



## SSC CHSL 29 Jan 2017 Afternoon 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. Eccrinology : Secretions :: Cardiology : ?

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

Answer: D

### Explanation:

Eccrinology is the branch of medical science concerned with secretions of the eccrine glands, similarly Cardiology is the branch of medicine that deals with diseases and abnormalities of the *heart*.

=> Ans - (D)

## SSC CHSL Free Mock Test

### Question 2

Select the related word/letters/number from the given alternatives. CFI : XUR :: GJM : ?

- A TRO
- B TQN
- C WQT
- D QWT

Answer: B

### Explanation:

Expression = CFI : XUR :: GJM : ?

The pattern followed is that letters which are at the corresponding opposite end with each other are written.

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

Similarly, for GJM : TQN

=> Ans - (B)

### Question 3

Select the related word/letters/number from the given alternatives. BFJ : KOS :: KOS : ?

- A TXC
- B SXB
- C TXB
- D SXC

**Answer: C**

**Explanation:**

Expression = BFJ : KOS :: KOS : ?

The pattern followed is that :

B	F	J
(+9)	(+9)	(+9)
K	O	S

Similarly, for KOS :

K	O	S
(+9)	(+9)	(+9)
T	X	B

=> Ans - (C)

**Question 4**

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

24 : 36 :: 52 : ?

A 19

B 70

C 49

D 78

**Answer: D**

**Explanation:**

Expression = 24 : 36 :: 52 : ?

The pattern followed is =  $x : 1.5x$

Eg :- 24 :  $24 \times 1.5 = 24 : 36$

Similarly,  $52 \times 1.5 = 78$

=> Ans - (D)

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**Question 5**

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

A Body

B Nose

C Eyes

D Lips

**Answer: A**

**Explanation:**

Nose, eyes and lips are all parts of the body, hence body is the odd one out.

=> Ans - (A)

**Question 6**

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

- A BYCX
- B DWEV
- C GUHS
- D IRJQ

**Answer:** C

**Explanation:**

Each pair of letters (1st,2nd and 3rd,4th) in the words are at the same position from the end.

```

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

```

B -> Y and C -> X

D -> W and E -> V

I -> R and J -> Q

But, G -> T and H -> S

=> Ans - (C)

**Question 7**

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

- A 13
- B 17
- C 19
- D 21

**Answer:** D

**Explanation:**

13, 17 and 19 are prime numbers, hence 21 is the odd one out.

=> Ans - (D)

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**Question 8**

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

- A 25673
- B 34664
- C 42763
- D 25556

**Answer:** C

**Explanation:**

Except for 42763, sum of digits of other numbers is 23, hence 42763 is the odd one out.

=> Ans - (C)

**Question 9**

A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. DJO, EKP, FLQ, GMR, ?

- A HOS
- B HNS
- C INS
- D DEF

**Answer: B**

**Explanation:**

Expression : DJO, EKP, FLQ, GMR, ?

The pattern followed in each letter of the terms is :

1st letter : D (+1 letter) = E (+1 letter) = F (+1 letter) = G (+1 letter) = H

2nd letter : J (+1 letter) = K (+1 letter) = L (+1 letter) = M (+1 letter) = N

3rd letter : O (+1 letter) = P (+1 letter) = Q (+1 letter) = R (+1 letter) = S

Thus, missing term = **HNS**

=> 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. DEF, ? , OPQ , VWX

- A HIJ
- B GHI
- C IJK
- D IPV

**Answer: C**

**Explanation:**

Expression : DEF, ? , OPQ , VWX

The pattern followed in each letter of the terms is :

1st letter : D (+5 letters) = I (+6 letters) = O (+7 letters) = V

2nd letter : E (+5 letters) = J (+6 letters) = P (+7 letters) = W

3rd letter : F (+5 letters) = K (+6 letters) = Q (+7 letters) = X

Thus, missing term = **IJK**

=> Ans - (C)

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**Question 11**

A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series.  
4, 18, 48, ?, 180

- A 80
- B 100
- C 105
- D 125

**Answer: B**

**Explanation:**

The pattern followed is  $n(n + 1)^2$

$$1 \times 2^2 = 4$$

$$2 \times 3^2 = 18$$

$$3 \times 4^2 = 48$$

$$4 \times 5^2 = 100$$

$$5 \times 6^2 = 180$$

=> Ans - (B)

**Question 12**

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

**Statements:**

- (I) Corruption has complete establishment in each sector of our country.
- (II) Corruption has gone into their deep roots of every process and system.

**Conclusion:**

- (I) People think about corruption in a routine way and not especially.
- (II) The eradication of corruption depends upon every individual. No government can enforce rules or regulation on people.

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

**Answer: D**

**Question 13**

A series is given with one term missing. Choose the correct alternative from the given ones that will complete the series. Tuesday, Thursday, Saturday, ?

- A Monday
- B Sunday
- C Tuesday
- D Thursday

**Answer: A**

**Explanation:**

Alternate days of a week are given :

Tuesday -> Thursday -> Saturday -> Monday

=> Ans - (A)

## SSC CGL Free Mock Test (Latest Pattern)

**Question 14**

Ramesh, Kamal, Mohit, Amit and Rohit are standing in a row in the order of their heights. Ramesh is shorter than Kamal but taller than Rohit. Mohit is the tallest. Amit is a little shorter than Kamal but little taller than Ramesh. Who is the shortest?

