



## SSC CHSL 4 July 2019 Shift-3

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## Reasoning

### Instructions

For the following questions answer them individually

### Question 1

Select the option that is related to the third letter-cluster in the same way as the second letter-cluster is related to the first letter-cluster.

DFHJ : MOQS :: CGGK : \_\_\_\_\_

- A NQQT
- B NPPT
- C LPPT
- D LQQT

**Answer:** C

### Explanation:

Given relation is DFHJ : MOQS

$$D + 9 = M$$

$$F + 9 = O$$

$$H + 9 = Q$$

$$J + 9 = S$$

Using the same logic,

$$C + 9 = L$$

$$G + 9 = P$$

$$G + 9 = P$$

$$K + 9 = T$$

∴ CGGK : LPPT is related in the same way DFHJ : MOQS related

Hence, the correct answer is Option C

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### Question 2

Which number will replace the question mark (?) in the following series?

4, 16, 36, 64, 100, 144, 196, ?

- A 284
- B 225
- C 256
- D 246

**Answer:** C

### Explanation:

$$4 + 12 = 16$$

$$16 + 20 = 36$$

$$36 + 28 = 64$$

$$64 + 36 = 100$$

$$100 + 44 = 144$$

$$144 + 52 = 196$$

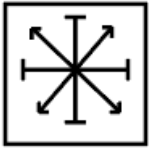
$$196 + 60 = 256$$

### Question 3

Select the option in which the given figure is embedded.



A



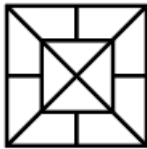
B



C



D



Answer: D

### Explanation:

The only figure that can give the zigzag impression is the last figure.

### Question 4

Select the number that will come next in the following series.

2, 6, 14, 30, 62, ?

A 98

B 134

C 122

D 126

Answer: D

### Explanation:

The series is

$$2 * 2 + 2 = 6$$

$$6 \times 2 + 2 = 14$$

$$14 \times 2 + 2 = 30$$

$$30 \times 2 + 2 = 62$$

$$62 \times 2 + 2 = 126$$

## SSC CHSL Free Mock Test

### Question 5

Three of the following four words are alike in a certain way and one is different. Pick the odd word out.

- A Nib
- B Rink
- C Pitch
- D Arena

**Answer: A**

#### Explanation:

Nib means pointed end part of the pen which distributes ink to the writing surface

Rink means an enclosed area of ice for skating

Pitch means highness or lowness of the slope area

Arena means area surrounded by seating where sports and other public events are held

∴ The odd one among them is Nib

Hence, the correct answer is Option A

### Question 6

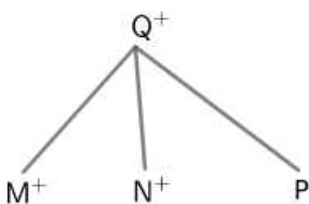
M is the brother of N. N is the brother of P. Q is the father of M. Based on these statements, which of the following statements cannot be definitely true ?

- A N is the son of Q
- B N is the brother of M
- C P is the brother of M
- D M is the brother of P

**Answer: C**

#### Explanation:

According to the problem, the family tree is



Since gender of P is unknown, we cannot say the relationship of P with anyone

Hence, the correct answer is Option C

**Question 7**

'Man' is related to 'Mammal' in the same way as 'Rat' is related to '\_\_\_\_\_'.  
*cracku*

- A Reptile
- B Rodent
- C Mice
- D Burrow

**Answer: B**

**Explanation:**

Here it is related to species of animals. Rat is a rodent

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**Question 8**

Select the set in which the numbers are related in the same way as are the numbers of the following set.  
(6, 36, 1296)

- A (7, 49, 2409)
- B (10, 100, 5000)
- C (3, 9, 81)
- D (4, 16, 64)

**Answer: C**

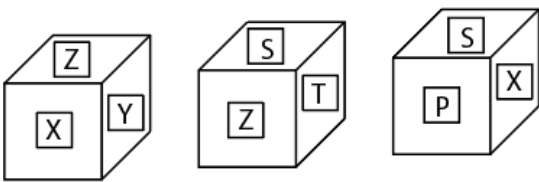
**Explanation:**

Square of 6 is 36 and square of 36 is 1296.

Similarly square of 3 is 9 and square of 9 is 81

**Question 9**

Three different positions of the same dice are shown. Which alphabet will appear on the opposite surface on which alphabet P appears ?



- A X
- B T
- C Z
- D S

**Answer: C**

**Explanation:**

From the first position of dice, Z is not opposite to X and Y

From the second position of dice, Z is not opposite to S and T

=> Z is opposite to remaining letter P

∴ Alphabet Z will appear on the opposite surface on which alphabet P appears

Hence, the correct answer is Option C

#### Question 10

Select the letter cluster that will come next in the following series.

LVD, OTF, RRH, ?, XNL

A TQJ

B TPJ

C UPJ

D UQI

Answer: C

Explanation:

Follow the pattern,

$L + 3 = O$ ,  $V - 2 = T$ ,  $D + 2 = F$ , So LVD becomes OTF, Similarly,  $O + 3 = R$ ,  $T - 2 = R$ ,  $F + 2 = H$ , Similarly,  $R + 3 = U$ ,  $R - 2 = P$ ,  $H + 2 = J$

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#### Question 11

Select the word-pair in which the two words are related in the same way as are the two words in the following word-pair.

Seismology : Earthquakes :: \_\_\_\_\_ : \_\_\_\_\_

A Phycology : Fungi

B Entomology : Plants

C Nephrology : Nerves

D Ornithology : Birds

Answer: D

Explanation:

Seismology is the study of earthquakes and ornithology is the study of birds.

#### Question 12

If R = 36 and BIN = 50, then how will you code 'TALE'?

A 19

B 54

C 76

D 110

Answer: C

Explanation:

The logic here is doubling the sum of the alphabetical values of the word/letter.

$R = 18$ , therefore  $2 * 18 = 36$

$BIN = 2 + 9 + 14 = 25$ , therefore  $2 * 25 = 50$

TALE = 20 + 1 + 12 + 5 = 38 Therefore 2\*38 = 76

### Question 13

Three of the following four letter-clusters are alike in a certain way and one is different. Pick the odd one out.

