 5 cm and 6 cm respectively. What is the length of BC?

- A 9 cm
- B 2 cm
- C 3 cm
- D 11 cm

Answer: A

Explanation:



DE is parallel to BC

$$\Rightarrow \frac{AD}{AB} = \frac{DE}{BC}$$

$$\Rightarrow \frac{5}{10+5} = \frac{6}{BC}$$

$$\Rightarrow \frac{2}{3} = \frac{6}{BC}$$

$$\Rightarrow BC = 3 \times 3 = 9 \text{ cm}$$

$\Rightarrow$  Ans - (A)

## SSC CHSL Free Mock Test

Question 52

If  $2x - 1 < 5x + 2$  and  $2x + 5 < 6 - 3x$ , then  $x$  can take which of the following values?

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

Answer: B

Explanation:



Expression 1 :  $2x - 1 < 5x + 2$

$\Rightarrow 5x - 2x > -1 - 2 \Rightarrow 3x > -3$

$\Rightarrow x > \frac{-3}{3} \Rightarrow x > -1$  -----(i)

Expression 2 :  $2x + 5 < 6 - 3x$

$\Rightarrow 2x + 3x < 6 - 5 \Rightarrow 5x < 1$

$\Rightarrow x < \frac{1}{5}$  -----(ii)

Combining equations (i) and (ii), we get :  $-1 < x < \frac{1}{5}$

Thus, the only possible value that  $x$  can take = 0

$\Rightarrow$  Ans - (B)

### Question 53

A carpenter can build a cupboard in 60 hours. After 15 hours he takes a break. What fraction of the cupboard is yet to be built?

A 0.5

B 0.9

C 0.75

D 0.25

Answer: C

### Explanation:

Time taken to build the cupboard = 60 hours

Time spent = 15 hours

$\Rightarrow$  Fraction of the cupboard yet to be built =  $\frac{(60-15)}{60} = \frac{45}{60}$

$= \frac{3}{4} = 0.75$

$\Rightarrow$  Ans - (C)

### Question 54

There is 75% increase in an amount in 5 years at simple interest. What will be the compound interest of Rs 40000 after 2 years at the same rate?

A Rs 25800

B Rs 32250

C Rs 12900

D Rs 19350

Answer: C

**Explanation:**

Let the rate of interest =  $r\%$

Let sum invested under simple interest = Rs.  $100x$  and time period = 5 years

$$\Rightarrow \text{Interest earned} = \frac{75}{100} \times 100x = Rs.75x$$

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

$$\Rightarrow \frac{100x \times r \times 5}{100} = 75x$$

$$\Rightarrow r = \frac{75}{5} = 15\%$$

Sum invested under compound interest = Rs. 40,000 and time period = 2 years

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

$$= 40,000 \left[ \left( 1 + \frac{15}{100} \right)^2 - 1 \right]$$

$$= 40,000 \left[ \left( \frac{23}{20} \right)^2 - 1 \right] = 40,000 \left( \frac{529-400}{400} \right)$$

$$= 100 \times 129 = Rs.12,900$$

## SSC CHSL Previous Papers (DOWNLOAD PDF)

**Question 55**

Which of the following equations has the sum of its roots as 5?

A  $x^2 - 5x + 6 = 0$

B  $x^2 - 6x - 5 = 0$

C  $x^2 + 5x + 6 = 0$

D  $x^2 + 6x - 5 = 0$

Answer: A

**Explanation:**

Sum of roots in an equation :  $ax^2 + bx + c = 0$  is  $-\frac{b}{a}$

(A) :  $x^2 - 5x + 6 = 0$

$$\Rightarrow \text{Sum of roots} = -\frac{-5}{1} = 5$$

(B) :  $x^2 - 6x - 5 = 0$

$$\Rightarrow \text{Sum of roots} = -\frac{-6}{1} = 6$$

(C) :  $x^2 + 5x + 6 = 0$

$$\Rightarrow \text{Sum of roots} = -\frac{5}{1} = -5$$

$$(D) : x^2 + 6x - 5 = 0$$

$$\Rightarrow \text{Sum of roots} = -\frac{6}{1} = -6$$

$\Rightarrow$  Ans - (A)

### Question 56

The base angle of an isosceles trapezium is  $45^\circ$ . If the shorter side and both the equal sides are 10 cm each, what is the area of the trapezium?

