



## 2016 SSC CGL 10 Sep Tier-1

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature without the permission of cracku.in, application for which shall be made to [support@cracku.in](mailto:support@cracku.in)

## Reasoning

### Instructions

For the following questions answer them individually

### Question 1

Select the related word/letters/numbers from the given alternatives:

Cytology : Cells :: ? : Birds

- A Odontology
- B Mycology
- C Etymology
- D Ornithology

Answer: D

### Explanation:

Cytology is the branch of biology and medicine concerned with the structure and function of plant and animal cells, similarly Ornithology is the scientific study of birds.

=> Ans - (D)

## SSC CGL Free Mock Test

### Question 2

Select the related word/letters/numbers from the given alternatives:

RIGT : WDBY :: FUSH : ?

- A PKJQ
- B KPNM
- C DXWB
- D QKJR

Answer: B

### Explanation:

Expression = RIGT : WDBY :: FUSH : ?

The pattern followed is =

R	I	G	T
(+5)	(-5)	(-5)	(+5)
W	D	B	Y

Similarly, for FUSH :

F	U	S	H
(+5)	(-5)	(-5)	(+5)
K	P	N	M

=> Ans - (B)

### Question 3

Select the related word/letters/numbers from the given alternatives:

42 : 56 :: 110 : ?

- A 18
- B 132
- C 136
- D 140

**Answer: B**

**Explanation:**

Expression =  $42 : 56 :: 110 : ?$

The pattern followed is =  $n(n + 1)$

$$6 \times 7 = 42$$

$$7 \times 8 = 56$$

$$10 \times 11 = 110$$

Similarly,  $11 \times 12 = 132$

=> Ans - (B)

**Question 4**

**For the following questions**

**Find the odd word/letters/number from the given alternatives.**

- A Rupee
- B Pound
- C Yen
- D Currency

**Answer: D**

**Explanation:**

Rupee, Pound and yen are currencies of India, UK and Japan respectively, hence currency is the odd one out.

=> Ans - (D)

**125 SSC CGL Mocks for just Rs. 199**

**Question 5**

**For the following questions**

**Find the odd word/letters/number from the given alternatives.**

- A DAEH
- B KIMP
- C HEIL
- D FCGJ

**Answer: B**

**Explanation:**

(A) : D (-3 letters) = A (+4 letters) = E (+3 letters) = H

(B) : K (-2 letters) = I (+4 letters) = M (+3 letters) = P

(C) : H (-3 letters) = E (+4 letters) = I (+3 letters) = L

(D) : F (-3 letters) = C (+4 letters) = G (+3 letters) = J

=> Ans - (B)

#### Question 6

For the following questions

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

A 436

B 284

C 507

D 365

Answer: B

#### Explanation:

Among the given numbers, only 284 contains digits all of which are even, thus it is the odd one out.

=> Ans - (B)

#### Question 7

Arrange the following words as per order in the dictionary

1. Direction

2. Directed

3. Director

4. Directing

A 1, 4, 3, 2

B 2, 4, 1, 3

C 4, 2, 3, 1

D 4, 1, 2, 3

Answer: B

#### Explanation:

As per the dictionary,

= Directed -> Directing -> Direction -> Director

≡ 2413

=> Ans - (B)

## SSC CGL Previous Papers (DOWNLOAD PDF)

#### Question 8

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

IGT, JHS, KIR, LJQ, MKP, ?

A LOP

B NOP

C NLO

D LNO

**Answer: C**

**Explanation:**

Expression : IGT, JHS, KIR, LJQ, MKP, ?

The pattern followed is that the first two letters of the words are the successive letters of English alphabetical series and the third letters are in reverse order.

1st letter : I, J, K, L, M, N

2nd letter : G, H, I, J, K, L

3rd letter : T, S, R, Q, P, O

Thus, missing word = **NLO**

=> 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.

**6, 10, 18, 34, ?, 130**

A 78

B 52

C 66

D 94

**Answer: C**

**Explanation:**

Numbers of the form  $2^n$  are added.

$$6 + 2^2 = 10$$

$$10 + 2^3 = 18$$

$$18 + 2^4 = 34$$

$$34 + 2^5 = 66$$

$$66 + 2^6 = 130$$

=> Ans - (C)

**Question 10**

Introducing Reeta, Monica said, "She is the only daughter of my father's only daughter." How is Monica related to Reeta?

A Aunt

B Niece

C Cousin

D Mother

**Answer: D**

**Explanation:**

Monica's father's only daughter = Monica

Now, it is said that Reeta is the only daughter of Monica.

Thus, Monica is Reeta's mother.

=> Ans - (D)

## 25 SSC CHSL Mocks for just Rs. 149

### Question 11

In a row of students, if John , who is 16th from the left, and Johnson, who is 8th from the right, interchange their positions, John becomes 33rd from left. How many students are there in a row?

- A 38
- B 39
- C 40
- D 41

**Answer:** C

#### **Explanation:**

Johnson's initial position from right end = 8th

John's final position from left end = 33rd

Both of them are on the same seat.

=> Total students in the row =  $(33+8) - 1 = 40$

=> Ans - (C)

### Question 12

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

**ADMISSION**

- A MISSION
- B DISMISS
- C MASONS
- D NOMADS

**Answer:** B

#### **Explanation:**

The word ADMISSION does not contain 3 'S', and thus the word 'Dismiss' cannot be formed.

=> Ans - (B)

### Question 13

If in a certain language TEACHER is coded as QBXZEBO, then how is STUDENT coded in the same language?

- A PQRBAQK
- B PQRABKQ
- C PQRKBAQ
- D PRKQBAQ

**Answer:** B

**Explanation:**

TEACHER is coded as QBXZEBO

The pattern followed is :

T	E	A	C	H	E	R
(-3)	(-3)	(-3)	(-3)	(-3)	(-3)	(-3)
Q	B	X	Z	E	B	O

Similarly, for STUDENT :

S	T	U	D	E	N	T
(-3)	(-3)	(-3)	(-3)	(-3)	(-3)	(-3)
P	Q	R	A	B	K	Q

=&gt; Ans - (B)

## SSC CGL Tier-2 Previous Papers PDF

**Question 14**

If 'x' means addition, '-' means division, '÷' means subtraction and '+' means multiplication, then which of the equations is correct?