- A Amit
- B Mohit
- C Rohit
- D Kamal

**Answer: C**

**Explanation:**

Ramesh is shorter than Kamal but taller than Rohit, => Kamal > Ramesh > Rohit

Also, Mohit is the tallest.

Amit is a little shorter than Kamal but little taller than Ramesh, => Kamal > Amit > Ramesh

Combining above statements, we get : **Mohit > Kamal > Amit > Ramesh > Rohit**

∴ Rohit is the shortest.

=> Ans - (C)

**Question 15**

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

- i. Pitiful
- ii. Plague
- iii. Pitiless
- iv. Plaque
- v. Plankton

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

**Answer: D**

**Explanation:**

As per the order of dictionary :

= Pitiful -> Pitiless -> Plague -> Plankton -> Plaque

≡ i, iii, ii, v, iv

=> Ans - (D)

Question 16

In a certain code language, "DISORDER" is written as "OSIDREDR". How is "PRACTICE" written in that code language?

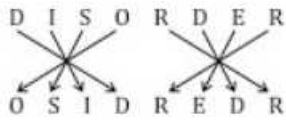
- A CARPECIT
- B CAREPCIT
- C CARTICE
- D CARECEIT

Answer: A

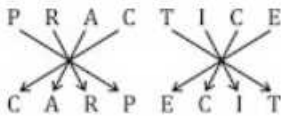
Explanation:

"DISORDER" is written as "OSIDREDR"

The pattern followed is :



Similarly, for PRACTICE :



=> Ans - (A)

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

Question 17

Find the missing number as per given Series in the table

6	42	7
8	32	4
9	?	5

- A 35
- B 45
- C 25
- D 50

Answer: B

Explanation:

The pattern followed is that in each row, the number at the middle is obtained by multiplying the other two.

Eg :-  $6 \times 7 = 42$

$8 \times 4 = 32$

Similarly,  $9 \times 5 = 45$

=> Ans - (B)

Question 18

Identify the correct combination of mathematical signs to replace "\*" sign in the given equation and balance the equation.

$14 * 6 * 3 * 5 * 4 * 20$



A  $\div, +, \times, -, =$

B  $+, \div, \times, -, =$

C  $\times, \div, +, =, -$

D  $=, \times, \div, +, -$

Answer: B

Explanation:

Expression :  $14 \times 6 \div 3 \times 5 - 4 = 20$

(A) :  $\div, +, \times, -, =$

$\equiv 14 \div 6 + 3 \times 5 - 4 = 20$

L.H.S. =  $2.33 + 15 - 4 = 13.33 \neq$  R.H.S.

(B) :  $+, \div, \times, -, =$

$\equiv 14 + 6 \div 3 \times 5 - 4 = 20$

L.H.S. =  $14 + 10 - 4 = 20 =$  R.H.S.

=> Ans - (B)

Question 19

In the following question, which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?  
ab\_ \_abbc\_aa\_bbb

A cacb

B cacc

C cabc

D caca

Answer: D

Explanation:

The pattern followed is that the term 'abc' is written in increasing order :

= abc aabbcc aaabbb

=> Ans - (D)

## SSC CHSL Study Material

Question 20

Vijendra walks to his southeast side for 10 km. From there he turns 90 degree anticlockwise and walks 10km and then he again turns 90 degree clockwise and travels 10 km. In which direction is he from his original position?

A South

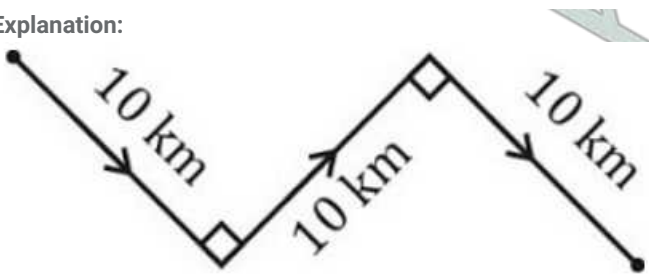
B North

C East

D South-east

Answer: D

Explanation:



Vijendra walks to his south-east side for 10 km. From there he turns 90 degree anti-clockwise and walks 10 km towards north-east and then he again turns 90 degree clockwise and travels 10 km.

Thus, he is south-east of his original position.

=> Ans - (D)

### Question 21

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as 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, 'C' can be represented by 21, 43, etc., and 'U' can be represented by 75,98,etc. Similarly, you have to identify the set for the word 'LUNCH'.

Matrix 1:

	0	1	2	3	4
0	H	L	M	O	C
1	C	M	O	L	H
2	M	C	L	H	M
3	O	H	C	M	O
4	L	O	H	C	L

Matrix 2:

	5	6	7	8	9
5	B	U	S	G	N
6	S	B	U	N	G
7	U	S	N	B	G
8	G	N	B	S	U
9	N	S	G	U	B

A 40, 56, 68, 21, 31

B 01, 67, 95, 11, 23

C 22, 75, 86, 03, 24

D 32, 98, 77, 43, 14

Answer: A

Explanation:

(A) : 40, 56, 68, 21, 31 = LUNCH

(B) : 01, 67, 95, 11, 23 = LUNMH

(C) : 22, 75, 86, 03, 24 = LUNOM

(D) : 32, 98, 77, 43, 14 = CUNCH

=> Ans - (A)

### Question 22

Pointing towards a lady in a photograph, Sushma says, "She is the mother of my grandfather's son". How is Sushma related to the lady in the picture?