A  $50\sqrt{2} + 50$  sq cm

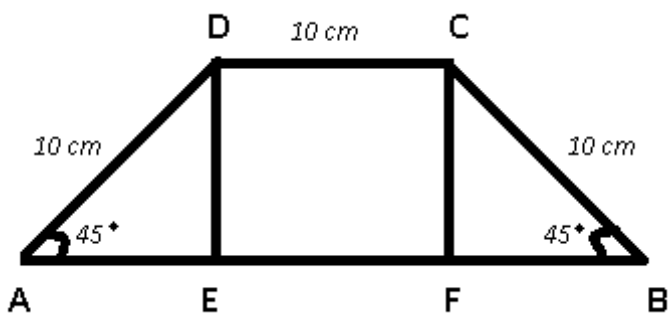
B  $50\sqrt{2} + 100$  sq cm

C  $100\sqrt{2} + 50$  sq cm

D  $100\sqrt{2} + 100$  sq cm

Answer: A

Explanation:



$$\text{In } \triangle ADE, \cos 45 = \frac{AE}{AD}$$

$$\Rightarrow \frac{1}{\sqrt{2}} = \frac{AE}{10}$$

$$\Rightarrow AE = \frac{10}{\sqrt{2}} = 5\sqrt{2}$$

$$\text{Similarly, } BF = 5\sqrt{2}$$

$$\text{Also, in } \triangle ADE, \sin 45 = \frac{DE}{AD}$$

$$\Rightarrow \frac{1}{\sqrt{2}} = \frac{DE}{10}$$

$$\Rightarrow DE = \frac{10}{\sqrt{2}} = 5\sqrt{2}$$

$$\Rightarrow AB = AE + EF + BF = 5\sqrt{2} + 10 + 5\sqrt{2} = 10 + 10\sqrt{2}$$

$$\therefore \text{Area of trapezium} = \frac{1}{2} \times \text{sum of parallel sides} \times \text{height}$$

$$= \frac{1}{2} \times (CD + AB) \times DE$$

$$= \frac{1}{2} \times (10 + 10 + 10\sqrt{2}) \times (5\sqrt{2})$$

$$= (10 + 5\sqrt{2}) \times 5\sqrt{2}$$

$$= 50\sqrt{2} + 50 \text{ sq. cm}$$

#### Question 57

Rahul sells a machine for Rs 50 lakhs at a loss. Had he sold it for Rs 60 lakh, his gain would have been 7 times the earlier loss. What is the cost price of the machine?

- A Rs 51.25 lakhs
- B Rs 58.75 lakhs
- C Rs 67.14 lakhs
- D Rs 43.75 lakhs

**Answer:** A

#### Explanation:

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

When selling price = Rs. 50 lakhs

$$\Rightarrow \text{Loss} = \text{Rs. } (x - 50) \text{ lakhs}$$

If selling price = Rs. 60 lakhs

$$\Rightarrow \text{Profit} = \text{Rs. } (60 - x) \text{ lakhs}$$

According to ques, Profit =  $7 \times$  loss

$$\Rightarrow (60 - x) = 7 \times (x - 50)$$

$$\Rightarrow 60 - x = 7x - 350$$

$$\Rightarrow 7x + x = 350 + 60 = 410$$

$$\Rightarrow x = \frac{410}{8} = \text{Rs. } 51.25 \text{ lakhs}$$

## SSC CGL MTS Previous Papers (DOWNLOAD PDF)

#### Question 58

If the radius of a circle is increased by 27%, then its area will increase by

- A 61.29 percent
- B 54 percent
- C 27 percent
- D 30.645 percent

**Answer: A**

**Explanation:**

Let radius = 10 cm

$$\Rightarrow \text{Area of circle} = \pi(10)^2 = 100\pi \text{ sq. cm}$$

$$\text{If radius is increased by 27\%, } \Rightarrow \text{New radius} = 10 + \frac{27}{100} \times 10 = 12.7 \text{ cm}$$

$$\text{New area} = \pi(12.7)^2 = 161.29\pi \text{ sq. cm}$$

$$\Rightarrow \% \text{ increase in area} = \frac{161.29 - 100}{100} \times 100$$

$$= 61.29 \%$$

$\Rightarrow$  Ans - (A)