- A OQTX
- B EGJN
- C ACFJ
- D IKNQ

Answer: D

#### Explanation:

If you clearly check all the alphabets you will see a pattern, which is not present in D.

For example,

A.OQTX = O+2 = Q +3 = T +4 = X

B.EGJN = E + 2 = G+ 3=J +4 =N

C.ACFJ = A +2 =C +3 =F +4 =J

D.IKNQ = I + 2 = K +3 = N + 3= Q

Hence D

## SSC CGL Free Mock Test (Latest Pattern)

### Question 14

Vikram is twice as old as his brother Ajay. 5 years ago, Vikram was 3 times as old as Ajay. How old is Vikram now?

- A 20
- B 22
- C 18
- D 17

Answer: A

#### Explanation:

$$v = 2a \dots (i)$$

$$v - 5 = 3(a - 5)$$

$$\Rightarrow v - 5 = 3a - 15$$

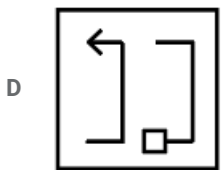
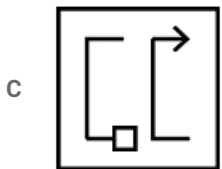
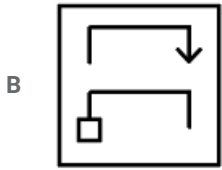
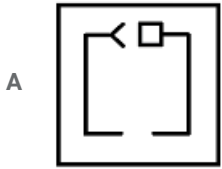
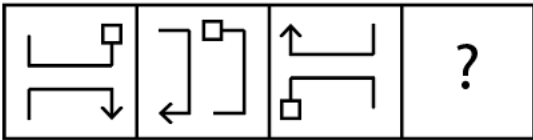
$$\Rightarrow 3a - v = 10 \dots (ii)$$

Therefore a = 10

$$V = 2a = 20$$

Question 15

Select the figure that will come next in the following figure series.

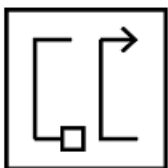


Answer: C

Explanation:

In the figures, the facing of the arrow is moving in clockwise direction and the facing of the part of the figure with square is moving in anticlockwise direction.

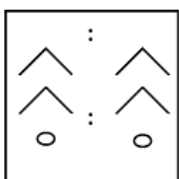
∴ The figure that will come next in the following figure series is



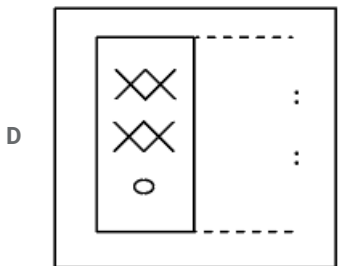
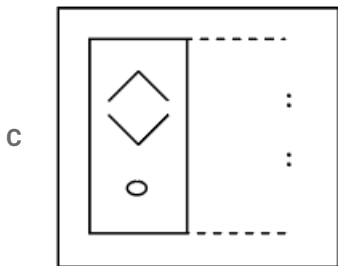
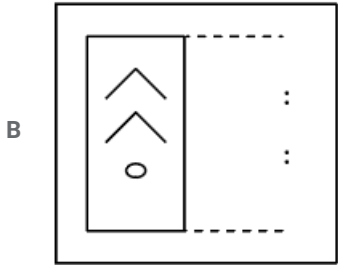
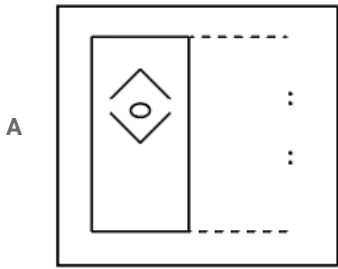
Hence, the correct answer is Option C

Question 16

A figure of transparent sheet with a pattern is given below. Select the option that shows how the pattern would appear when the transparent sheet is folded at the dotted line.







Answer: B

**Explanation:**

When a sheet is folded sideways, the characters don't get flipped vertically but only flipped horizontally.

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

**Question 17**

Two statements are given followed by three conclusions numbered I, II and III. Assuming the statements to be true, even if they seem to be at variance with commonly known facts, decide which of the conclusions logically follow(s) from the statements.

**Statements:**

No ball is pen.

All pens are boxes.

**Conclusions:**

I. Some boxes are pens.

II. Some boxes are balls.

III. No box is ball.

A All conclusions follow

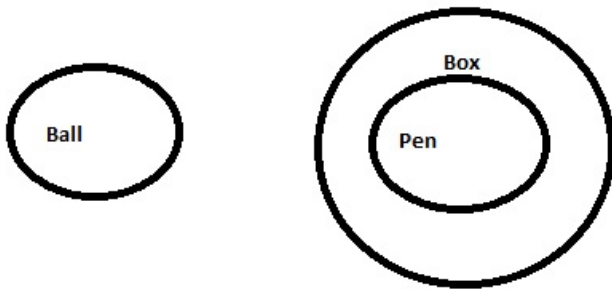
B Either conclusion II or III follows

C Only conclusion I follows

D Conclusion I and either II or III follows

Answer: D

Explanation:



Hence it is true that I. Some boxes are pens. follows.

Whereas,

II. Some boxes are balls. -- Independently false

III. No box is ball.-- Independently false

But either of them is true.