- A  $16 \times 5 \div 10 + 4 - 3 = 19$
- B  $16 + 5 \div 10 \times 4 - 3 = 9$
- C  $16 + 5 - 10 \times 4 \div 3 = 9$
- D  $16 - 5 \times 10 \div 4 + 3 = 12$

**Answer: C****Explanation:**(A) :  $16 \times 5 \div 10 + 4 - 3 = 19$ 

$$\equiv 16 + 5 - 10 \times 4 \div 3$$

$$\text{L.H.S.} = 21 - 13.34 = 7.66 \neq \text{R.H.S.}$$

(B) :  $16 + 5 \div 10 \times 4 - 3 = 9$ 

$$\equiv 16 \times 5 - 10 + 4 \div 3$$

$$\text{L.H.S.} = 80 - 10 + 1.34 = 71.34 \neq \text{R.H.S.}$$

(C) :  $16 + 5 - 10 \times 4 \div 3 = 9$ 

$$\equiv 16 \times 5 \div 10 + 4 - 3$$

$$\text{L.H.S.} = 8 + 4 - 3 = 9 = \text{R.H.S.}$$

=&gt; Ans - (C)

**Question 15**If  $4 \times 5 \times 2 = 524$ ,  $3 \times 7 \times 2 = 723$  and  $6 \times 8 \times 7 = 876$  then  $9 \times 4 \times 5 = ?$ 

- A 495
- B 459
- C 549
- D 954

**Answer: B****Explanation:**

The pattern followed is that the the numbers are swapped and are written starting from the second position.

Eg =  $4 \times 5 \times 2 = 524$

Also,  $3 \times 7 \times 2 = 723$  and  $6 \times 8 \times 7 = 876$

Similarly,  $9 \times 4 \times 5 = 459$

=> Ans - (B)

**Question 16**

Select the missing numbers from the given responses

43	25	?
21	40	35
35	34	28

A 36

B 46

C 40

D 26

Answer: A

**SSC CGL Important Questions PDF**

**Question 17**

Johnson left for his office in his car. He drove 15km towards North and then 10km towards West. He then turned to the South and covered 5km. Further he turned to East & moved 8km. Finally he turned right and moved 10km. How far & in which direction is he from his starting point?

A 2 km, West

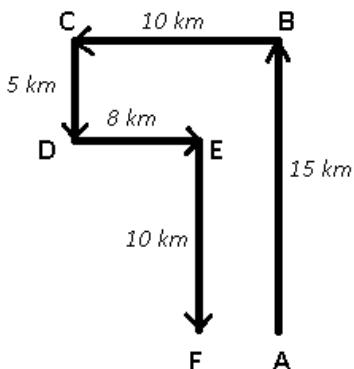
B 5 km, East

C 3 km, North

D 3 km, South

Answer: A

Explanation:



Let Johnson started from point A, he drove north for 15 km and reached point B, then he turned west and drove for 10 km to reach C. He then turned South and reach D after driving for 5 km, then he turned east and drove for 8 km and finally stopped at point F.



Thus,  $AF = 10 - 8 = 2$  km

∴ He is 2 km to the west of his starting point.

=> Ans - (A)

### Question 18

Consider the given statement/s to be true and decide which of the given conclusions/assumptions can definitely be drawn from the given statement.

Statements:

1. All men are lazy.
2. Some men are stenographers.

Conclusions:

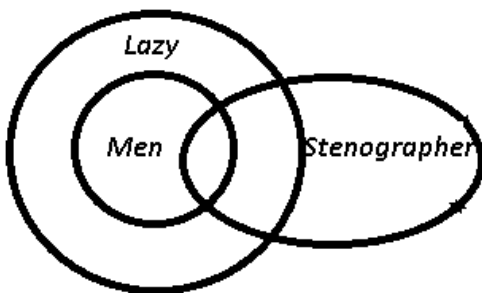
- I. All lazy people are stenographers.
- II. Some stenographers are lazy.

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

Answer: B

Explanation:

The venn diagram for above statements is :



Conclusions:

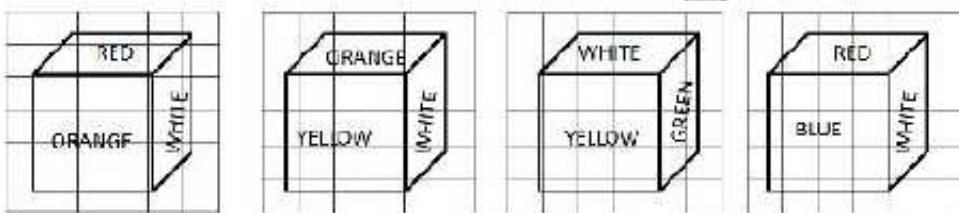
- I. All lazy people are stenographers = false  
II. Some stenographers are lazy = true

Thus, only conclusion II follows

=> Ans - (B)

### Question 19

Four positions of a cube are shown below. Which color is opposite to white color in the given cubes?



- A Orange  
B Blue

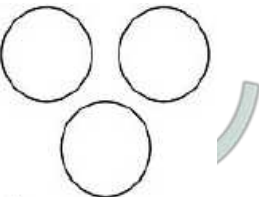
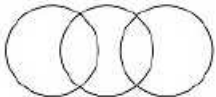
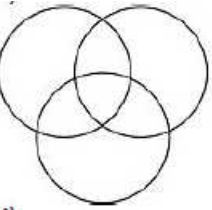
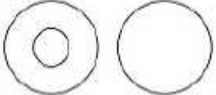
- C Red
- D Yellow
- E None of the above

Answer: E

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

### Question 20

Which one of the following figures best represents the relationship among Kitchen, House and Garden?

- A 
- B 
- C 
- D 

Answer: D

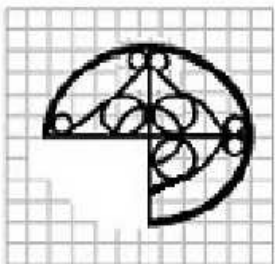
#### Explanation:

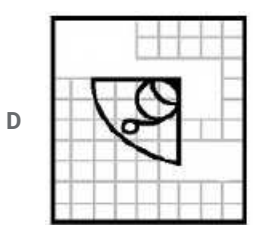
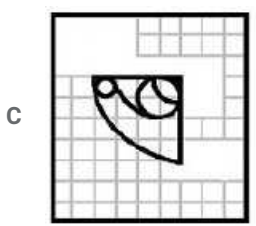
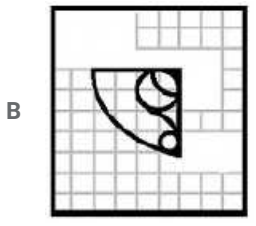
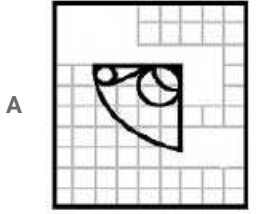
Kitchen is a part of the house, but a garden lies outside the house, thus the last option best represents above relationship.