**Question 59**

If Girilal's salary is  $\frac{11}{7}$  times of Hariram's and Shekhar's is  $\frac{3}{4}$  times of Hariram's, what is the ratio of Girilal's salary to Shekhar's salary.

A 44:21

B 28:33

C 33:28

D 21:44

**Answer: A**

**Explanation:**

Let Hariram's salary =  $28x$

$$\Rightarrow \text{Girilal's salary} = \frac{11}{7} \times 28x = 44x$$

$$\Rightarrow \text{Shekhar's salary} = \frac{3}{4} \times 28x = 21x$$

$$\therefore \text{Ratio of Girilal's salary to Shekhar's} = \frac{44x}{21x}$$

$$= 44 : 21$$

$\Rightarrow$  Ans - (A)

**Question 60**

$(\cos A + \sin A)^2 + (\cos A - \sin A)^2$  is equals to

A 1

B  $\frac{1}{2}$

C 2

D 0

Answer: C

**Explanation:**

Expression :  $(\cos A + \sin A)^2 + (\cos A - \sin A)^2$

$$= (\cos^2 A + \sin^2 A + 2.\sin A.\cos A) + (\cos^2 A + \sin^2 A - 2.\sin A.\cos A)$$

$$= (1 + 2.\sin A.\cos A) + (1 - 2.\sin A.\cos A)$$

$$= 1 + 1 = 2$$

=> Ans - (C)

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

Question 61

If a merchant offers a discount of 20% on the list price, then she makes a loss of 16%. What % profit or % loss will she make if she sells goods at a discount of 10% of the list price?

A 14 percent profit

B 20 percent profit

C 50 percent profit

D 5.5 percent loss

Answer: D

**Explanation:**

Let list price = Rs.  $100x$

After 20% discount, selling price =  $\frac{100-20}{100} \times 100x = \text{Rs. } 80x$

Let Cost price = Rs.  $y$

$$\Rightarrow \text{Loss \%} = \frac{y-80x}{y} \times 100 = 16$$

$$\Rightarrow \frac{y-80x}{y} = \frac{16}{100} = \frac{4}{25}$$

$$\Rightarrow 25y - 2000x = 4y$$

$$\Rightarrow 25y - 4y = 2000x$$

$$\Rightarrow y = \frac{2000x}{21} = 95.23x$$

If discount = 10%, => Selling price =  $\frac{100-10}{100} \times 100x = \text{Rs. } 90x$

$$\therefore \text{Loss \%} = \frac{95.23x-90x}{95.23x} \times 100$$

$$= 5.49 \approx 5.5\%$$

**Question 62**

The sum of all prime numbers between 30 and 42 is

- A 103
- B 109
- C 105
- D 104

**Answer: B**

**Explanation:**

Sum of prime numbers between 30 and 42 :

$$= 31 + 37 + 41$$

$$= 109$$

$$\Rightarrow \text{Ans - (B)}$$

**Question 63**

The curved surface area of a hemisphere is 2772 sq cm, what is its radius? (Take  $\pi = 22/7$ )

