



## SSC CGL 11 June 2019 Shift-3

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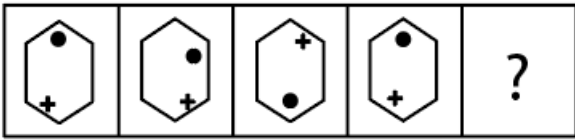
# Reasoning

## Instructions

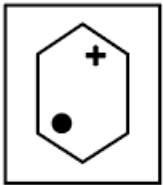
For the following questions answer them individually

### Question 1

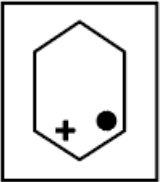
Select the figure that will come next in the following figure series.



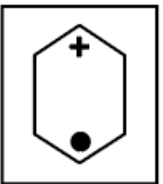
A



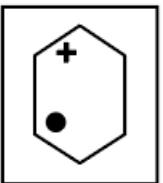
B



C



D

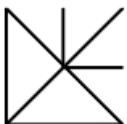


Answer: D

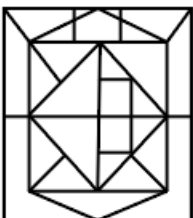
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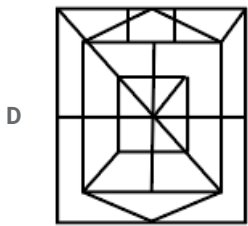
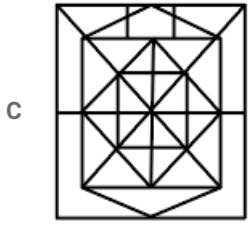
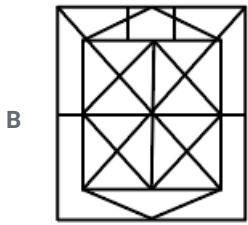
### Question 2

Select the figure in which the given figure is embedded. (Rotation is not allowed)



A





Answer: C

**Question 3**

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

- A PUYBD
- B EJNQS
- C TYBEG
- D JOSVX

Answer: C

**Explanation:**

Option C is correct.

Let us take option A,

U is four places away from P, Y is three places away from U, B is two places away from Y and D is one place away from B. The sequence is same in option B and D except C.

**Question 4**

In a code language, SELECTION is written as ESELDITNO. How will NOSTALGIA be written in the same language?

- A ONTSBGLAI
- B ONTSZGLAI
- C NOTSBLGAI
- D ONSTBGLAI

Answer: A

**Explanation:**

Option A is correct from figure we get the solution,

S E L E C T I O N  
X X | +1 X X  
E S E L D I T N O

N O S T A L G I A  
X X | +1 X X  
O N T S B G L A I

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### Question 5

The sum of the current ages of Natasha and Krishna is 50 years. 10 years ago, Krishna was twice as old as Natasha. What is Krishna's current age?

- A 15 years
- B 20 years
- C 10 years
- D 30 years

**Answer:** D

**Explanation:**

Option D is correct,

Let us take the present age of Natasha is  $x$  and the present age of Krishna is  $y$ . So that,

$$x+y=50 \quad \text{--- (i)}$$

$$y=50-x$$

Ten year ago, Krishna was twice as old as Natasha so that,

$$(y-10)=2(x-10)$$

put the value of y

$$(50-x-10)=2x-20$$

from solving the equation we get

$$x=20$$

Put the value of x in equation (i)

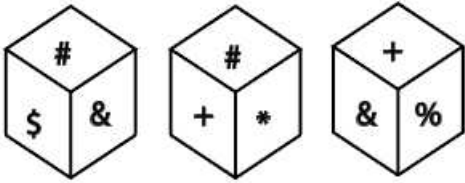
$$20+y=50$$

$$y=30$$

So the present age of Krishna is 30 years.

#### Question 6

Three different positions of the same dice are shown below. Which symbol is on the face opposite the face showing '\*' ?



A +

B %

C #

D &

Answer: D

#### Question 7

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

ADH, XAE, UXB, RUY, ?

A PRV

B ORU

C OSV

D ORV

Answer: D

#### Explanation:

Option D is correct.

As we see the sequence in figure,

D is two places away from A and H is three places away from D. Similarly in option D, R is two places away from O and V is three places away from R

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Question 8

Arrange the following words in a logical and meaningful order.

1. Kidney
2. Heart
3. Brain
4. Thyroid gland
5. Liver

- A 3, 4, 2, 5, 1  
B 3, 2, 4, 5, 1  
C 3, 4, 2, 1, 5  
D 3, 2, 4, 1, 5

Answer: A

Explanation:

Option A is correct because we have to place all the body organ from top to bottom.