=> Ans - (D)

### Question 21

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

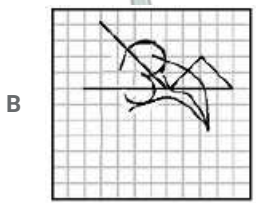
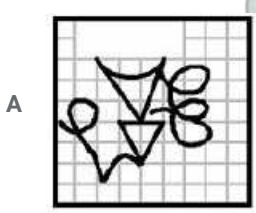
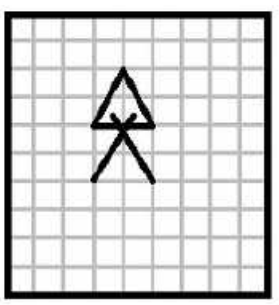


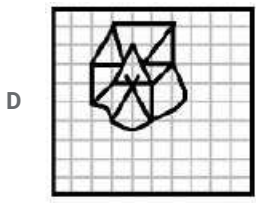
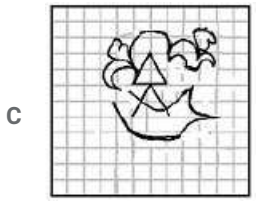


Answer: C

Question 22

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

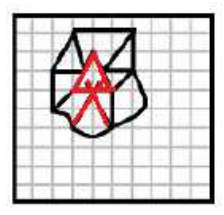




Answer: D

**Explanation:**

The question figure is embedded in the following figure :

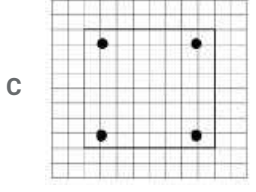
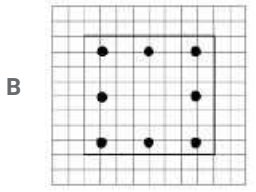
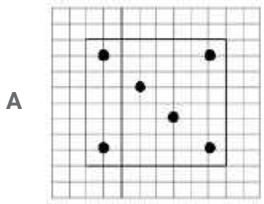
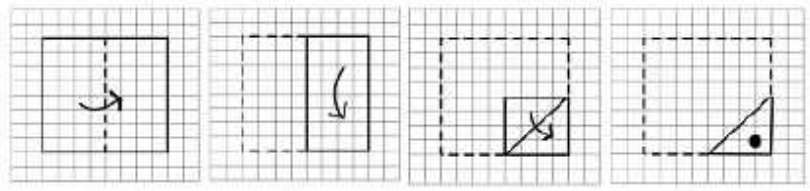


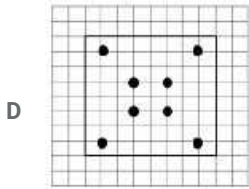
=> Ans - (D)

**General Science Notes for SSC CGL**

**Question 23**

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

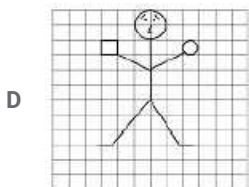
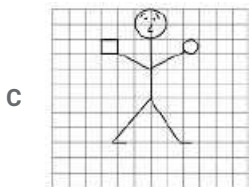
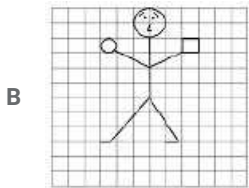
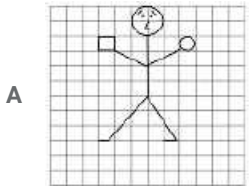
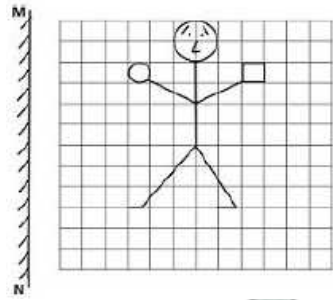




Answer: D

Question 24

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



Answer: C

Explanation:

A vertical mirror is placed, so the object at the left will appear at the right and vice-versa. So, the circle on the left will appear on the right hand side and square will appear on the left side in the mirror image, hence second option is eliminated.

Also, the two horizontal lines at the bottom are pointing towards left, thus in the mirror image, they will point right, and thus first and last options are also eliminated.

=> Ans - (C)

Question 25

In the question, 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 in two matrices given below. 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, e.g., 'P' can be represented by 02, 13, etc., and 'A' can be represented by 57, 68, etc. Similarly you have to identify the set for the word 'GUNS'

Matrix - I

	0	1	2	3	4
0	S	U	P	E	R
1	R	S	U	P	E
2	E	R	S	U	P
3	P	E	R	S	U
4	U	P	E	R	S

Matrix - II

	5	6	7	8	9
5	G	L	A	N	D
6	D	G	L	A	N
7	N	D	G	L	A
8	A	N	D	G	L
9	L	A	N	D	G

A 88, 23, 59, 33

B 66, 40, 67, 11

C 55, 34, 77, 44

D 99, 12, 86, 22

Answer: D

Explanation:

(A) : 88, 23, 59, 33 = GUDS

(B) : 66, 40, 67, 11 = GULS

(C) : 55, 34, 77, 44 = GUGS

(D) : 99, 12, 86, 22 = **GUNS**

=> Ans - (D)

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

### General Awareness

Instructions

For the following questions answer them individually

Question 26

Which one of the following countries is not a member of the "BRICS" group?

A Brazil

B Russia

C China


D Indonesia

Answer: D

## SSC Exam Free Videos (Youtube)

Question 27

'Do or Die' is associated with which of the movements in India's freedom struggle

- 
- A Dandi March
  - B NonCooperation Movement
  - C Khilafat Movement
  - D Quit India Movement

**Answer: D**

**Question 28**

'Parsec' is the unit measurement of

- A Density of stars
- B Astronomical distance
- C Brightness of heavenly bodies
- D Orbital velocity of giant stars

**Answer: B**

**Question 29**

A collective term used by the Jains for their sacred books is

- A Prabandhas
- B Angas
- C Nibandhas
- D Charits

**Answer: B**

**SSC Free Preparation App**

**Question 30**

Which one of the following is not an instrument of Fiscal policy?

- A Open Market Operations
- B Taxation
- C Public borrowing
- D Public expenditure

**Answer: A**

**Question 31**

At room temperature, which metal remains liquid?

- A Mercury

- B Platinum
- C Lead
- D Zinc

**Answer: A**

**Question 32**

**Which is known as carbolic acid?**

- A Phenol
- B Ethanol
- C Acetic acid
- D Oxalic acid

**Answer: A**

**Daily Free SSC Practice Set**

**Question 33**

**On which river is the Tehri dam built?**

- A Alakananda
- B Bhagirathi
- C Ganga
- D Hooghly

**Answer: B**

**Question 34**

**With which country, India has the longest international boundary?**

- A Nepal
- B Pakistan
- C China
- D Bangladesh

**Answer: D**

**Question 35**

**Which State in India has the largest coastline?**

- A Tamil Nadu
- B Andhra Pradesh
- C Gujrat



D West Bengal

Answer: C

## SSC CGL Free Online Coaching

### Question 36

Jog falls in Karnataka is located over which river?

A Kaveri

B Godavari

C Saraswati

D Krishna

Answer: C

### Question 37

In which market form, a firm does not exercise control over price?

A Monopoly

B Perfect competition

C Oligopoly

D Monopolistic competition

Answer: B

### Question 38

Which one of the following areas of India is covered by tropical evergreen forest?

A Semiarid areas of Gujarat

B Eastern Ghats

C Western Ghats

D Madhya Pradesh

Answer: C

## SSC CHSL Previous Question papers (download pdf)

### Question 39

Which substance is predominantly found in urine?