- A 42 cms
- B 21 cms
- C 10.5 cms
- D 31.5 cms

**Answer: B**

**Explanation:**

Let radius of hemisphere =  $r$  cm

$$\Rightarrow \text{Curved surface area} = 2\pi r^2 = 2772$$

$$\Rightarrow 2 \times \frac{22}{7} \times (r)^2 = 2772$$

$$\Rightarrow (r)^2 = 2772 \times \frac{7}{44}$$

$$\Rightarrow (r)^2 = 63 \times 7 = 441$$

$$\Rightarrow r = \sqrt{441} = 21 \text{ cm}$$

$$\Rightarrow \text{Ans - (B)}$$

**Question 64**

If  $\cos C - \cos D = x$ , then value of  $x$  is

- A  $2\sin[(C+D)/2]\cos[(C-D)/2]$
- B  $2\cos[(C+D)/2]\sin[(C-D)/2]$
- C  $2\sin[(C+D)/2]\sin[(D-C)/2]$
- D  $2\cos[(C+D)/2]\cos[(C-D)/2]$

**Answer: C**

**Explanation:**

We know that,  $\cos(x + y) = \cos x \cos y - \sin x \sin y$  -----(i)

and  $\cos(x - y) = \cos x \cos y + \sin x \sin y$  -----(ii)

Subtracting equations (ii) from (i), we get :

$$\cos(x + y) - \cos(x - y) = -2\sin x \sin y \text{ -----(iii)}$$

Let  $x + y = C$  and  $x - y = D$

$$\Rightarrow x = \frac{C+D}{2}$$

$$\text{and } y = \frac{C-D}{2}$$

Substituting above values in equation (iii)

$$\Rightarrow \cos C - \cos D = -2\sin\left(\frac{C+D}{2}\right)\sin\left(\frac{C-D}{2}\right)$$

$$\Rightarrow \cos C - \cos D = 2\sin\left(\frac{C+D}{2}\right)\sin\left(\frac{D-C}{2}\right)$$

$\Rightarrow$  Ans - (C)

**Question 65**

The value of  $x$  for which the expressions  $12 - 6x$  and  $4x + 2$  become equal is

- A 0
- B 2
- C 1
- D 4

**Answer: C**

**Explanation:**

Expressions :  $12 - 6x$  and  $4x + 2$

$$\Rightarrow 12 - 6x = 4x + 2$$



$$\Rightarrow 4x + 6x = 12 - 2$$

$$\Rightarrow 10x = 10$$

$$\Rightarrow x = \frac{10}{10} = 1$$

$\Rightarrow$  Ans - (C)

#### Question 66

$\Delta DEF$  and  $\Delta GHI$  are similar triangles. Length of DE is 4 cm and length of the corresponding side GH is 9 cm. What is the ratio of areas of  $\Delta DEF$  and  $\Delta GHI$ ?

A 81:16

B 4:9

C 16:81

D 9:4

**Answer:** C

#### Explanation:

It is given that  $\Delta DEF \sim \Delta GHI$

Also, length of DE = 4 cm and length of the corresponding side GH = 9 cm

$\Rightarrow$  Ratio of Area of  $\Delta DEF$  : Area of  $\Delta GHI$  = Ratio of square of corresponding sides =  $(DE)^2 : (GH)^2$

$$= \frac{(4)^2}{(9)^2} = \frac{16}{81}$$

$\therefore$  The required ratio is 16 : 81

$\Rightarrow$  Ans - (C)

## SSC CGL Previous Papers (DOWNLOAD PDF)

#### Question 67

To travel 816 km, an Express train takes 9 hours more than Rajdhani. If however, the speed of the Express train is doubled, it takes 4 hours less than Rajdhani. What is the speed of Rajdhani?

A 48 km/hr

B 62.8 km/hr

C 33.2 km/hr

D 77.5 km/hr

**Answer:** A

**Explanation:**

Let speed of Rajdhani train =  $x$  km/hr and Express train =  $y$  km/hr

Using, time = distance/speed

$$\text{Acc. to ques, } \Rightarrow \frac{816}{y} - \frac{816}{x} = 9$$

$$\Rightarrow \frac{1}{y} - \frac{1}{x} = \frac{9}{816} = \frac{3}{272} \text{ -----(i)}$$