Question 18

Which two signs should be interchanged in the following equation to make it correct?

$$5 \times 15 \div 7 - 20 + 4 = 77$$

A (+ and -)

B ( $\div$  and +)

C (- and  $\times$ )

D (+ and  $\times$ )

Answer: B

Explanation:

By trial and error method,

Option A

$$5 \times 15 \div 7 + 20 - 4 = 77$$

$$\frac{5 \times 15}{7} + 20 - 4 = 77$$

$$\frac{75}{7} + 20 - 4 = 77$$

75 is not divisible by 7 so we get a decimal number after solving which is not possible

Option B

$$5 \times 15 + 7 - 20 \div 4 = 77$$

$$5 \times 15 + 7 - 5 = 77$$

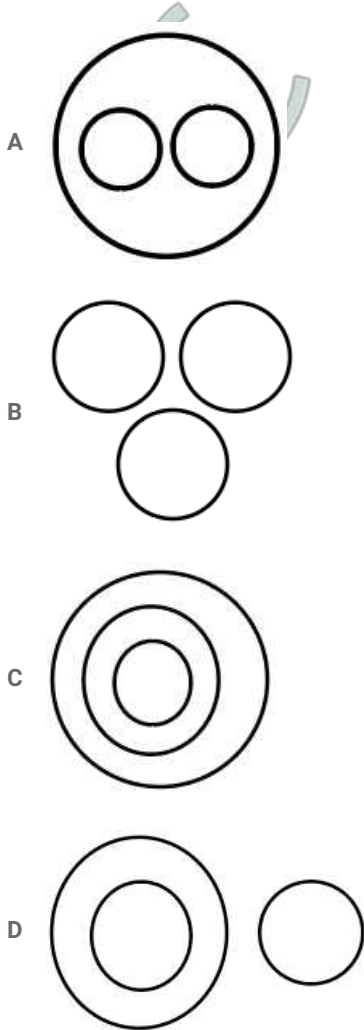
$$75 + 7 - 5 = 77$$

$$77 = 77$$

Hence, the correct answer is Option B

Question 19

Select the Venn diagram that best illustrates the relationship between the following classes.  
Moon, Venus, Universe



Answer: A

Explanation:

Since Moon and Venus are entities of the universe, at the same time they are different, one is a satellite and other is a planet.

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Question 20

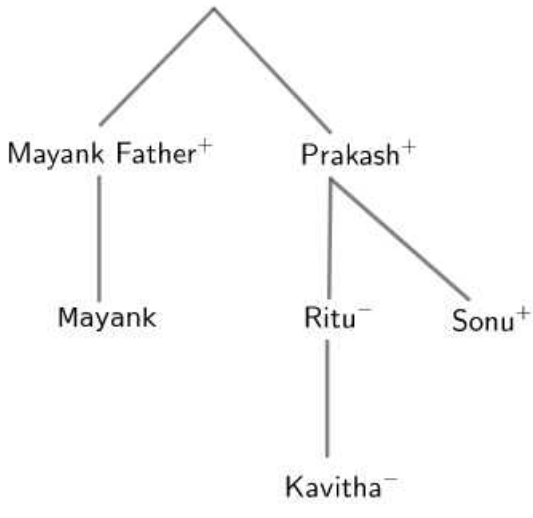
Mayank's father has a brother, Prakash, whose daughter, Ritu is Kavita's mother. Sonu is Ritu's only brother. How is Sonu related to Mayank?

- A Brother
- B Son
- C Nephew
- D Cousin

Answer: D

Explanation:

According to the problem, the family tree is

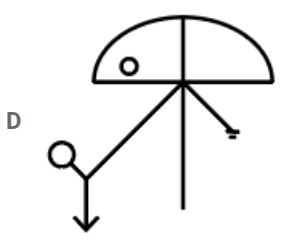
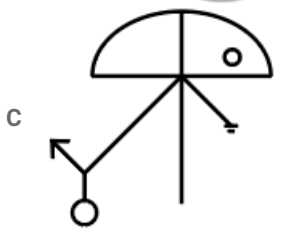
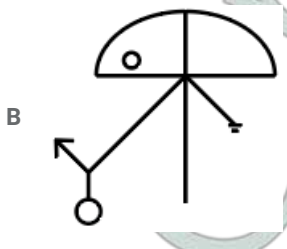
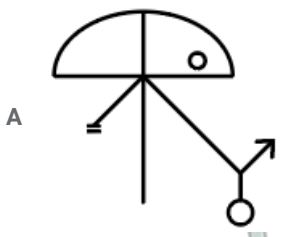


∴ Sonu is cousin of Mayank

Hence, the correct answer is Option D

**Question 21**

Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



Answer: B

**Explanation:**

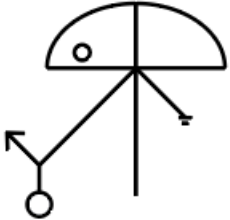
When the mirror is placed to the right of the figure,

The facing of the figure to the left and right direction changes to opposite direction in mirror image(right facing changes to left and vice versa). There won't be change in shape of the mirror image.

The small circle in the semicircle on the right of the figure will be on the left in the mirror image

The arrow above circle at the bottom right of the figure will be above circle at the bottom left in the mirror image

∴ The mirror image of the given figure is



Hence, the correct answer is Option B

**Question 22**

Rohit's age is 10 years less than half of his mother's age who is 5 years younger than Rohit's father. If Rohit's father is 47 years old, what is Rohit's age?

- A 10 years
- B 11 years
- C 21 years
- D 14 years

**Answer: B**

**Explanation:**

Rohit's father is 47 years old. Hence mother is 42 years old.

Half of his mother's age is 21.

10 years less than half of his mother's age is  $21 - 10 = 11$

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**Question 23**

Select the set in which the numbers are related in the same way as are the numbers of the following set.

(3, 5, 34)

- A (4, 7, 65)
- B (1, 2, 12)
- C (6, 7, 89)
- D (9, 10, 190)

**Answer: A**

**Explanation:**

(3, 5, 34)

lets find the logic here.

$3*5 = 15$  and  $15*2 = 30$

$$5 - 3 = 2 \text{ and } 2^2 = 4$$

$$\text{and } 30 + 4 = 34$$

Similarly,

$$4, 7, 65$$

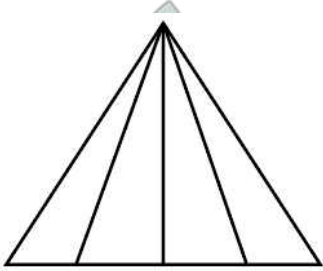
$$7 * 4 = 28 \text{ and } 28 * 2 = 56$$

$$7 - 4 = 3 \text{ and } 3^2 = 9$$

$$56 + 9 = 65$$

#### Question 24

How many triangles are there in the following figure ?