- A Grand daughter
- B Motherinlaw
- C Sister
- D Mother

Answer: A

**Explanation:**

Sushma's grandfather's son = Sushma's father

Now, the lady is Sushma's father's mother, => Sushma's grandmother

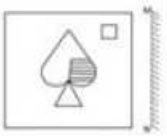
Thus, Sushma is the granddaughter of the lady.

=> Ans - (A)

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**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?



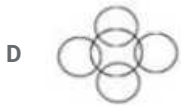
- A
- B
- C
- D

Answer: B

**Question 24**

Identify the diagram that best represents the relationship among the given classes. Keyboard, Mouse, Input Device, Output Device, Computer

- A
- B



Answer: C

**Explanation:**

Keyboard and mouse are both input device (but do not overlap each other) and also output devices are different from input device.

Now, a computer consists of output and input device.

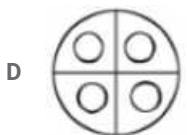
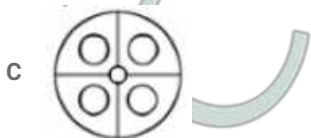
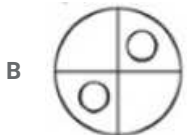
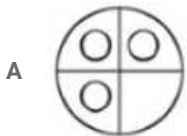
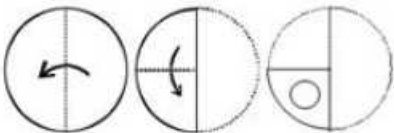
Thus, the venn diagram that best describes above relationship is :



=> Ans - (C)

**Question 25**

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



Answer: D

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**General Awareness**

**Instructions**

For the following questions answer them individually

**Question 26**

**Churches and Convents of Goa were built by?**

- A British
- B Dutch
- C Portuguese
- D Mughals

**Answer: C**

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**Question 27**

**Resul Pookutty won Oscars for the movie "Slumdog Millionaire" in the category of .....**

- A Best Sound Mixing
- B Best Original Score
- C Best Original Song
- D Best Foreign Language Film

**Answer: A**

**Question 28**

**How many chromosomes does a human cell contain?**

- A 6
- B 26
- C 46
- D 66

**Answer: C**

**Question 29**

**In a Punnett Square with the cross  $AaBb \times Aabb$ , how many  $AaBb$  genotypes would be created?**

- A 4
- B 1
- C 7
- D 6

**Answer: A**

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**Question 30**

Arboreal Ateles is the scientific name of .....

- A Squirrel
- B Sparrow
- C Lizard
- D Spider monkey

**Answer: D**

**Question 31**

The chemical formula of Ammonia is .....

- A NH
- B NH1
- C NH2
- D NH3

**Answer: D**

**Question 32**

Who discovered Fullerene (an allotrope of carbon)?

- A K Scheele
- B Richard Smalley
- C Faraday
- D Heisenberg

**Answer: B**

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**Question 33**

.....perform Internet Protocol blocking to protect networks from unauthorized access.

- A Firewalls
- B Proxy Servers
- C Routers
- D VoIP

**Answer: A**

**Question 34**

Gugga Naumi is a religious festival in connection with snakeworship. This festival is of which state?

- A Haryana
- B West Bengal
- C Gujarat
- D Maharashtra

Answer: A

**Question 35**

If quantity of a good demanded increases from 200 to 250 then the average income of the population increases from Rs 20,000 to Rs 30,000, find Arc Income elasticity of demand?

- A 1.45
- B 0.55
- C 2
- D 1.25

Answer: B

## SSC CHSL Previous Papers (DOWNLOAD PDF)

**Question 36**

Match the characteristics with their market structure:

- (a) demand will tend to be inelastic
- (b) Firm has control over quantity of output but it must take into account reactions of competitors

- A (a) Pure Monopoly, (b) Oligopoly
- B (a) Pure Monopoly, (b) Monopolistic Competition
- C (a) Pure Competition, (b) Oligopoly
- D (a) Monopolistic Competition, (b) Pure Competition

Answer: A

**Question 37**

Which type of pathogen causes the waterborne disease Salmonellosis?

- A Algal
- B Parasitic
- C Bacterial
- D Viral

Answer: C

**Question 38**

Which of the following is not a Halon gas ?

- A methane
- B Carbon tetra chloride
- C iodomethane
- D bromomethane

Answer: A

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### Question 39

Dnyaneshwar was a 13th century Marathi saint who wrote the Dnyaneshwari, which is a commentary on the .....

- A Ramayana
- B Bhagavad Gita
- C Vedas
- D Upanishads

Answer: B

### Question 40

Earth is the .....planet from the Sun.

- A First
- B Third
- C Fifth
- D Seventh

Answer: B

### Question 41

Which city is located on the banks of the river Godavari?

- A Badrinath
- B Nashik
- C Mathura
- D Lucknow

Answer: B

## SSC CGL Previous Papers (DOWNLOAD PDF)

### Question 42

Ghatotkacha (who ruled in the years 290-305 B.C.) was a king from which dynasty?



- A Gupta Dynasty
- B Kanva Dynasty
- C Shunga Dynasty
- D Maurya Dynasty

Answer: A

**Question 43**

Who are credited to a large extent for ending the Mughal rule in India?

- A Mauryas
- B Cholas
- C Guptas
- D Marathas

Answer: D

**Question 44**

Who Invented postage stamp?