If speed of express train is doubled =  $2y$  km/hr

$$\Rightarrow \frac{816}{x} - \frac{816}{2y} = 4$$

$$\Rightarrow \frac{1}{x} - \frac{1}{2y} = \frac{4}{816} = \frac{1}{204} \text{ -----(ii)}$$

Adding equations (i) and (ii), we get :

$$\Rightarrow \frac{1}{y} - \frac{1}{2y} = \frac{3}{272} + \frac{1}{204}$$

$$\Rightarrow \frac{1}{2y} = \frac{9+4}{816}$$

$$\Rightarrow y = \frac{408}{13} \text{ km/hr}$$

$$\therefore \text{Speed of Rajdhani} = \frac{1}{x} = \frac{13}{408} - \frac{3}{272}$$

$$\Rightarrow \frac{1}{x} = \frac{26-9}{816} = \frac{17}{816}$$

$$\Rightarrow x = \frac{816}{17} = 48 \text{ km/hr}$$

**Question 68**

What would be the equation of the line, which intercepts x-axis at -5 and is perpendicular to the line  $y = 2x + 3$ ?

A  $x - 2y = -5$

B  $x + 2y = 5$

C  $x + 2y = -5$

D  $x - 2y = 5$

**Answer: C**

**Explanation:**

Let the line be  $l$  which has x-intercept -5,  $\Rightarrow l$  passes through (-5,0)

Slope of line  $ax + by + c = 0$  is  $-\frac{a}{b}$

$$\Rightarrow \text{Slope of line } y = 2x + 3 \Rightarrow 2x - y + 3 = 0$$

$$\Rightarrow \text{Slope} = \frac{-2}{-1} = 2$$

Product of slopes of two perpendicular lines = -1

Let slope of line  $l = m$

$$\Rightarrow m \times 2 = -1$$

$$\Rightarrow m = \frac{-1}{2}$$

Now, equation of line having slope  $m$  and passing through  $(x_1, y_1)$  is  $(y - y_1) = m(x - x_1)$

$$\Rightarrow (y - 0) = \frac{-1}{2}(x + 5)$$

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

$$\Rightarrow x + 2y = -5$$

#### Question 69

If  $4pxy = (x + 2y)^2 - (x - 2y)^2$ , then what will be the value of  $p$ ?

A 0.5

B 0.25

C 4

D 2

Answer: D

#### Explanation:

$$\text{Expression : } 4pxy = (x + 2y)^2 - (x - 2y)^2$$

$$\Rightarrow 4pxy = (x^2 + 4y^2 + 4xy) - (x^2 + 4y^2 - 4xy)$$

$$\Rightarrow 4pxy = (x^2 - x^2) + (4y^2 - 4y^2) + (4xy + 4xy)$$

$$\Rightarrow 4pxy = 8xy$$

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

$\Rightarrow$  Ans - (D)

## SSC CGL Free Mock Test (Latest Pattern)

#### Question 70

In the first 26 overs of a cricket match, the run rate was 5.4 runs/over. What is the required run rate in the remaining 24 overs to reach the target of 294 runs?

A 7

B 6.4

C 7.6

D 5.8

**Answer: B**

**Explanation:**

Run rate in 26 overs = 5.4 runs/over

=> Runs scored in 26 overs =  $26 \times 5.4 = 140.4$

Runs needed to score in 24 overs =  $294 - 140.4 = 153.6$

=> Run rate required =  $\frac{153.6}{24} = 6.4$

=> Ans - (B)

**Question 71**

What is the value of  $\tan\left(-\frac{5\pi}{6}\right)$

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

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

C  $\sqrt{3}$

D  $-\sqrt{3}$

**Answer: B**

**Explanation:**

Expression :  $\tan\left(-\frac{5\pi}{6}\right)$

=  $-\tan\left(\frac{5\pi}{6}\right)$

=  $-\tan\left(\pi - \frac{\pi}{6}\right) = -(-\tan\frac{\pi}{6})$

=  $\tan\left(\frac{\pi}{6}\right) = \frac{1}{\sqrt{3}}$

=> Ans - (B)

**Question 72**

Refer the below data table and answer the following question

	Number of employees	Annual salary (in lakhs)	Bonus as percent of annual salary
Manager	1	48	40%
Executive	6	16	20%
Trainee	2	2	20%

What is the average bonus received by each employee (employee includes all - Manager, Executive, and Trainee)?