A 6

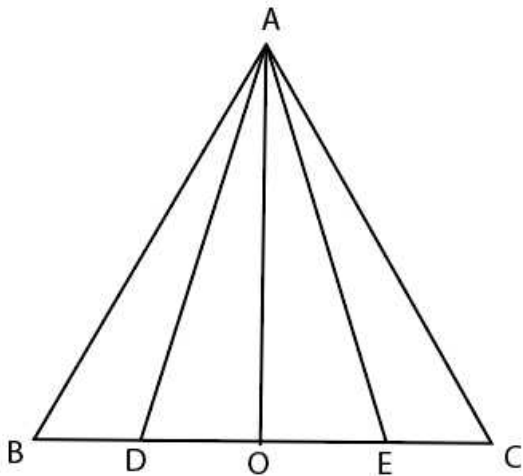
B 9

C 10

D 8

Answer: C

Explanation:



The triangles are ABC, ABE, ABO, ABD, ADC, ADE, ADO, AOC, AOE, AEC

$\therefore$  Number of triangles in the figure = 10

#### Question 25

Three of the following four numbers are alike in a certain way and one is different. Pick the number that is different from the rest.

A 323

B 373

C 313

D 353

Answer: A

**Explanation:**

All are prime numbers except 323.

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### General knowledge

#### Instructions

For the following questions answer them individually

#### Question 26

Srirangapatnam Fort is located in \_\_\_\_\_.

- A Telangana
- B Kerala
- C Karnataka
- D Tamil Nadu

Answer: C

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#### Question 27

At NASA's annual Human Exploration Rover Challenge, a team from \_\_\_\_\_ in India won the 'AIAA Neil Armstrong Best Design Award' in April 2019.

- A Indian Institute of Technology, Delhi
- B Lovely Professional University, Phagwara
- C KIET Group of Institutions, Ghaziabad
- D Mukesh Patel School of Technology Management and Engineering, Mumbai

Answer: C

#### Question 28

The responsibility of regulating and supervising primary (urban) cooperative banks, which are popularly known as Urban Cooperative Banks (UCBs) is vested with which one of the following?

- A The Department of Non-Banking Supervision of the Reserve Bank of India
- B The Department of Corporate Services of the Reserve Bank of India
- C The Urban Banks Department of the Reserve Bank of India
- D State Co-operative Banks

Answer: C

**Question 29**

**Who is the author of the famous book 'Kamayani'?**

- A Mahadevi Verma
- B Maithili Sharan Gupt
- C Jaishankar Prasad
- D Sumitranandan Pant

**Answer: C**

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**Question 30**

**Which one of the following allows the user to store, organise, calculate and manipulate the available data in a tabular format ?**

- A Microsoft Powerpoint
- B Microsoft Excel
- C Notepad
- D Microsoft Word

**Answer: B**

**Question 31**

**According to Indian Bureau of Mines Report 2018, which among the following is the largest mica producing state in India?**

- A Andhra Pradesh
- B Bihar
- C Punjab
- D Odisha

**Answer: A**

**Question 32**

**India is a federal republic with 29 states and \_\_\_\_\_union territories.**

- A six
- B seven
- C five
- D four

**Answer: B**

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**Question 33**

After winning 'Australian Open 2018', the total number of Grand Slam Men's singles titles won by Roger Federer is:

- A 21
- B 20
- C 24
- D 18

**Answer: B**

**Question 34**

Name the Nobel Prize winning American economist whose report to the US Congress titled "National Income, 1929-35" paved the way for the calculation of Gross Domestic Product (GDP) as the ultimate measure of a country's overall welfare.

- A Paul Samuelson
- B Kenneth Arrow
- C John Maynard Keynes
- D Simon Kuznets

**Answer: D**

**Question 35**

As a part of SIMBEX-2019, held from 16 to 22 May 2019, Indian naval ships INS Kolkata and INS Shakti participated in the annual bilateral naval exercise between India and \_\_\_\_\_.

- A US
- B Russia
- C Singapore
- D Japan

**Answer: C**

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**Question 36**

Which one of the following is defined as "a set of instructions, data or programs used to operate computers and execute specific tasks"?

- A Processor
- B Malware
- C Hardware
- D Software

**Answer: D**

**Question 37**

Which of the following states won the maximum number of medals in the inaugural 2018 edition of the 'Khelo India School Games'?

- A Maharashtra
- B Delhi
- C Jharkhand
- D Haryana

**Answer: D**

**Question 38**

Which of the following mountain ranges is home to the second highest peak of the world, K2?

- A East Karakoram Range
- B Pir Panjal Range
- C Zaskar Range
- D Ladakh Range

**Answer: A**

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**Question 39**

In which state are the Dilwara Jain Temples situated?

- A Bihar
- B Rajasthan
- C Maharashtra
- D Madhya Pradesh

**Answer: B**

**Question 40**

Marmagao Port is located in \_\_\_\_\_.

- A Gujarat
- B Goa
- C Odisha
- D West Bangal

**Answer: B**

**Question 41**

Who is the current Chief of the Army Staff of India as of May 2019?

- A General Bipin Rawat
- B General Devraj Anbu
- C General Dalbir Singh Suhag
- D General Bikram Singh

**Answer: A**

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### Question 42

Which one of the following is a degenerative disorder of the brain and one of several conditions that cause dementia, a progressive decline of mental functions resulting in memory loss and confusion?

- A Schizophrenia
- B Amnesia
- C Concussion
- D Alzheimer's disease

**Answer: D**

### Question 43

Select the option that does NOT have the correct pair of state and its chief minister?

- A Andhra Pradesh - Jaganmohan Reddy
- B Odisha - Naveen Patnaik
- C Arunachal Pradesh - Gegong Apang
- D Sikkim - P S Golay

**Answer: C**

### Question 44

Who among the following authored the book 'Poverty and Un-British Rule in India'?

- A Rajagopalachari
- B Bal Gangadhar Tilak
- C Dadabhai Naoroji
- D Raja Ram Mohan Roy

**Answer: C**

## SSC CHSL Free Mock Test

### Question 45

In May 2019, \_\_\_\_\_ became the first judge from the Indian apex court to be appointed to the Supreme Court of Fiji's non-resident panel for a period of three years.

- A Justice A K Sikri
- B Justice Madan Lokur
- C Justice A K Goel
- D Justice H L Dattu

**Answer: B**

**Question 46**

According to the Constitution of India, how many members from the Anglo-Indian community can be nominated to the Lok Sabha by the President?