- A Ruth Handler
- B John Harington
- C Rowland Hill
- D Felix Hoffmann

Answer: C

## SSC CGL Free Mock Test (Latest Pattern)

**Question 45**

If a body moves with a uniform speed in a circular motion, then.....

- A its acceleration is increasing
- B its acceleration is zero
- C its velocity is changing
- D its velocity is uniform

Answer: C

**Question 46**

.....is the fourth state of matter.

- A Plasma
- B Steam

- C Gas
- D Matteroid

**Answer: A**

**Question 47**

**The original constitution of India was published in?**

- A Delhi
- B Srinagar
- C Ajmer
- D Dehradun

**Answer: D**

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

**Question 48**

**Article 228 of the Indian Constitution "Transfer of certain cases to High Court" deals with?**

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

**Answer: B**

**Question 49**

**Who won the 2016 National Snooker Championship?**

- A Mohit Saraswat
- B Aditya Mehta
- C Arjun Pandit
- D Varun Shakya

**Answer: B**

**Question 50**

**Who is the author of "I Too Had a Love Story"?**

- A Preeti Shenoy
- B Ravinder Singh
- C Keshav Aneel
- D Durjoy Datta

Answer: B

## SSC CHSL Study Material

### English

#### Instructions

For the following questions answer them individually

#### Question 51

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

The speed with which she typed the draft demonstrated that she is a .....secretary.

- A savvy
- B adapted
- C nimble
- D competent

Answer: D

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#### Question 52

Select the antonym of magnate

- A mogul
- B tycoon
- C aristocrat
- D nonentity

Answer: D

#### Question 53

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

The current .....in global negotiations over climate change has stalled progress on the issue.

- A intransigence
- B fallacy
- C stalemate
- D rigidity

Answer: C

**Question 54**

Rearrange the parts of the sentence in correct order.

India should not be in a hurry  
To ratify the Agreement  
Until there is clarity  
On the U.S. position

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

Answer: B

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**Question 55**

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

**Birds of a feather flock together**

- A even a small similarity is enough to become friends and stay together
- B there is always more safety in a crowd
- C people with the same tastes and interests will be found together
- D people with bad intentions always form a gang

Answer: C

**Question 56**

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

**The management committee is required to publish a report every year.**

- A A report would be published by the management committee every year.
- B A report would have been published by the management committee every year.
- C A report requires to be published by the management committee every year.
- D Every year the report would be published by the management committee.

Answer: C

**Question 57**

Improve the bracketed part of the sentence.

**Ramesh says, he has already repaid me but I can't recall, so I'll have (to take his word).**

- A to take his word as true
- B to take him at his word
- C to take his for word for it

D no improvement

Answer: B

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### Question 58

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'.

No students is(A)/as intelligent(B)/as Priya.(C)/No error(D)

A A

B B

C C

D D

Answer: A

### Question 59

Improve the bracketed part of the sentence.

The manager was highly upset because of (the inordinate delaying).

A the inordinate delay

B the inordinately delay

C the inordinately delaying

D no improvement

Answer: A

### Question 60

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.

"Is anyone there?" Reema asked.

A Reema asked if someone were there.

B Reema asked whether anyone was being there.

C Reema asked if anyone was there.

D Reema asked if anyone was here.

Answer: C

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### Question 61

Select the synonym of to cite

A to conceal

- B to ignore
- C to indicate
- D to deny

Answer: C

**Question 62**

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'.

Rehana had everything(A)/beauties, a good figure,(B)/and a sweet personality.(C)/No issue(D)

- A A
- B B
- C C
- D D

Answer: B

**Question 63**

Select the word with the correct spelling.

- A vacuoles
- B skulcking
- C squodron
- D absenses

Answer: A

## SSC CHSL Free Mock Test

**Question 64**

In the following question, out of the four alternatives, select the alternative which is the best substitute of the phrase. a small mistake in an agreement or law that gives someone the chance to avoid having to do something

- A loophole
- B ruse
- C ploy
- D gambit

Answer: A

**Question 65**

Select the word with the correct spelling.

- A etarnity
- B monition

C advisory

D gigantec

Answer: B

Question 66

Select the antonym of to abnegate

A to eject

B to evict

C to admit

D to bounce

Answer: C

## SSC CHSL Previous Papers (DOWNLOAD PDF)

Question 67

In the following question, out of the four alternatives, select the alternative which is the best substitute of the phrase. having or showing an interest in learning things; curious.

A probe

B inquisitive

C speculative

D snoop

Answer: B

Question 68

Select the synonym of poise

A tizzy

B turmoil

C agitate

D elegance

Answer: D

Question 69

In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase. Beggars can't be choosers

A those who have nothing have no hope

B all your options close when you are going through a bad time

C a poor person is forced to kill all his desires

D people with no other options must be content with what is offered

Answer: D

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Question 70

Rearrange the parts of the sentence in correct order

The party has not just  
Pvacated space for other  
Qbeing steadily hollowed out ideologically  
Rpolitical parties, but it is also

A PRQ

B RQP

C QPR

D QRP

Answer: A

Explanation:

Start Group:

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.

Widespread liberalization of the economic .....(1).....regime was long overdue in 1991, and has played a positive role since, but its impact has .....(2)..... its course and the policy has recognizable .....(3)..... Liberalization cannot address all aspects of the manmade environment and now climate change .....(4).....to change everything forever. We do not have another quarter century to deal ..... (5).....these imperatives.