- A 3920004
- B 220000
- C 228000
- D 435556

**Answer: D**

**Explanation:**

Total bonus of managers (in lakh) =  $1 \times 48 \times \frac{40}{100} = 19.2$  lakhs

Total bonus of executive (in lakh) =  $6 \times 16 \times \frac{20}{100} = 19.2$  lakhs

Total bonus of trainee (in lakh) =  $2 \times 2 \times \frac{20}{100} = 0.8$  lakhs

=> Average bonus in rupees =  $\frac{(19.2+19.2+0.8)}{(1+6+2)}$

=  $\frac{39.2}{9} = 4.35556$  lakhs = 4,35,556

=> Ans - (D)

## SSC Stenographer Previous Papers (Latest Pattern)

**Question 73**

Refer the below data table and answer the following question.

	2011	2012	2013	2014	2015
<b>Company A</b>	4000	3000	3000	1000	2000
<b>Company B</b>	1000	1000	1000	5000	4000
<b>Company C</b>	1000	1000	4000	2000	1000

For which of the following pairs of years the total exports from the three Companies together are equal?  
(Note: Figures given are in lakh rupees)

- A 2013 & 2014
- B 2013 & 2015
- C 2011 & 2012
- D 2014 & 2015

**Answer: A**

**Explanation:**

Total exports from the three companies together in :

$$2011 = 4000 + 1000 + 1000 = 6000$$

$$2012 = 3000 + 1000 + 1000 = 5000$$

$$2013 = 3000 + 1000 + 4000 = 8000$$

$$2014 = 1000 + 5000 + 2000 = 8000$$

$$2015 = 2000 + 4000 + 1000 = 7000$$

Clearly, total exports in 2013 and 2014 are equal to 8000

=> Ans - (A)

#### Question 74

Refer the below data table and answer the following Question.

Year	Profit or (-Loss) in Rs crore
2011	5
2012	-5
2013	20
2014	5
2015	-5

What was the total Profit or loss of the company in last 5 years?

- A Profit of Rs 30 crores
- B Loss of Rs 20 crores
- C Loss of Rs 30 crores
- D Profit of Rs 20 crores

**Answer:** D

#### Explanation:

Total profit or loss in Rs. crore in last 5 years

$$= 5 - 5 + 20 + 5 - 5$$

$$= \text{Rs. } 20 \text{ crore}$$

Since, it is positive, thus profit of Rs. 20 crore

=> Ans - (D)

### Question 75

Refer the below data table and answer the following Question.

India's Exports in 2015	Value in Million US\$
Jewellery	500
Software	850
Cotton	950
Steel	1000
Electronics	875

Electronics was what percent of total exports?

- A 23.46 percent
- B 25.96 percent
- C 18.46 percent
- D 20.96 percent

**Answer:** D

#### **Explanation:**

Value in millions of electronics = 875

Total exports = 500 + 850 + 950 + 1000 + 875 = 4175

=> % of electronics in total exports =  $\frac{875}{4175} \times 100$

=  $\frac{3500}{167} = 20.96\%$

=> Ans - (D)

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

### **English**

#### **Instructions**

For the following questions answer them individually

#### **Question 76**

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

Open to more than one interpretation; not having one obvious meaning.

- A trite

- B opposite
- C exceptional
- D ambiguous

Answer: D

## SSC MTS Free Mock Test (Latest Pattern)

### Question 77

Select the word with the correct spelling.

- A humanoide
- B rikshaw
- C deviance
- D virtuos

Answer: C

### Question 78

Select the antonym of vibrant

- A drab
- B gaudy
- C jazzy
- D vivid

Answer: A

### Question 79

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.

If you are caught using a calculator in the exam then it will be .....