- A Two
- B Three
- C Four
- D Five

**Answer: A**

**Question 47**

Which one of the following is a Japanese word that means 'harbour wave',?

- A Gneiss
- B Jishin
- C Volcano
- D Tsunami

**Answer: D**

## SSC CHSL Previous Papers (DOWNLOAD PDF)

**Question 48**

Which of the following at  $23^{\circ}30'N$  divides India into almost two halves?

- A Tropic of Cancer
- B Prime Meridian
- C Tropic of Capricorn
- D Equator

**Answer: A**

**Question 49**

As of May 2019, Vidarbha has won \_\_\_\_\_ Ranji Trophy tournaments.

- A 3

- B 5
- C 2
- D 8

Answer: C

**Question 50**

Who among the following was elected the President of South Africa in May 2019 ?

- A F W de Klerk
- B Jacob Zuma
- C Thabo Mbeki
- D Cyril Ramaphosa

Answer: D

## SSC CGL Previous Papers (DOWNLOAD PDF)

### Quant

**Instructions**

For the following questions answer them individually

**Question 51**

A number is decreased by 30%, then increased by 30%, then further decreased by 10%. What is the net increase/decrease percent in the number(correct to the nearest integer)?

- A 19% increase
- B 18% increase
- C 18% decrease
- D 19% decrease

Answer: C

**Explanation:**

Let the number be 100.

First increased by 30 percent, number becomes 130.  $(100 + \frac{30}{100} * 100)$

Then decreased by 30 Percent, number becomes 91.  $(130 - \frac{30}{100} * 130)$

Finally decreased by 10 percent, number becomes 81.9.  $(91 - \frac{10}{100} * 91)$

## SSC CGL Free Mock Test (Latest Pattern)

**Question 52**

What is the area of a rhombus(in  $\text{cm}^2$ ) whose side is 13 cm and the smaller diagonal is 10 cm ?

- A 192

B 120

C 96

D 50

Answer: B

**Question 53**

In a  $\triangle ABC$ , the bisectors of  $\angle B$  and  $\angle C$  meet at point O with in the triangle. If  $\angle BOC$  is given, then which among the given options is true ?

A  $\angle A = 180^\circ - \angle BOC$

B  $\angle A = 2(\angle BOC - 90^\circ)$

C  $\angle A = 90^\circ + \angle BOC$

D  $\angle A = 2(90^\circ - \angle BOC)$

Answer: B

**Question 54**

If  $x^4 + x^{-4} = 1442$ , ( $x > 0$ ) then the value of  $x + x^{-1}$  is:

A 15

B 6

C 8

D 7

Answer: B

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

**Question 55**

Three numbers are in the ratio  $\frac{1}{2} : \frac{2}{3} : \frac{3}{4}$ . The difference between the greatest and the smallest number is 27. The smallest number is:

A 72

B 54

C 81

D 40

Answer: B

**Explanation:**

$$\frac{1}{2} : \frac{2}{3} : \frac{3}{4}$$

$$\frac{1}{2} * 12 : \frac{2}{3} * 12 : \frac{3}{4} * 12$$

$$6 : 8 : 9$$

Let the numbers are  $6x$ ,  $8x$  and  $9x$

By the problem  $9x - 6x = 27$

i.e  $x = 9$

hence the smallest number is  $6x$  i.e 54

#### Question 56

If  $a^2 + b^2 = 99$  and  $ab = 11$ , ( $a > 0, b > 0$ ) then the value of  $(a^3 + b^3)$  is:

- A 1080
- B 1100
- C 968
- D 1250

**Answer: C**

**Explanation:**

$$a^2 + b^2 = 99 \text{ and } ab = 11$$

$$(a^3 + b^3) = (a+b)(a^2 + b^2 - ab)$$

Hence we have to find  $a+b$

$$a^2 + b^2 = 99$$

$$a^2 + b^2 + 2ab = 99 + 22$$

$$(a + b)^2 = 121$$

$$(a + b) = 11$$

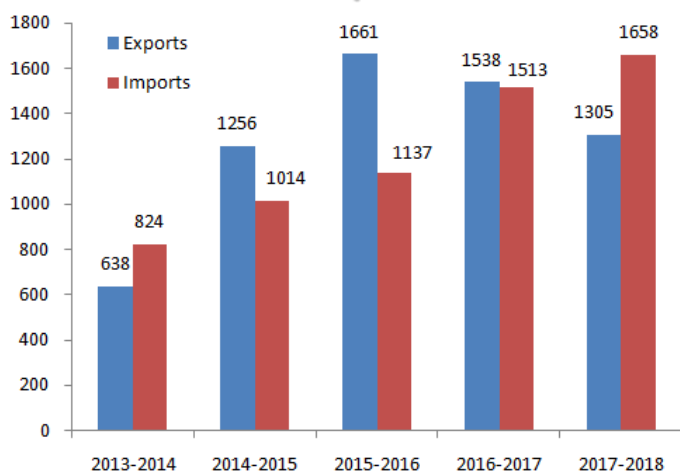
$$a + b = 11$$

Hence,

$$(a^3 + b^3) = 11 \times (88) = 968$$

#### Instructions

The given Bar Graph presents the Imports and Exports of an item (in tonnes) manufactured by a company for the five financial years, 2013-2014 to 2017-2018.



#### Question 57

In which financial year the absolute difference between the Exports and the Imports is the highest?

- A 2015-2016
- B 2014-2015

C 2016-2017

D 2017-2018

**Answer: A**

**Explanation:**

It is clearly from the figure that in the Financial year 15-16 the difference in the peaks are highest.

## SSC CHSL Study Material

**Question 58**

What is the average of Import (in tonnes) during the five financial years?