Question 71

Widespread liberalization of the economic .....regime

A manifesto

B statement

C plan

D policy

Answer: D

Question 72

but its impact has .....its course

A run

B ran

C been running

D had ran



Answer: A

## SSC CGL Previous Papers (DOWNLOAD PDF)

### Question 73

The policy has recognizable .....

- A limits
- B constraint
- C considerations
- D fault

Answer: A

### Question 74

Now climate change .....to change everything forever.

- A were threatening
- B threatens
- C threatened
- D are threatening

Answer: B

### Question 75

We do not have another quarter century to deal .....these imperatives.

- A about
- B for
- C with
- D of

Answer: C

Explanation:

End Group:

## SSC CGL Free Mock Test (Latest Pattern)

### Mathematics

#### Instructions

For the following questions answer them individually

#### Question 76

Which of the following is correct?

A  $(3x + 4y)(4x - 3y) = 12x^2 + 7xy - 12y^2$

B  $(3x + 4y)(4x - 3y) = 12x^2 + 251xy - 12y^2$

C  $(3x + 4y)(4x - 3y) = 12x^2 - 7xy + 12y^2$

D  $(3x + 4y)(4x - 3y) = 12x^2 - 251xy + 12y^2$

Answer: A

Explanation:

Expression :  $(3x + 4y)(4x - 3y) = 12x^2 + 7xy - 12y^2$

=> L.H.S. =  $(3x + 4y)(4x - 3y)$

=  $12x^2(-9xy + 16xy) - 12y^2$

=  $12x^2 + 7xy - 12y^2$

=> Ans - (A)

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

Question 77

What is the value of  $(81 + 82 + 83 + \dots + 130)$ ?

A 5275

B 10550

C 15825

D 21100

Answer: A

Explanation:

Expression :  $(81 + 82 + 83 + \dots + 130)$

This is an arithmetic progression with first term,  $a = 81$ , last term,  $l = 130$  and common difference,  $d = 1$

Let number of terms =  $n$

Last term in an A.P. =  $a + (n - 1)d = 130$

=>  $81 + (n - 1)(1) = 130$

=>  $n - 1 = 130 - 81 = 49$

=>  $n = 49 + 1 = 50$

∴ Sum of A.P. =  $\frac{n}{2}(a + l)$

=  $\frac{50}{2}(81 + 130)$

=  $25 \times 211 = 5275$

Question 78

The sum of the ages of husband and wife at present is 100. Ten years ago the ratio of their ages was 9:7. What is the age of the husband?

A 45 years

B 55 years

C 65 years

D 40 years

**Answer: B**

**Explanation:**

Let husband's age =  $x$  years

=> Wife's age =  $(100 - x)$  years

According to ques,

$$\Rightarrow 100 - x - 10 = \frac{9}{7}$$

$$\Rightarrow 90 - x = \frac{9}{7}$$

$$\Rightarrow 7x - 70 = 810 - 9x$$

$$\Rightarrow 9x + 7x = 810 + 70 = 880$$

$$\Rightarrow x = \frac{880}{16} = 55 \text{ years}$$

=> Ans - (B)

**Question 79**

If  $3x - 1 < 5x + 2$  and  $3x + 5 < 6 - 4x$ ; then  $x$  can take which of the following values?

A -1

B 1

C -2

D 2

**Answer: A**

**Explanation:**

Expression 1 :  $3x - 1 < 5x + 2$

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

$$\Rightarrow 2x > -3$$

$$\Rightarrow x > \frac{-3}{2} \text{-----(i)}$$

Expression 2 :  $3x + 5 < 6 - 4x$

$$\Rightarrow 3x + 4x < 6 - 5$$

$$\Rightarrow 7x < 1$$

$$\Rightarrow x < \frac{1}{7} \text{-----(ii)}$$

Combining inequalities (i) and (ii), we get :  $\frac{-3}{2} < x < \frac{1}{7}$

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

=> Ans - (A)

## SSC CHSL Study Material

**Question 80**

In an arithmetic progression if 13 is the 3rd term, 47 is the 13th term, then 30 is which term?

A 9

B 10

C 7

D 8

Answer: D

Explanation:

The  $n^{\text{th}}$  term of an A.P. =  $a + (n - 1)d$ , where 'a' is the first term, 'n' is the number of terms and 'd' is the common difference.

$$\text{3rd term, } A_3 = a + (3 - 1)d = 13$$

$$\Rightarrow a + 2d = 13 \text{ -----(i)}$$

$$\text{Similarly, 13th term, } A_{13} = a + 12d = 47 \text{ -----(ii)}$$

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

$$\Rightarrow (12d - 2d) = 47 - 13 = 34$$

$$\Rightarrow d = \frac{34}{10} = 3.4$$

Substituting it in equation (i),  $\Rightarrow a + 2 \times 3.4 = 13$

$$\Rightarrow a = 13 - 6.8 = 6.2$$

Let  $n^{\text{th}}$  term = 30

$$\Rightarrow a + (n - 1)d = 30$$

$$\Rightarrow 6.2 + (n - 1)(3.4) = 30$$

$$\Rightarrow (n - 1)(3.4) = 30 - 6.2 = 23.8$$

$$\Rightarrow (n - 1) = \frac{23.8}{3.4} = 7$$

$$\Rightarrow n = 7 + 1 = 8$$

Question 81

Among three numbers, the first is twice the second and thrice the third. If the average of three numbers is 506, then what is the difference between the first and the third number?