A Blood proteins

B creatinine

C red blood cells

D white blood cells

**Answer: B**

**Question 40**

The thymus gland produces a hormone called

A thyroxine

B thymosin

C thyronine

D calcitonin

**Answer: B**

**Question 41**

Blood group AB has which kind of antibodies?

A No antigen

B No antibody is present in blood group AB

C Neither antigen nor antibody

D Both antigen and antibody

**Answer: B**

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

**Question 42**

Which Vitamins are those, if taken in excess can be dangerous as they are stored in the body?

A B Complex

B E and C

C B and C

D A and D

**Answer: D**

**Question 43**

Atomic explosion is triggered by which kind of reaction?

A thermo nuclear reaction

B chemical reaction

C controlled chain reaction

D uncontrolled chain reaction

**Answer: D**

**Question 44**

The phenomenon of change in direction of light when it passes from one medium to another is called

- A Propagation
- B Reflection
- C Refraction
- D Dispersion

**Answer: C**

**Latest Job Updates on Telegram - Join here**

**Question 45**

Who has the right to decide whether a Bill is a money bill or not?

- A Speaker of Lok Sabha
- B Prime Minister
- C President
- D Finance Minister

**Answer: A**

**Question 46**

What is the name of portal launched by RBI recently to check illegal money collection?

- A Sahyog
- B Sahayata
- C Sampark
- D Sachet

**Answer: D**

**Question 47**

Which of the following is not an operating system

- A Android
- B Vista
- C iOS
- D Opera

**Answer: D**

**Join SSC Daily Quiz Telegram Group**

**Question 48**

Which pair of the following Indians has been selected for grant of Raman Magasaysay Award 2016

- A Bezwada Wilson and T.M. Krishna
- B T.M. Krishna and Arvind Adiga
- C Arvind Adiga and Bezwada Wilson
- D T.M. Krishna and Satish Gujral

**Answer: A**

**Question 49**

The discretionary powers of a Governor is limited in

- A Appointment of Chief Minister
- B Dismissal of the Ministry
- C Dissolution of the Legislative Assembly
- D Assent to Bills

**Answer: D**

**Question 50**

Who is the first law officer of the country?

- A Chief Justice of India
- B Attorney General
- C Law Minister
- D Solicitor General

**Answer: B**

**SSC CGL Free Mock Test**

**Mathematics**

**Instructions**

For the following questions answer them individually

**Question 51**

A is twice as good as B and together they finish a piece of work in 16 days. The number of days taken by A alone to finish the work is

- A 20 days
- B 21 days
- C 22 days
- D 24 days

**Answer: D**

**Explanation:**

Let A's efficiency =  $2x$  units/day

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

=> (A+B)'s 1 day's work =  $(2x + x) = 3x$  units/day

∴ Together they complete work in 16 days

=> Total work to be done =  $16 \times 3x = 48x$  units

∴ Time taken by A alone to finish the work =  $\frac{48x}{2x} = 24$  days

=> Ans - (D)

**125 SSC CGL Mocks for just Rs. 199**

**Question 52**

The successive discount of 15%, 20% and 25% on an article is equivalent to the single discount of

- A 60%
- B 47%
- C 49%
- D 40%

**Answer: C**

**Explanation:**

Let original price = Rs.  $100x$

After discount of 15%, new price =  $\frac{85}{100} \times 100x = \text{Rs. } 85x$

Similarly, after discount of 20%, price =  $\frac{80}{100} \times 85x = \text{Rs. } 68x$

Again, after discount of 25%, price =  $\frac{75}{100} \times 68x = \text{Rs. } 51x$

∴ Equivalent discount =  $\frac{100x - 51x}{100x} \times 100$

= 49%

=> Ans - (C)

**Question 53**

The numbers  $x, y, z$  are respectively proportional to 2, 3, 5 and the sum of  $x, y$  and  $z$  is 80. If the number  $z$  is given by the equation  $z = ax - 8$ , then  $a$  is

- A 6
- B  $\frac{3}{2}$
- C 3
- D  $\frac{5}{2}$

**Answer: C**

**Explanation:**

Let  $x = 2k, y = 3k$  and  $z = 5k$

Sum =  $(x + y + z) = 80$

=>  $2k + 3k + 5k = 80$

$$\Rightarrow 10k = 80$$

$$\Rightarrow k = \frac{80}{10} = 8$$

Thus,  $x = 2 \times 8 = 16$  and  $z = 40$

Also,  $z = ax - 8$

$$\Rightarrow 40 = 16(a) - 8$$

$$\Rightarrow 16a = 40 + 8 = 48$$

$$\Rightarrow a = \frac{48}{16} = 3$$

$\Rightarrow$  Ans - (C)

#### Question 54

If the ratio of cost price and selling price be 10:11, then the profit percentage is

- A 1%
- B 10%
- C 5%
- D 8%

**Answer: B**

#### Explanation:

Let cost price = Rs.  $10x$

$\Rightarrow$  Selling price = Rs.  $11x$

$$\therefore \text{Profit \%} = \frac{SP-CP}{CP} \times 100$$

$$= \frac{11x-10x}{10x} \times 100$$

$$= \frac{100}{10} = 10\%$$

$\Rightarrow$  Ans - (B)

## SSC CGL Previous Papers (DOWNLOAD PDF)

#### Question 55

The price of rice has increased by 60%. In order to restore the original price, the new price must be reduced by

- A  $33\frac{1}{3}\%$
- B  $37\frac{1}{2}\%$
- C 40%
- D 45%

**Answer: B**

#### Explanation:

Let the original price of rice = Rs. 100

If the price is increased by 60%,  $\Rightarrow$  New price =  $\frac{100+60}{100} \times 100 = \text{Rs.}160$

To restore to its original value the new price must be reduced by =  $\frac{160-100}{160} \times 100$

$$= \frac{6 \times 25}{4} = 37\frac{1}{2}\%$$

=> Ans - (B)

**Question 56**

A man covers a total distance of 100 km on bicycle. For the first 2 hours, the speed was 20 km/hr and for the rest of the journey, it came down to 10 km/hr. The average speed will be

- A  $12\frac{1}{2}$  km/hr
- B 13 km/hr
- C  $15\frac{1}{8}$  km/hr
- D 20 Km/hr

**Answer: A**

**Explanation:**

Total distance covered = 100 km

Speed for first 2 hours = 20 km/hr

=> Distance covered =  $2 \times 20 = 40$  km

Distance left =  $100 - 40 = 60$  km

Speed for remaining journey = 10 km/hr

=> Time taken for rest of the journey =  $\frac{60}{10} = 6$  hours

Thus, total time taken =  $2 + 6 = 8$  hours

∴ Average speed = total distance / total time

$$= \frac{100}{8} = \frac{25}{2} = 12\frac{1}{2} \text{ km/hr}$$

=> Ans - (A)

**Question 57**

Alipta got some amount of money from her father. In how many years will the ratio of the money and the interest obtained from it be 10:3 at 6% simple interest per annum?