A 1229.2

B 1229.5

C 1335.9

D 1552.4

**Answer: A**

**Explanation:**

Average is Total divided by no. of terms.

i.e. Total Import value = 6146 = (824 + 1014 + 1137 + 1513 + 1658)

Average  $6146/5 = 1229.2$

**Instructions**

For the following questions answer them individually

**Question 59**

If  $2 \sin^2 \theta + 5 \cos \theta - 4 = 0$ ,  $0^\circ < \theta < 90^\circ$ , then the value of  $\tan \theta + \sin \theta$  is:

A  $\frac{3\sqrt{3}}{2}$

B  $\frac{2}{\sqrt{3}}$

C  $\frac{\sqrt{3}}{2}$

D  $\frac{\sqrt{3}}{3}$

**Answer: A**

**Question 60**

If  $(3x - 7)^3 + (3x - 8)^3 + (3x + 6)^3 = 3(3x - 7)(3x - 8)(3x + 6)$ , then what is the value of  $x$ ?

A 1

B 4

C 3

D 2

**Answer: A**



**Explanation:**

Let us consider,

$(3x - 7)$ ,  $(3x - 8)$  and  $(3x + 6) = a, b, c$  respectively,

Hence ,

given  $a^3 + b^3 + c^3 = 3 a.b.c$

Hence, if it is the case, Then  $a+b+c = 0$ , therefore,  $(3x - 7 + 3x - 8 + 3x + 6) = 0$ , hence  $9x = 9$ , hence  $x = 1$

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**Question 61**

Two circles of radii 7 cm and 9 cm intersect at the points A and B. If AB = 6 cm, and the distance between the centres of the circles is x cm, then the value of x (to the closest integer) is:

- A 10
- B 14
- C 12
- D 15

Answer: D

**Question 62**

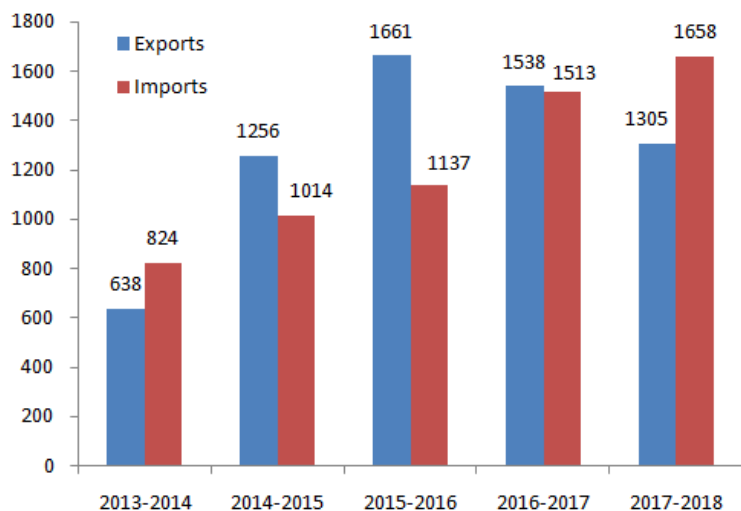
9 years ago, the average age of a family of five members was 33 years. Now, three new members join whose ages are in ascending order with consecutive gaps of 8 years. If the present average age of the family is the same as it was 9 years ago, what is the age (in years) of the youngest new member ?

- A 10
- B 9
- C 15
- D 17

Answer: A

Question 63

The given Bar Graph presents the Imports and Exports of an item (in tonnes) manufactured by a company for the five financial years, 2013-2014 to 2017-2018.



In which financial year the percentage increase in Imports and Exports taken together is the highest in comparison to its previous financial year?

- A 2016-2017
- B 2017-2018
- C 2015-2016
- D 2014-2015

Answer: D

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Question 64

If  $\cos \theta = \frac{2p}{p^2+1}$ , ( $p \neq 0$ ) then  $\tan \theta$  is equal to:

- A  $\frac{2p}{p^2-1}$
- B  $\frac{p^2-1}{2p}$
- C  $\frac{2p}{p^2+1}$
- D  $\frac{p^2+1}{p^2-1}$

Answer: B

Explanation:

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

We know  $\cos \theta$  symbolises base and Hypotenuse in ratio format.

Similarly,  $\tan \theta$  symbolises perpendicular and base in ratio format .

So we have to find the perpendicular, whose base and hypotenuse are given,

$$\text{Base} = B = 2p \text{ whereas Hypotenuse} = H = p^2 + 1$$

Therefore Perpendicular =  $P = \sqrt{H^2 - B^2} = p^2 - 1$

$$\tan \theta = P/B = \frac{p^2 - 1}{2p}$$

**Question 65**

A, B and C can complete a piece of work in 4, 28 and 56 days respectively. Working together, they can complete the same work in how many days ?

A  $5\frac{1}{17}$

B  $3\frac{5}{17}$

C  $5\frac{5}{17}$

D  $3\frac{1}{17}$

**Answer: B**

**Explanation:**

Simple approach to find it-

$$\frac{1}{4} + \frac{1}{28} + \frac{1}{56}$$

$$= \frac{14}{56} = \frac{1}{4} \text{ i.e B}$$

**Question 66**

There was 29% off on bags. A lady bought a bag and got 13% discount for paying in cash. She paid ₹617.70. What was the price tag (in ₹) on the bag ?

A 925

B 800

C 750

D 1000

**Answer: D**

**Explanation:**

Let the marked price of the bag = Rs. x

According to the problem,

$$x * \frac{71}{100} * \frac{87}{100} = 617.70$$

By solving, we get, x = 1000

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**Question 67**

A train covers 60 km at a uniform speed. If the speed had been 8 km/h more, it would have taken 10 hours less for the same journey. What is the speed of the train (in km/h)?

A 3

B 2.5

C 5

D 4

Answer: D

Explanation:

Let speed be  $x$  km/h

Therefore Time taken to complete the whole journey =  $\frac{60}{x}$  hour.