A 759

B 585

C 755

D 552

Answer: D

Explanation:

Let the first number =  $6x$

$\Rightarrow$  Second number =  $3x$  and third number =  $2x$

$$\text{Average of the three numbers} = \frac{6x+3x+2x}{3} = 506$$

$$\Rightarrow 11x = 506 \times 3 = 1518$$

$$\Rightarrow x = \frac{1518}{11} = 138$$

$\therefore$  Difference between first and third number =  $6x - 2x = 4x$

$$= 4 \times 138 = 552$$

$\Rightarrow$  Ans - (D)

Question 82

What is the distance between the points (4,8) and (-2,0)?

- A 100 units
- B 5 units
- C 25 units
- D 10 units

**Answer: D**

**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  $(-2,0)$  and  $(4,8)$

$$= \sqrt{(8 - 0)^2 + (4 + 2)^2} = \sqrt{(8)^2 + (6)^2}$$

$$= \sqrt{64 + 36} = \sqrt{100}$$

= 10 units

=> Ans - (D)

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**Question 83**

For triangle PQR, find equation of altitude PS if coordinates of P, Q and R are  $(6,2)$ ,  $(0,3)$  and  $(4,5)$  respectively?

- A  $2x - y = 14$
- B  $2x + y = 10$
- C  $2x - y = 10$
- D  $2x + y = 14$

**Answer: D**

**Explanation:**

Coordinates of  $P(6,2)$ ,  $Q(0,3)$  and  $R(4,5)$ . PS is perpendicular to QR

$$\text{Slope of line QR} = \frac{5-3}{4-0} = \frac{1}{2}$$

Product of slopes of two perpendicular lines = -1

Let slope of line PS =  $m$

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

$$\Rightarrow m = -2$$

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

$$\Rightarrow (y - 2) = -2(x - 6)$$

$$\Rightarrow y - 2 = -2x + 12$$

$$\Rightarrow 2x + y = 12 + 2 = 14$$

=> Ans - (D)

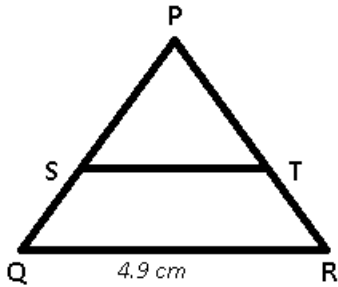
**Question 84**

In  $\Delta PQR$ , S and T are points on side PQ and PR respectively. ST is parallel to QR. If S divides PQ in the ratio 4:3 and length of QR is 4.9 cm, find ST?

- A 5.6 cm
- B 7.2 cm
- C 2.8 cm
- D 3.6 cm

Answer: C

Explanation:



ST is parallel to QR and PS : SQ = 4 : 3

$$\Rightarrow \frac{PS}{PQ} = \frac{ST}{QR}$$

$$\Rightarrow \frac{4}{4+3} = \frac{ST}{4.9}$$

$$\Rightarrow \frac{4}{7} = \frac{ST}{4.9}$$

$$\Rightarrow BC = 4 \times 0.7 = 2.8 \text{ cm}$$

=> Ans - (C)

#### Question 85

Makarand works 2 times as fast as Samarjit. If Samarjit can complete a job alone in 27 days, then in how many days can they together finish the job?

- A 6 days
- B 7 days
- C 5 days
- D 9 days

Answer: D

Explanation:

Let total work to be done be 27 units.

$$\text{Samarjit's efficiency} = \frac{27}{27} = 1 \text{ units/day}$$

$$\text{Makarand's efficiency} = 2 \times 1 = 2 \text{ units/day}$$

$$\Rightarrow \text{Samarjit's and Makarand's 1 day's work together} = 1 + 2 = 3 \text{ units/day}$$

$$\therefore \text{Time taken by them together} = \frac{27}{3} = 9 \text{ days}$$

=> Ans - (D)

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**Question 86**

The ratio of present ages of Ramya and Saurabh is 8:7. After 10 years the ratio of their ages will be 12:11. What is Ramya's present age?

- A 20
- B 14
- C 63
- D 45

**Answer: A**

**Explanation:**

Let Ramya's present age =  $8x$  years and Saurabh's present age =  $7x$  years

According to ques,  $\Rightarrow \frac{8x+10}{7x+10} = \frac{12}{11}$

$$\Rightarrow 88x + 110 = 84x + 120$$

$$\Rightarrow 88x - 84x = 120 - 110 = 10$$

$$\Rightarrow x = \frac{10}{4} = 2.5$$

$\therefore$  Ramya's age =  $8 \times 2.5 = 20$  years

$\Rightarrow$  Ans - (A)

**Question 87**

Simple interest on a certain sum of money for 3 years at 16% per annum is half the compound interest on Rs. 12000 for 2 years at 10% per annum. The sum placed on simple interest is