- A 7 years
- B 3 years
- C 5 years
- D 4 years

**Answer: C**

**Explanation:**

Let principal amount = Rs.  $10x$  and time required =  $t$  years

=> Simple interest = Rs.  $3x$

Rate of interest =  $r = 6\%$

$$\Rightarrow \frac{P \times r \times t}{100} = 3x$$

$$\Rightarrow \frac{10x \times 6 \times t}{100} = 3x$$

$$\Rightarrow \frac{6t}{10} = 3$$

$$\Rightarrow t = 3 \times \frac{5}{3} = 5 \text{ years}$$

=> Ans - (C)

## 25 SSC CHSL Mocks for just Rs. 149

### Question 58

If  $(x - 2)(x - p) = x^2 - ax + 6$ , then the value of  $(a - p)$  is

- A 0
- B 1
- C 2
- D 3

**Answer: C**

**Explanation:**

$$(x - 2)(x - p) = x^2 - ax + 6$$

$$\Rightarrow x^2 - (2 + p)x + 2p = x^2 - ax + 6$$

By the compare of terms,

$$a = 2 + p, 2p = 6$$

$$p = 3 \text{ and } a = 2 + 3 = 5$$

$$\text{The value of } (a - p) = 5 - 3 = 2$$

### Question 59

When  $2x + \frac{2}{x} = 3$  then the value of  $x^3 + \frac{1}{x^3} + 2$  is

- A  $\frac{2}{7}$
- B  $\frac{7}{8}$
- C  $\frac{7}{2}$
- D  $\frac{8}{7}$

**Answer: B**

**Explanation:**

$$\text{Expression : } 2x + \frac{2}{x} = 3$$

$$\Rightarrow 2\left(x + \frac{1}{x}\right) = 3$$

$$\Rightarrow x + \frac{1}{x} = \frac{3}{2} \text{ -----(i)}$$

Cubing both sides, we get :

$$\Rightarrow \left(x + \frac{1}{x}\right)^3 = \left(\frac{3}{2}\right)^3$$

$$\Rightarrow x^3 + \frac{1}{x^3} + 3 \cdot x \cdot \frac{1}{x} \left(x + \frac{1}{x}\right) = \frac{27}{8}$$

Substituting value from equation (i)

$$\Rightarrow x^3 + \frac{1}{x^3} + 3\left(\frac{3}{2}\right) = \frac{27}{8}$$

$$\Rightarrow x^3 + \frac{1}{x^3} = \frac{27}{8} - \frac{9}{2}$$

$$\Rightarrow x^3 + \frac{1}{x^3} = \frac{27 - 36}{8} = \frac{-9}{8}$$

Adding 2 on both sides, we get :



$$\Rightarrow x^3 + \frac{1}{x^3} + 2 = 2 - \frac{9}{8}$$

$$\Rightarrow x^3 + \frac{1}{x^3} + 2 = \frac{7}{8}$$

$\Rightarrow$  Ans - (B)

**Question 60**

In a triangle ABC, if  $\angle A + \angle C = 140^\circ$  and  $\angle A + 3\angle B = 180^\circ$  then  $\angle A$  is equal to

A  $80^\circ$

B  $40^\circ$

C  $60^\circ$

D  $20^\circ$

**Answer: C**

**Explanation:**

Given :  $\angle A + \angle C = 140^\circ$  -----(i)

and  $\angle A + 3\angle B = 180^\circ$  -----(ii)

To find :  $\angle A = ?$

Solution : In  $\triangle ABC$ ,

$$\Rightarrow \angle A + \angle B + \angle C = 180^\circ$$

Using equation (i),  $\Rightarrow \angle B + 140^\circ = 180^\circ$

$$\Rightarrow \angle B = 180^\circ - 140^\circ = 40^\circ$$

Substituting it in equation (ii), we get :

$$\Rightarrow \angle A + (3 \times 40^\circ) = 180^\circ$$

$$\Rightarrow \angle A = 180^\circ - 120^\circ$$

$$\Rightarrow \angle A = 60^\circ$$

$\Rightarrow$  Ans - (C)

## SSC CGL Tier-2 Previous Papers PDF

**Question 61**

If PA and PB tangents to a circle with center such that  $\angle APB = 80^\circ$  then  $\angle AOP =$

A  $40^\circ$

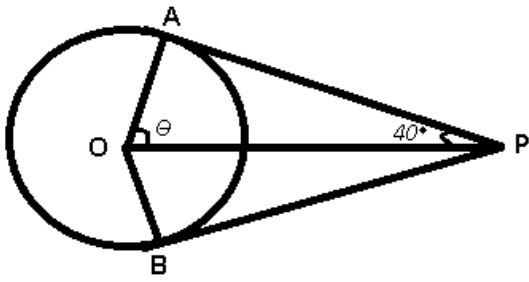
B  $50^\circ$

C  $60^\circ$

D  $70^\circ$

**Answer: B**

**Explanation:**



Given :  $\angle APB = 80^\circ$

To find :  $\angle AOP = \theta = ?$

Solution :  $\angle APO = \frac{1}{2} \times \angle APB$

$$\Rightarrow \angle APO = \frac{1}{2} \times 80^\circ = 40^\circ$$

Also, the radius of a circle intersects the tangent at the circumference of circle at  $90^\circ$

$$\Rightarrow \angle OAP = 90^\circ$$

In  $\triangle AOP$

$$\Rightarrow \angle AOP + \angle APO + \angle OAP = 180^\circ$$

$$\Rightarrow \theta + 40^\circ + 90^\circ = 180^\circ$$

$$\Rightarrow \theta = 180^\circ - 130^\circ$$

$$\Rightarrow \theta = 50^\circ$$

$\Rightarrow$  Ans - (B)

#### Question 62

If  $\tan(5x - 10^\circ) = \cot(5y + 20^\circ)$ , then the value of  $x + y$  is

- A  $15^\circ$
- B  $16^\circ$
- C  $22\frac{1}{2}^\circ$
- D  $24^\circ$

**Answer: B**

#### Explanation:

Expression :  $\tan(5x - 10^\circ) = \cot(5y + 20^\circ)$

$$\Rightarrow \tan(5x - 10^\circ) = \cot[90^\circ - (-5y + 70^\circ)]$$

Using,  $\cot(90^\circ - \theta) = \tan\theta$

$$\Rightarrow \tan(5x - 10^\circ) = \tan(-5y + 70^\circ)$$

$$\Rightarrow 5x - 10^\circ = -5y + 70^\circ$$

$$\Rightarrow 5x + 5y = 70^\circ + 10^\circ$$

$$\Rightarrow 5(x + y) = 80^\circ$$

$$\Rightarrow (x + y) = \frac{80^\circ}{5} = 16^\circ$$

$\Rightarrow$  Ans - (B)

#### Question 63

Which one of the following is the minimum value of the sum of two integers whose product is 24?