- A taken
- B confiscated



- C confiscate
- D under possession

Answer: B

## SSC CPO Free Mock Test (Latest Pattern)

### Question 80

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.

"Please don't hit me" Rita said to the attacker.

- A Rita begged the attacker to not to hit her.
- B Rita told the attacker to not hit her.
- C Rita begged the attacker not to hit her.
- D Rita pleaded with the attacker to not to hit her.

Answer: A

### Question 81

Select the synonym of dignity

- A decency
- B immoral
- C primacy
- D chagrin

Answer: A

### Question 82

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

Indian Defence forces(A)/fought the enemy(B)/till the last soldier was standing.(C)/No error(D)

- A A
- B B

C C

D D

Answer: A

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Question 83

Choose the synonym of defecate

A chaff

B quench

C ingest

D secrete

Answer: D

Question 84

Select the word with the correct spelling.

A bargundy

B panacea

C revolver

D cantinue

Answer: B

Question 85

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.

.....and my younger brother went to the movies all by ourselves.

A I

B Mine

C Myself

D My own self

Answer: A

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

Question 86

Rearrange the parts of the sentence in correct order

The truth about these P-communities is that Q-they deserve to die  
R-dysfunctional, downscale

A PQR

B QPR

C RPQ

D RQP

Answer: C

Question 87

Improve the bracketed part of the sentence.

The unfortunate old man was knocked (away by) the rash driver.

A out by

B off by

C by

D no improvement

Answer: A

Question 88

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

Something widely feared as a possible dangerous occurrence.

A spectre

B beguile

C monolith

D canny

Answer: A

## SSC CHSL Free Videos (Youtube)

### Question 89

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

The landlord could not(A)/tell which of the servant(B)/broke the glass.(C)/No error(D)

A A

B B

C C

D D

Answer: B

### Question 90

Improve the bracketed part of the sentence. One should get (trained) to prepare one's own breakfast.

A habituated

B used

C prepared

D no improvement

Answer: B

### Question 91

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

Mrs. Vaijanthi teaches us literature.

A We have been taught literature by Mrs. Vaijanthi.

B Literature is being taught by Mrs. Vaijanthi to us.

C Literature is being taught to us by Mrs. Vaijanthi.

D Literature is taught by Mrs. Vaijanthi to us.

Answer: C

## SSC CHSL Syllabus

### Question 92

Select the antonym of deep-seated

A chronic

B temporary

C inbred

D subconscious

Answer: B

### Question 93

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

Zero tolerance

A Accuracy is paramount

B Non-acceptance of antisocial behaviour

C No return without risk

D No problem at all

Answer: B

### Question 94

Rearrange the parts of the sentence in correct order.

Do not be anxious about

P-thanksgiving, present your requests to God

Q-and petition, with

R-anything, but in every situation, by prayer

A PRQ

B PQR

C QRP

D RQP

Answer: D

## SSC CHSL Expected Cutt off

### Question 95

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

**Variety is the spice of life**

A New experiences make life more interesting

B Experimentation may be risky

C Life is very beautiful

D There is no life without excitement

Answer: A

### Instructions

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

Potholes and .....(1) placed speed breakers of all shapes and sizes on city streets have become a health .....(2) for two-wheeler riders. From cuts and bruises, wounds, and a visit to the emergency room to serious and .....(3) back and neck-related complications, potholes have become an ..... (4) for those on the road. Doctors report an increase in patients with injuries and serious bone-related .....(5) in the monsoon.

### Question 96

(1)

A haphazardly

B accidentally

C casually

D randomly

Answer: A

**Question 97**

(2)

- A risk
- B threat
- C danger
- D hazard

**Answer: D**

## SSC CHSL Study Material

**Question 98**

(3)

- A chronic
- B painful
- C hurtful
- D terrible

**Answer: A**

**Question 99**

(4)

- A health risk
- B dangerous situation
- C imminent threat
- D epidemic

**Answer: C**

**Question 100**

(5)

- A confusions
- B complications
- C complexities
- D difficulties

**Answer: B**

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