- A Rs 5250
- B Rs 1325
- C Rs 2100
- D Rs 2625

**Answer: D**

**Explanation:**

Sum for compound interest = Rs. 12000

Rate of interest = 10% and time period = 2 years

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

$$= 12000 \left[ \left( 1 + \frac{10}{100} \right)^2 - 1 \right]$$

$$= 12000 \left[ \left( \frac{11}{10} \right)^2 - 1 \right] = 12000 \left( \frac{121-100}{100} \right)$$

$$= 120 \times 21 = \text{Rs. } 2520$$

$$\Rightarrow \text{Simple interest} = \frac{2520}{2} = \text{Rs. } 1260$$

Let sum under simple interest = Rs.  $x$

Rate of interest = 16% and time period = 3 years

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

$$= \frac{x \times 16 \times 3}{100} = 1260$$

$$\Rightarrow x = \frac{1260 \times 25}{12} = 105 \times 25 = \text{Rs.}2625$$

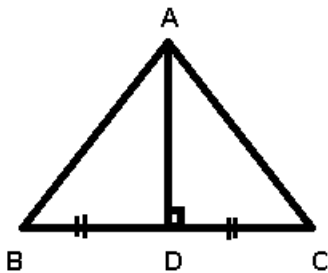
#### Question 88

What is the altitude of an equilateral triangle whose side is  $12\sqrt{3}$  cm?

- A 12 cm
- B  $(15\sqrt{2})$  cm
- C  $9/\sqrt{2}$  cm
- D 18 cm

Answer: D

Explanation:



$\triangle ABC$  is equilateral triangle with  $AB = AC = BC = 12\sqrt{3}$  cm

AD is altitude of the triangle and also, in an equilateral triangle altitude and median coincides. Thus, AD is the median

$$\Rightarrow CD = \frac{12\sqrt{3}}{2} = 6\sqrt{3} \text{ cm}$$

$$\text{In } \triangle ACD, \Rightarrow (AD)^2 = (AC)^2 - (CD)^2$$

$$\Rightarrow (AD)^2 = (12\sqrt{3})^2 - (6\sqrt{3})^2$$

$$\Rightarrow (AD)^2 = 432 - 108 = 324$$

$$\Rightarrow AD = \sqrt{324} = 18 \text{ cm}$$

$\Rightarrow$  Ans - (D)

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#### Question 89

An engineering student has to secure 25% marks to pass. He gets 56 and fails by 34 marks. Find the maximum marks.

- A 385 marks
- B 360 marks
- C 410 marks
- D 435 marks

Answer: B

Explanation:

Let maximum marks =  $100x$

$$\Rightarrow \text{Passing marks} = \frac{25}{100} \times 100x = 25x$$

According to ques,



$$\Rightarrow 25x - 34 = 56$$

$$\Rightarrow 25x = 56 + 34 = 90$$

$$\Rightarrow x = \frac{90}{25} = 3.6$$

$$\therefore \text{Maximum marks} = 100 \times 3.6 = 360$$

#### Question 90

30% discount is offered on an item. By applying a promo code the customer wins 20% cash back. What is the effective discount?

- A 44 percent
- B 52.8 percent
- C 50 percent
- D 26 percent

**Answer:** A

#### Explanation:

Let the marked price of item = Rs.  $100x$

$$\text{Amount after 30 \% discount} = 100x - \frac{30}{100} \times 100x$$

$$= 100x - 30x = \text{Rs.}70x$$

$$\text{Selling price after 20 \% cashback} = 70x - \frac{20}{100} \times 70x$$

$$= 70x - 14x = \text{Rs.}56x$$

$$\Rightarrow \text{Total discounted amount} = 100x - 56x = \text{Rs.}44x$$

$$\therefore \text{Effective discount} = \frac{44x}{100x} \times 100 = 44\%$$

#### Question 91

If curved surface area of a cylinder is 1320 sq cm and height is 10 cm, find its radius?

- A 21 cm
- B 42 cm
- C 63 cm
- D 10.5 cm

**Answer:** A

#### Explanation:

Let radius of cylinder =  $r$  cm and height = 10 cm

$$\text{Curved surface area of cylinder} = 2\pi rh = 1320$$

$$\Rightarrow 2 \times \frac{22}{7} \times r \times 10 = 1320$$

$$\Rightarrow \frac{44}{7} \times r = \frac{1320}{10} = 132$$

$$\Rightarrow r = 132 \times \frac{7}{44}$$

$$\Rightarrow r = 3 \times 7 = 21 \text{ cm}$$

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**Question 92**

A wholesaler sells a watch to a retailer at a gain of 35% and the retailer sells it to a customer at a loss of 25%. If the customer pays Rs 2379.375, what had it cost the wholesaler?

- A Rs 2350
- B Rs 2409
- C Rs 2928
- D Rs 2291

**Answer:** A

**Explanation:**

For the wholesaler,

Let the cost price = Rs.  $100x$

With profit of 35%, Selling price =  $\frac{135}{100} \times 100x = Rs.135x$

For the retailer,

Cost price = Rs.  $135x$

With a loss of 25%, Selling price =  $\frac{75}{100} \times 135x = Rs.101.25x$

For the customer,

Cost price =  $101.25x = 2379.375$

$\Rightarrow x = \frac{2379.375}{101.25} = 23.5$

$\therefore$  Cost price for retailer =  $100 \times 23.5 = Rs2350$

**Question 93**

What is the value of  $\tan 7\pi/4$ ?