- A 25
- B 11
- C 8
- D 10

Answer: D

**Explanation:**

Factors of 24 = 1,2,3,4,6,8,12,24

Integers whose product is 24 : (1,24) , (2,12) , (3,8) , (4,6)

Sum of these integers = 25,14,11,10

Thus minimum value = 10

=> Ans - (D)

## SSC CGL Important Questions PDF

**Question 64**

The average marks obtained by a class of 60 students is 65. The average marks of half of the students is found to be 85. The average marks of the remaining students is

- A 35
- B 45
- C 55
- D 65

Answer: B

**Explanation:**

Average marks of 60 students = 65

=> Total marks of 60 students =  $60 \times 65 = 3900$

Average marks of half students i.e.  $\frac{60}{2} = 30$  students = 85

=> Total marks of 30 students =  $30 \times 85 = 2550$

Total marks of remaining 30 students =  $3900 - 2550 = 1350$

$\therefore$  Average marks of remaining 30 students =  $\frac{1350}{30} = 45$

=> Ans - (B)

**Question 65**

If  $x = \sqrt{a} + \frac{1}{\sqrt{a}}$ ,  $y = \sqrt{a} - \frac{1}{\sqrt{a}}$ , ( $a > 0$ ) the the value of  $x^4 + y^4 - 2x^2y^2$  is

- A 16
- B 20
- C 10
- D 5

Answer: A

**Explanation:**

Given :  $x = \sqrt{a} + \frac{1}{\sqrt{a}}$

Squaring both sides

$$\Rightarrow (x)^2 = (\sqrt{a} + \frac{1}{\sqrt{a}})^2$$

$$\Rightarrow x^2 = (\sqrt{a})^2 + (\frac{1}{\sqrt{a}})^2 + 2 \cdot \sqrt{a} \cdot \frac{1}{\sqrt{a}}$$

$$\Rightarrow x^2 = a + \frac{1}{a} + 2 \text{-----(i)}$$

$$\text{Similarly, } y^2 = a + \frac{1}{a} - 2 \text{-----(ii)}$$

To find :  $x^4 + y^4 - 2x^2y^2$

$$= (x^2 - y^2)^2$$

Substituting values from equations (i) and (ii), we get :

$$= [(a + \frac{1}{a} + 2) - (a + \frac{1}{a} - 2)]^2$$

$$= (2 + 2)^2 = (4)^2 = 16$$

$\Rightarrow$  Ans - (A)

**Question 66**

If  $x = \sqrt[3]{x^2 + 11} - 2$  then the value of  $x^3 + 5x^2 + 12x$  is

- A 0
- B 3
- C 7
- D 11

**Answer:** B

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

**Question 67**

Which of the set of three sides can't form a triangle?

- A 5 cm, 6 cm, 7 cm
- B 5 cm, 8 cm, 15 cm
- C 8 cm, 15 cm, 18 cm
- D 6 cm, 7 cm, 11 cm

**Answer:** B

**Explanation:**

In a triangle, sum of any two sides is always greater than the third side.

In the second option, sides given are 5, 8 and 15 cm

$$\text{Clearly, } 5 + 8 = 13 < 15$$

Thus, these sides cannot form a triangle.

$\Rightarrow$  Ans - (B)

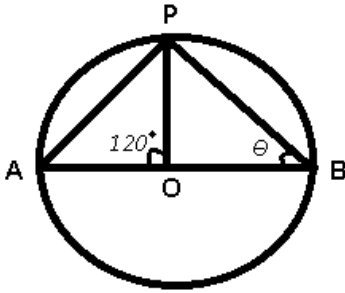
Question 68

AB is the diameter of a circle with center O and P be a point on its circumference if  $\angle POA = 120^\circ$  then the value of  $\angle PBO$  is

- A  $30^\circ$
- B  $60^\circ$
- C  $50^\circ$
- D  $40^\circ$

Answer: B

Explanation:



Let  $\angle PBO = \theta$

$\angle AOP + \angle POB = 180^\circ$  [Supplementary Angles]

$$\Rightarrow 120^\circ + \angle POB = 180^\circ$$

$$\Rightarrow \angle POB = 180^\circ - 120^\circ = 60^\circ$$

OB = OP = radius of circle

$$\Rightarrow \angle OBP = \angle BPO = \theta$$

In  $\triangle BOP$ ,

$$\Rightarrow \angle POB + \angle OBP + \angle BPO = 180^\circ$$

$$\Rightarrow \theta + \theta + 60^\circ = 180^\circ$$

$$\Rightarrow 2\theta = 180^\circ - 60^\circ = 120^\circ$$

$$\Rightarrow \theta = \frac{120^\circ}{2} = 60^\circ$$

$\Rightarrow$  Ans - (B)

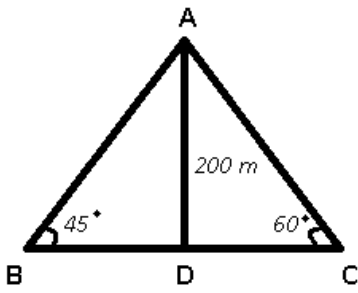
Question 69

A pilot in an aeroplane at an altitude of 200 m observes two points lying on either side of a river. If the angles of depression of the two points be  $45^\circ$  and  $60^\circ$ , then the width of the river is

- A  $(200 + \frac{200}{\sqrt{3}})$  m
- B  $(200 - \frac{200}{\sqrt{3}})$  m
- C  $400\sqrt{3}$  m
- D  $(\frac{400}{\sqrt{3}})$  m

Answer: A

Explanation:



Given : A is the aeroplane and  $AD = 200$  m

To find : Width of river =  $BC = ?$

Solution : In  $\triangle ADC$

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

$$\Rightarrow \sqrt{3} = \frac{200}{DC}$$

$$\Rightarrow DC = \frac{200}{\sqrt{3}} \text{ m}$$

Similarly, in  $\triangle ABD$

$$\Rightarrow \tan(45^\circ) = \frac{AD}{DB}$$

$$\Rightarrow 1 = \frac{200}{DB}$$

$$\Rightarrow DB = 200 \text{ m}$$

$$\therefore BC = BD + DC$$

$$= (200 + \frac{200}{\sqrt{3}}) \text{ m}$$

$\Rightarrow$  Ans - (A)

## General Science Notes for SSC CGL

### Question 70

A solid sphere of radius 9 cm is melted to form a sphere of radius 6 cm and a right circular cylinder of same radius. The height of the cylinder so formed is ?