By the problem,

$$\frac{60}{x+8} = \frac{60}{x} - 10$$

$$\Rightarrow x^2 + 8x - 48 = 0$$

$\Rightarrow$  we get  $x = 4, -12$ . Since speed can be positive only, speed = 4

Question 68

Let  $\triangle ABC \sim \triangle PQR$  and  $\frac{ar(\triangle ABC)}{ar(\triangle PQR)} = \frac{1}{16}$ . If  $AB = 12$  cm,  $BC = 6$  cm and  $AC = 9$  cm then  $PR$  is equal to:

A 9 cm

B 24 cm

C 12 cm

D 8 cm

Answer: B

Question 69

If  $x + \frac{1}{x} = 10$ , then  $x^3 + \frac{1}{x^3}$  is equal to:

A 1100

B 1030

C 1000

D 970

Answer: D

Explanation:

Given,

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

We have to find,

$$x^3 + \frac{1}{x^3}$$

First we have to know what is  $a^3 + b^3$  i.e.  $(a + b)(a^2 - ab + b^2)$

Putting the same for  $x$  and  $1/x$ , we get

$$\left(x + \frac{1}{x}\right) \left(x^2 - 1 + \frac{1}{x^2}\right) \dots (i)$$

and Again we have to find  $\left(x^2 + \frac{1}{x^2}\right)$ , From the formula of  $a^2 + b^2 = (a + b)^2 - 2ab$ ,

we got  $\left(x^2 + \frac{1}{x^2}\right) = \left(x + \frac{1}{x}\right)^2 - 2 = 98$ .

Hence we have now ,

$$10 \times (98 - 1) = 970$$

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### Question 70

A man bought 2 articles for ₹3050 each. He sold one article at 10% profit and another at 20% profit. The total profit percentage he earned is:

- A 20%
- B 18%
- C 10%
- D 15%

Answer: D

### Explanation:

Since he has the Cost price for both the particles same, then the profit he will get in total will be the average of the two profits i.e.

$$\frac{20+10}{2} = 15\%$$

### Question 71

A certain amount invested at a certain rate, compounded annually, grows to an amount in two years, which is a factor of 1.1881 more than to what it would have grown in three years. What is the rate percentage?

- A 8
- B 8.1
- C 9.2
- D 9

Answer: D

### Explanation:

Think of the logic here.

It means after three years if we have the same amount to be invested for a period of two years it would give the same 1.1881 times.

it means,

$$P \left(1 + \frac{x}{100}\right)^2 = 1.1881P$$

which becomes

$$\left(1 + \frac{x}{100}\right) = \left(1 + \frac{9}{100}\right)$$

i.e.  $x = 9$

### Question 72

A circle is inscribed in a triangle ABC. It touches sides AB, BC and AC at the points P, Q and R respectively. If BP = 8.5 cm, CQ = 6.5 cm and AR = 4.5 cm, then the perimeter (in cm) of the  $\triangle ABC$  is:

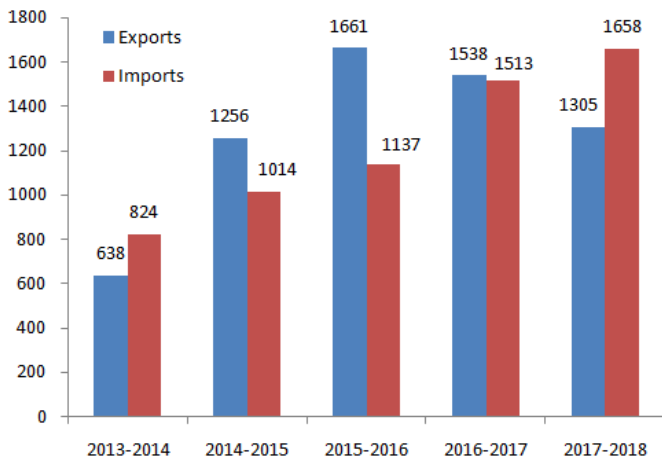
- A 49.5
- B 39
- C 33
- D 35

Answer: B

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### Question 73

The given Bar Graph presents the Imports and Exports of an item (in tonnes) manufactured by a company for the five financial years, 2013-2014 to 2017-2018.



What is the ratio of total Exports to total Imports during the five financial years?

- A 4011 : 4175
- B 3199 : 3073
- C 4175 : 4011
- D 3073 : 3199

**Answer: B**

#### Explanation:

Here Blue represents Exports and Red represents Imports

Therefore Exports =  $638 + 1256 + 1661 + 1538 + 1305 = 6398$

Imports =  $824 + 1014 + 1137 + 1513 + 1658 = 6146$

Hence Ratio =  $3199/3073$

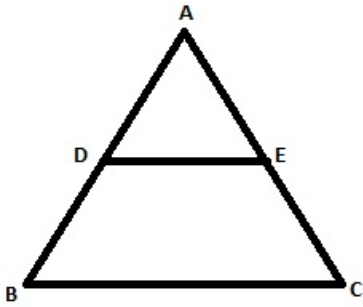
### Question 74

In triangle ABC, D and E are two points on the sides AB and AC respectively so that  $DE \parallel BC$  and  $\frac{AD}{BD} = \frac{3}{4}$ . The ratio of the area of  $\triangle ABC$  to the area of trapezium DECB is:

- A 49 : 40
- B 40 : 49
- C 33 : 49
- D 49 : 33

**Answer: A**

#### Explanation:



So this is our corresponding figure.

Let us assume  $AD = 3x$  and  $BD = 4x$  ( Since it is given that  $AD:BD = 3:4$ )

Therefore  $AB = AD + BD = 3x + 4x = 7x$

Now Consider two triangles here,

$ABC$  and  $ADE$

(Since  $DE$  parallel to  $BC$ )

$\angle ADE = \angle ABC$  (Corresponding angle)

$\angle AED = \angle ACB$  (Corresponding angle)

$\angle BAC = \angle DAE$  (Same angle)

The two triangles  $ABC$  and  $ADE$  are similar.

Hence we can say,

By the property of similar triangles,

We can say that Area of two similar triangles are proportional to the square of their corresponding sides,

$$\text{Areas of } \frac{ADE}{ABC} = \left(\frac{AD}{BD}\right)^2 = \frac{9}{49}$$

Hence,  $ADE = 9x$  and  $ABC = 49x$

But we have to find the area of Trapezium  $DECB$ , which is nothing but the difference of the areas of the two triangles above,

Area of trapezium  $DECB$  is  $40x$ .

Hence , the ratio area of  $\triangle ABC$  to the area of trapezium  $DECB = 40:49$

#### Question 75

A man gets a discount of 30% and then 20% on his food bill of ₹1,500. How much discount, in rupees, did he get ?