- A  $\sqrt{3}$
- B  $-1/2$
- C  $\sqrt{3}/2$
- D  $-1$

**Answer:** D

**Explanation:**

Expression :  $\tan 7\pi/4$

$= \tan(2\pi - \frac{\pi}{4})$

$= -\tan(\frac{\pi}{4}) = -1$

$\Rightarrow$  Ans - (D)

**Question 94**

A man travels 401 kilometres in, partly by rail and partly by steamer. He spends 6 hours more time on steamer. If the velocity of the steamer is 21 km/hr and the velocity of rail is 56 km/hr, how much distance does he cover by steamer?

- A 241 km
- B 302 km

C 201 km

D 362 km

**Answer: C**

**Explanation:**

Let distance covered by steamer =  $d$  km

=> Distance covered by rail =  $(401 - d)$  km

Let time taken on rail =  $t$  hours and time taken on steamer =  $(t + 6)$  hours

Speed of rail = 56 km/hr and speed of steamer = 21 km/hr

Using, speed = distance/time

For steamer,  $\frac{d}{t+6} = 21$

=>  $d = 21t + 126$  -----(i)

For rail,  $\frac{401-d}{t} = 56$

Substituting value of  $d$  from equation (i), we get :

=>  $401 - (21t + 126) = 56t$

=>  $401 - 126 = 56t + 21t = 77t$

=>  $t = \frac{275}{77} = \frac{25}{7}$  hours

Substituting value of  $t$  in equation (i), =>  $d = (21 \times \frac{25}{7}) + 126$

=  $(3 \times 25) + 126 = 75 + 126 = 201$  km

## SSC CHSL Free Mock Test

**Question 95**

$2\sin[(C+D)/2] \cdot \cos[(C-D)/2]$  is equal to

A  $\sin C - \sin D$

B  $\cos C + \cos D$

C  $\cos C - \cos D$

D  $\sin C + \sin D$

**Answer: D**

**Explanation:**

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

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

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

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

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

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

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

Substituting above values in equation (iii)

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

=> Ans - (D)

**Question 96**

$\tan A \operatorname{cosec} 2A$  is equal to  $\tan A \operatorname{cosec} 2A$  ?

- A  $(1 + \tan 2A) \cot A$
- B  $(1 - \tan 2A) \cot A$
- C  $\sqrt{(1 + \tan 2A) \cot A}$
- D  $\sqrt{(1 - \tan 2A) \cot A}$

Answer: A

**Question 97**

Read the table and answer the given questions

	Quantity of cost	Average cost
MOBILES	100	18000
CAMERAS	87	6000
TVs	80	56000
REFRIGERATOR	38	28000
AC	93	25000

What is the total cost in lakhs ?

- A 101.91
- B 1019.1
- C 133
- D 398

Answer: A

**Explanation:**

Total cost of mobiles =  $100 \times 18000 = \text{Rs. } 18,00,000$

Total cost of Cameras =  $87 \times 6000 = \text{Rs. } 5,22,000$

Total cost of TVs =  $80 \times 56000 = \text{Rs. } 44,80,000$

Total cost of Refrigerator =  $38 \times 28000 = \text{Rs. } 10,64,000$

Total cost of AC =  $93 \times 25000 = \text{Rs. } 23,25,000$

$\therefore$  Total cost =  $18,00,000 + 5,22,000 + 44,80,000 + 10,64,000 + 23,25,000 = \text{Rs. } 1,01,91,000$

Total cost in lakhs = Rs 101.91 lakhs

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

Question 98

Read the given data and answer the questions

Years	Ratio Import/Export
2011	1.5
2012	1
2013	1.5
2014	1
2015	1.5

If the imports in 2012 was Rs. 600 crores and the total exports in the years 2012 and 2013 together was Rs. 4000 crores, then the imports in 2013 was?

- A 600
- B 3400
- C 5100
- D 2267

Answer: C

Explanation:

Ratio of imports and exports in 2012 = 1

=> Imports in 2012 = Exports in 2012 = Rs. 600 crores

Total exports in the years 2012 and 2013 together = Rs. 4000 crores

=> Exports in 2013 = Rs. (4000 - 600) crores = Rs. 3400 crores

Let imports in 2013 = Rs.  $x$  crores

Ratio of imports and exports in 2013 =  $\frac{x}{3400} = 1.5$

=>  $x = 3400 \times 1.5 = 5100$

∴ Imports in 2013 was Rs. 5100 crores

Question 99

Read the table and answer the given questions?

Measured On Birthday	Height of Children in CMs
4	100
5	110
6	120
7	130
8	135
9	145
10	150
11	155
12	160
13	165
14	175
15	185
16	190

What was the increase in the height of the child from the 5th Birthday to the 16th Birthday?

- A 85 cms

- B 90 cms
- C 75 cms
- D 80 cms

**Answer: D**

**Explanation:**

Height on 5th birthday = 110 cm

Height on 16th birthday = 190 cm

Increase in height = 190 - 110 = 80 cm

=> Ans - (D)

**Question 100**

Read the table and answer the given questions?

Deep Sleep	5
Dreaming	30
Light Sleep	20
Exreamly Sleep	10
Awake	35

Between 10pm to 6am, a fitness band records the following data. How long was the user Dreaming or was Awake?

- A 5.2 hours
- B 4.7 hours
- C 3.7 hours
- D 5.7 hours

**Answer: A**

**Explanation:**

Total time between 10 pm to 6 am = 8 hours

% time spent on dreaming and on awake = 30 + 35 = 65%

=> Time spent on dreaming or on awake =  $\frac{65}{100} \times 8$

=  $\frac{26}{5}$  = 5.2 hours

=> Ans - (A)

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