- A 19 cm
- B 21 cm
- C 23 cm
- D 25 cm

Answer: A

### Explanation:

Radius of original sphere =  $R = 9$  cm

Radius of new sphere and cylinder =  $r = 6$  cm

Let the height of cylinder =  $h$  cm

Volume of original sphere = Volume of new sphere + Volume of new cylinder

$$\Rightarrow \frac{4}{3}\pi R^3 = (\frac{4}{3}\pi r^3) + (\pi r^2 h)$$

$$\Rightarrow \frac{4}{3} \times (9)^3 = (\frac{4}{3} \times 6^3) + (6^2 \times h)$$

$$\Rightarrow 972 = 288 + 36h$$

$$\Rightarrow 36h = 972 - 288 = 684$$

$$\Rightarrow h = \frac{684}{36} = 19 \text{ cm}$$

$\Rightarrow$  Ans - (A)

#### Question 71

An arc of  $30^\circ$  in one circle is double an arc in a second circle, the radius of which is three times the radius of the first. Then the angles subtended by the arc of the second circle at its centre is

- A  $3^\circ$
- B  $4^\circ$
- C  $5^\circ$
- D  $6^\circ$

Answer: C

#### Explanation:

For the first circle, angle subtended =  $30^\circ$  and let radius =  $r$  cm

For the second circle, let angle subtended =  $\theta$  and radius =  $3r$  cm

According to ques, arc of first circle =  $2 \times$  arc of second circle

$$\Rightarrow \frac{30^\circ}{360^\circ} 2\pi r = 2 \times \frac{\theta}{360^\circ} 2\pi(3r)$$

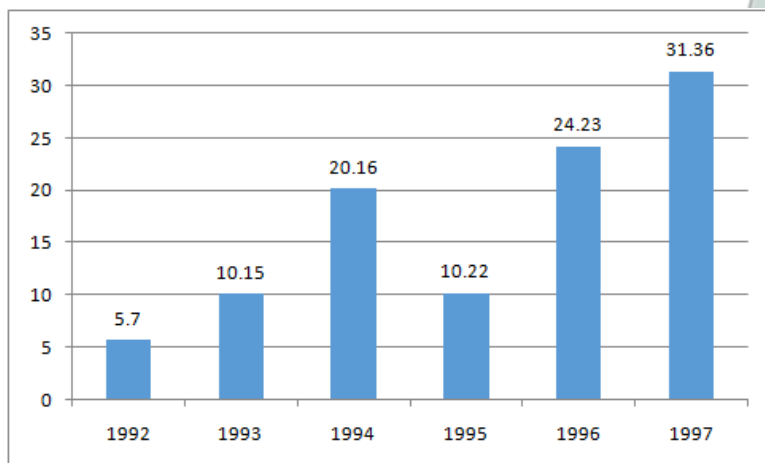
$$\Rightarrow 60\pi r = 12 \times \theta\pi r$$

$$\Rightarrow \theta = \frac{60}{12} = 5^\circ$$

$\Rightarrow$  Ans - (C)

#### Instructions

Study the Bar diagram carefully and answer the questions. The Bar diagram shows the trends of foreign direct investment (FDI) into India from all over the World (in Rs. crores).



#### Question 72

The sum of FDI of 1992 and 1993 is

- A 15.58 cr
- B 15.85 cr
- C 15.22 cr
- D 15.65 cr

Answer: B

Explanation:

FDI in 1992 (in Rs. crores) = 5.7

FDI in 1993 (in Rs. crores) = 10.15

=> The sum of FDI of 1992 and 1993 = 5.7 + 10.15

= 15.85

=> Ans - (B)

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

Question 73

The year which exhibited the 2nd highest growth percentage in FDI in India over the period shown is

A 1993

B 1994

C 1997

D 1996

Answer: B

Explanation:

Increase in the year 1993 from the previous year =  $\frac{4.45}{5.7} \times 100 = 78.07\%$

Increase in the year 1994 from the previous year =  $\frac{10.01}{10.15} \times 100 = 98.62\%$

There is a decrease in the year 1995 from the previous year.

Increase in the year 1996 from the previous year =  $\frac{14.01}{10.22} \times 100 = 137.4\%$

Increase in the year 1997 from the previous year =  $\frac{7.13}{24.23} \times 100 = 29.4\%$

=> Ans - (B)

Question 74

The ratio of investment in 1997 to the average investment is

A 2:1

B 1:2

C 1:1

D 3:1

Answer: A

Explanation:

Investment in 1997 (in Rs. crores) = 31.36  $\approx$  32

Total investment of 6 years

= 5.7 + 10.15 + 20.16 + 10.22 + 24.23 + 31.36 = 101.82

=> Average investment =  $\frac{101.82}{6} = 16.97 \approx 16$

$\therefore$  Required ratio =  $\frac{32}{16} = 2$

The ratio of investment in 1997 to the average investment = 2 : 1



=> Ans - (A)

**Question 75**

The absolute difference in FDI to India between 1996 and 1997

- A 7.29
- B 7.13
- C 7.16
- D 7.22

**Answer: B**

**Explanation:**

FDI in 1997 (in Rs. crores) = 31.36

FDI in 1996 (in Rs. crores) = 24.23

=> Absolute difference in FDI to India between 1996 and 1997 = 31.36 - 24.23

= 7.13

=> Ans - (B)

**SSC Exam Free Videos (Youtube)**

**English**

**Instructions**

For the following questions answer them individually

**Question 76**

In the following question, out of the four alternatives, choose the word which best expresses the meaning of the given word and click the button corresponding to it.

**FORSWEAR**

- A SWEAR
- B OATH
- C ABUSE
- D FORSAKE

**Answer: D**

**SSC Free Preparation App**

**Question 77**

In the following question, out of the four alternatives, choose the word which is opposite in meaning to the given word and click the button corresponding to it.

**INCLEMENT**

- A RADICAL
- B MILD

- C HARSH
- D TYRANNICAL

Answer: B

**Question 78**

Four words are given, out of which only one word is spelt correctly. Choose the correctly spelt word and click the button corresponding to it.

- A ANTICEPTIC
- B ANTECEPTIC
- C ANTICEPTIQUE
- D ANTISEPTIC

Answer: D

**Question 79**

In the following questions, one part of the sentence may have an error. Find out which part of the sentence has an error and click the button corresponding to it. If the sentence is free from error, click the "No error" option.

- A A The doctor says that
- B B the patient will recover
- C C in few days
- D D No Error

Answer: C

## Daily Free SSC Practice Set

**Question 80**

In the following questions, one part of the sentence may have an error. Find out which part of the sentence has an error and click the button corresponding to it. If the sentence is free from error, click the "No error" option.

- A A I do not think that
- B B I can cope up
- C C with this problem
- D D No Error

Answer: B

**Question 81**

In the following questions, one part of the sentence may have an error. Find out which part of the sentence has an error and click the button corresponding to it. If the sentence is free from error, click the "No error" option.

- A A The mother
- B B yearsns for

C C her only child

D D No Error

Answer: D

**Question 82**

The sentences given with blanks are to be filled with an appropriate word(s). Four alternatives are suggested for each question. For each question, choose the correct alternative and click the button corresponding to it.

Since last year his condition has been\_\_\_\_\_

A deteriorate

B deteriorating

C severely deteriorated

D deterioratingly

Answer: B

## SSC CGL Free Online Coaching

**Question 83**

The sentences given with blanks are to be filled with an appropriate word(s). Four alternatives are suggested for each question. For each question, choose the correct alternative and click the button corresponding to it.