- A 360
- B 700
- C 500
- D 660

**Answer:** D

#### Explanation:

In the first case, discount amount he get is 30% of Rs. 1500 i.e.  $\frac{30 \times 1500}{100} = \text{Rs. } 450$

Therefore the buying price now reduced to Rs.  $(1500 - 450) = \text{Rs. } 1050$ .

But he again got a discount of 20% i.e 20% of 1050 i.e.  $\frac{20 \times 1050}{100} = \text{Rs. } 210$

Therefore total discount he got Rs.  $(450 + 210) = \text{Rs. } 660$

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### English

#### Instructions

For the following questions answer them individually

#### Question 76

Identify the most appropriate option to substitute the underlined segment. If no substitution is required, select No substitution.  
By next week I will have been made all the reservations for the trip to Europe.

- A No substitution.
- B will had make
- C will have made
- D will have been making

Answer: C

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#### Question 77

Select the most appropriate synonym of the given word.

**PATHETIC**

- A purposeful
- B powerful
- C plentiful
- D pitiful

Answer: D

#### Question 78

Select the most appropriate antonym of the given word.

**INFERIOR**

- A superior
- B exterior
- C interior
- D ulterior

Answer: A

#### Question 79

Select the wrongly spelt word.

- A missionary
- B hereditary



C elementary

D jewellery

Answer: C

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### Question 80

Select the most appropriate word for the group of words.  
One whose hobby is stamp collection

A panegyrist

B philatelist

C philanthropist

D phonologist

Answer: B

### Question 81

Select the most appropriate indirect form of the given sentence.  
The lawyer said to the accused, "Where were you at the time of the burglary?"

A The lawyer asked the burglar that where was he at the time of burglary.

B The lawyer asked the burglar where were you at the time of burglary.

C The lawyer asked the burglar if he was there at the time of burglary.

D The lawyer asked the burglar where he was at the time of burglary.

Answer: D

### Question 82

Select the most appropriate meaning of the given idiom.  
To bark up the wrong tree

A to be mistaken about the name of a tree

B to be wrong about the reason for something

C to bury money under a tree and forget the place

D to eat an unpalatable fruit by mistake

Answer: B

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### Question 83

Identify the segment which contains the grammatical error.  
The ambulance have arrived on time, the accident victim was taken to the hospital.

A have arrived on time

- B was taken to the hospital
- C The ambulance
- D the accident victim

Answer: A

**Question 84**

Identify the most appropriate option to substitute the underlined segment. If no substitution is required, select No substitution. Of Rama and Usha the later is the most responsible.

- A the later is more
- B No substitution.
- C the latter is the more
- D the latter is most

Answer: C

**Instructions**

In the following passage some words have been deleted. Fill in the blanks with the help of the alternatives given. Select the most appropriate option for each blank.

**Comprehension:**

"Tenzing and Hillary have done it! Mount Everest has been conquered!" This news evoked (1) \_\_\_\_\_ reactions. Somehow, there was a sense of disappointment (2) \_\_\_\_\_ the fact that the great mountain had been (3) \_\_\_\_\_. It would have been nice to (4) \_\_\_\_\_ the Everest as an (5) \_\_\_\_\_ part of the Earth.

**Question 85**

Select the most appropriate option to fill in blank number 1

- A interesting
- B intruding
- C inspired
- D intimate

Answer: A

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**Question 86**

Select the most appropriate option to fill in blank number 2

- A on
- B of
- C at
- D for

Answer: C

**Question 87**

Select the most appropriate option to fill in blank number 3

- A occupied
- B challenged
- C conquered
- D invaded

**Answer: C**

**Question 88**

Select the most appropriate option to fill in blank number 4

- A left
- B be leaving
- C have left
- D had left

**Answer: C**

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**Question 89**

Select the most appropriate option to fill in blank number 5

- A unassailable
- B unusual
- C unruly
- D unavailed

**Answer: A**

**Instructions**

For the following questions answer them individually

**Question 90**

Identify the segment which contains the grammatical error.  
The Principal requested to the Chief Guest to inaugurate the sports meet.

- A the sports meet
- B The Principal requested
- C to the Chief Guest
- D to inaugurate

**Answer: C**

**Question 91**

Select the most appropriate meaning of the given idiom.

To grease the palm

- A to cheat someone
- B to give a massage
- C to give support
- D to bribe someone

Answer: D

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**Question 92**

Select the correctly spelt word.

- A compitition
- B contruction
- C repetition
- D distruction

Answer: C

**Question 93**

Select the most appropriate passive form of the given sentence.

Have you paid your outstanding bills?

- A Have your outstanding bills being paid ?
- B Are your outstanding bills being paid ?
- C Have your outstanding bills been paid ?
- D Will your outstanding bills be paid ?

Answer: C

**Question 94**

Fill in the blank with the most appropriate word.

The \_\_\_\_ appears to be rather rough today for the ships to sail.

- A environment
- B climate
- C weather
- D atmosphere

Answer: C

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

### Question 95

Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.

- A. They had come from different parts of the city.
- B. Men, tall and skinny, short and fat gathered in Dubai.
- C. They were all named Mohammad!
- D. But, all of them had one thing in common.

- A BADC
- B ABCD
- C BDAC
- D ADCB

Answer: A

### Question 96

Fill in the blank with the most appropriate word.

The archaeologist made a \_\_\_\_\_ discovery.

- A sensational
- B sensible
- C sensitive
- D senile

Answer: A

### Question 97

Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.

- A. Practicing hard, she hoped to win an Olympic medal some day.
- B. As she sped down the slope she had a terrible accident.
- C. But, she didn't know it would be her last run ever.
- D. Ann Thompson was going to make her practice ski run before lunch.

- A DCBA
- B DACB
- C BCDA
- D ACDB

Answer: B

## SSC CHSL Study Material

### Question 98

Select the most appropriate antonym of the given word.

SPARSE

- A dense
- B weak
- C thin
- D strong

Answer: A

**Question 99**

Select the most appropriate word for the group of words.  
One who is in charge of a museum or art gallery

- A curator
- B instructor
- C monitor
- D collector

Answer: A

**Question 100**

Select the most appropriate synonym of the given word.  
OPPORTUNE

- A timely
- B barely
- C likely
- D rarely

Answer: A

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