Most children remain\_\_\_\_\_school between the ages of seven and ten.

A in

B under

C at

D inside

Answer: C

**Question 84**

The sentences given with blanks are to be filled with an appropriate word(s). Four alternatives are suggested for each question. For each question, choose the correct alternative and click the button corresponding to it.

The quake also\_\_\_\_\_ mudslides on the outskirts of the city.

A tempered

B tampered

C erupted

D triggered

Answer: D

**Question 85**

In each of the questions, four alternatives are given for the Idiom/Phrase. Choose the alternative which best expresses the meaning of the Idiom/Phrase and click the button corresponding to it.

**Wet behind the ears**

- A Skillful
- B Young and rich with experience
- C Young and without much experience
- D Hearing impaired

**Answer: C**

**SSC CHSL Previous Question papers (download pdf)**

**Question 86**

In each of the questions, four alternatives are given for the Idiom/Phrase. Choose the alternative which best expresses the meaning of the Idiom/Phrase and click the button corresponding to it.

**Under a cloud**

- A Sheltered from the sun
- B Under suspicion
- C Out in the open
- D Get wet

**Answer: B**

**Question 87**

In each of the questions, four alternatives are given for the Idiom/Phrase. Choose the alternative which best expresses the meaning of the Idiom/Phrase and click the button corresponding to it.

**Get the sack**

- A Look for a sack
- B Find a sack
- C Get a call back
- D Be dismissed

**Answer: D**

**Question 88**

Out of the four alternatives, choose the one which can be substituted for the given words/sentences and click the button corresponding to it.

**A person's peculiar habit**

- A Trait
- B Idiosyncrasy

C Idiolect

D Talent

Answer: B

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

### Question 89

Out of the four alternatives, choose the one which can be substituted for the given words/sentences and click the button corresponding to it.

Speech delivered without preparation

A Rhetoric

B Oration

C Extempore

D Maiden speech

Answer: C

### Question 90

Out of the four alternatives, choose the one which can be substituted for the given words/sentences and click the button corresponding to it. One who will do any job for anyone for money

A Mercenary

B Recruit

C Hoodlum

D Merchant

Answer: A

### Question 91

A sentence/a part of the sentence is underlined. Four alternatives are given to the underlined part which will improve the sentence. Choose the correct alternative and click the button corresponding to it. In case no improvement is needed, click the button corresponding to "No improvement".

The more they earn, more they spend

A The more they earn, the more they spend

B More they earn, the more they spend

C More they earn, more they spend

D No improvement

Answer: A

[Latest Job Updates on Telegram - Join here](#)

**Question 92**

A sentence/a part of the sentence is underlined. Four alternatives are given to the underlined part which will improve the sentence. Choose the correct alternative and click the button corresponding to it. In case no improvement is needed, click the button corresponding to "No improvement".

The offerings were placed on the alter

- A on the altar
- B on the steps
- C on the platform
- D No improvement

Answer: A

**Question 93**

A sentence/a part of the sentence is underlined. Four alternatives are given to the underlined part which will improve the sentence. Choose the correct alternative and click the button corresponding to it. In case no improvement is needed, click the button corresponding to "No improvement".

Really speaking, no man is perfect

- A Strictly
- B slightly
- C vaguely
- D No improvement

Answer: A

**Question 94**

A sentence/a part of the sentence is underlined. Four alternatives are given to the underlined part which will improve the sentence. Choose the correct alternative and click the button corresponding to it. In case no improvement is needed, click the button corresponding to "No improvement".

Mankind does not know this

- A do
- B had
- C is
- D No improvement

Answer: D

**Join SSC Daily Quiz Telegram Group**

**Question 95**

A sentence/a part of the sentence is underlined. Four alternatives are given to the underlined part which will improve the sentence. Choose the correct alternative and click the button corresponding to it. In case no improvement is needed, click the button corresponding to "No improvement".

Practically every part of the coconut tree is used by man

- A each
- B most
- C any
- D No improvement

**Answer: D**

**Instructions**

A passage is given with 5 questions following it. Read the passage carefully and choose the best answer to each question out of the four alternatives and click the button corresponding to it.

Dyslexia is a perceptual disorder often occurring in persons of normal, or even above average intelligence. The reader is unable to perceive correctly what is on a page. Letters and numbers often appear reversed: "b" seems to be "d", "quite" is "quiet" and "from" is "form". The reader tends to leave out letters or words or insert words or letters that are not there. Vowel and consonant sounds may be confused. Many dyslexics are lefthanded or able to write with either hand. They often confuse left and right. Learning to speak may also be delayed beyond infancy. The condition seems to be inherited. It may persist into adulthood. However, with early recognition and specialized approaches to teaching reading, most dyslexics can learn to read.

Some researchers believe that latent dyslexia may be aggravated by the way reading is taught. The modern wholeword, or lookandsay, method seems to be more of a hindrance to learning for dyslexics than it is for ordinary pupils. The phonetic method of teaching students to learn letters and sound them out appears to achieve better reading results. The problem of words that cannot be sounded out such as rough, laugh or through is not solved by phonetics. These words must simply be memorized. However, for children with dyslexia the problem can be compounded by the failure of parents or teachers to recognize the condition. This can easily lead to emotional problems for dyslexic children, who cannot understand their failure to keep up with their classmates.

Explanation:

**Question 96**

**Dyslexia, often occurring in persons of normal, or even above average intelligence, is a \_\_\_\_\_**

- A Conceptual disorder
- B Pathological disease
- C Perceptive disorder
- D Perceptual disorder

**Answer: D**

**Question 97**

**In Dyslexia, letters and figures often appear \_\_\_\_\_\**

- A Inverted
- B Blurred
- C Reversed
- D Clustered

**Answer: C**

**SSC CGL Free Mock Test**

**Question 98**

**People suffering from dyslexia are often \_\_\_\_\_**

- A right handed
- B far sighted
- C ambidextrous
- D only left handed

Answer: C

**Question 99**

Dyslexia may \_\_\_\_\_

- A be noticed during infancy
- B last till childhood
- C persist into adulthood
- D end when one goes to school

Answer: C

**Question 100**

The problem of perception can be compounded by the failure of parents and teachers to

- A provide treatment
- B recognize the condition
- C correct the child at infancy
- D understand the child

Answer: B

**125 SSC CGL Mocks for just Rs. 199**

**SSC CGL Free Mock Test**

**125 SSC CGL Mocks for just Rs. 199**

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

**25 SSC CHSL Mocks for just Rs. 149**

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

**SSC CGL Important Questions PDF**



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

**General Science Notes for SSC CGL**

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

**SSC Exam Free Videos (Youtube)**

**SSC Free Preparation App**

**Daily Free SSC Practice Set**

**SSC CGL Free Online Coaching**

**SSC CHSL Previous Question papers (download pdf)**

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

**Latest Job Updates on Telegram - Join here**

**Join SSC Daily Quiz Telegram Group**