So the correct sequence is-

Brain

Thyroid Gland

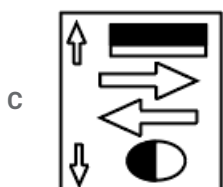
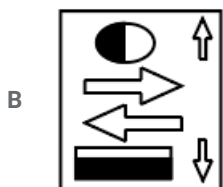
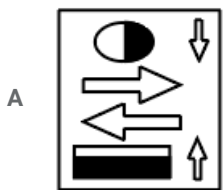
Heart

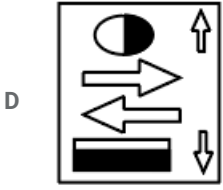
Liver

Kidney

Question 9

Select the correct mirror image of the given figure when a vertical mirror is placed on the right of the figure.





Answer: D

**Explanation:**

In option A, both the arrow faces towards each other.

In option B, the black part of circle is not facing towards arrow.

In option C, the rectangle box is placed on the top.

So that option D is correct.

**Question 10**

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:**

All squirrels are lizards.

All lizards are goose.

**Conclusions:**

I. Some squirrels are not goose.

II. Some lizards are squirrels.

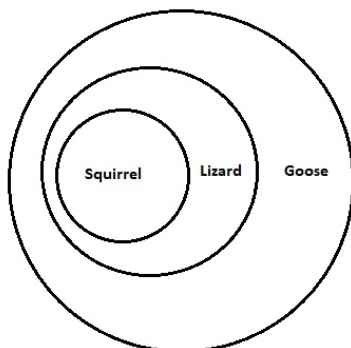
III. Some goose are squirrels.

- A Conclusions I and II follow
- B Conclusions I, II and III follow
- C Conclusions I and III follow
- D Conclusions II and III follow

Answer: D

**Explanation:**

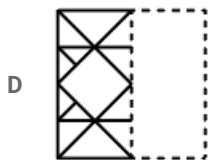
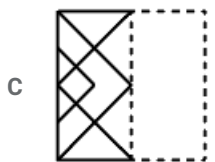
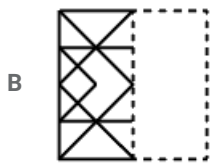
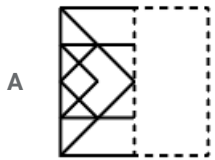
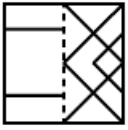
From Venn Diagram conclusion II and III follow.



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### Question 11

Given below is a transparent sheet of paper with a pattern on the left and right side. How will the pattern appear when the transparent sheet is folded on the dotted line ?



Answer: B

### Question 12

Select the number that will replace ? in the following series.

120, 128, 144, 168, ?, 240

A 216

B 202

C 208

D 200

Answer: D

### Question 13

A + B means 'A is the mother of B'

A - B means 'A is the father of B'

A × B means 'A is the sister of B'

A ÷ B means 'A is the daughter of B'

If  $P + R \times T - Q \div S + U$ , then how is S related to T ?



- A Daughter
- B Sister
- C Mother
- D Wife

Answer: D

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### Question 14

Which two signs should be interchanged to make the given equation correct?

$$27 \div 3 - 18 + 3 \times 2 = 18$$

- A  $\div$  and  $\times$
- B  $+$  and  $\div$
- C  $+$  and  $-$
- D  $\times$  and  $+$

Answer: B

### Question 15

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

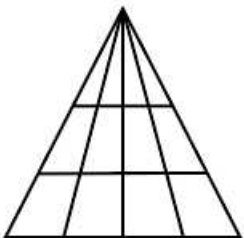
Walnut : Fig

- A Almond : Dry fruits
- B Turmeric : Spices
- C Asafoetida : Cashew nuts
- D Raisin: Apricot

Answer: D

### Question 16

How many triangles are there in the figure given below ?



- A 32
- B 36
- C 24

D 30

Answer: D

Explanation:

Shortcut formula for counting the number of triangles is  $\frac{n*m*(n+1)}{2}$  where

n = number of vertical parts

m = number of horizontal parts

$$\frac{4*3*(4+1)}{2} = 30$$

So, the answer would be option d)30.

## SSC CGL Important Questions PDF

Question 17

In a code language, if PICTURE is coded as 16932021185 then how will FUNCTION be coded in the same language?

A 6211432091514

B 6211432091413

C 6211332091513

D 6211432081514

Answer: A

Explanation:

Each letter is represented by its position in alphabetic order.

P I C T U R E

16 9 3 20 21 18 5

Similarly FUNCTION will be represented by 6211432091514.

So, the answer would be option a) 6211432091514.

Question 18

Find the missing number from the below options.

4            6            7

5            3            ?

41           45           58

A 9

B 51

C 12

D 3

Answer: D

Explanation:

Number in third row is summation of square of numbers in first and second row.

$$41 = 4 \times 4 + 5 \times 5$$

$$45 = 6 \times 6 + 3 \times 3$$

$$58 = 7 \times 7 + 3 \times 3$$

So, the answer would be Option d)3.

#### Question 19

Select the option that is related to the third number in the same way as the second number is related to the first number.

16 : 240 :: 6 : ?

A 25

B 30

C 35

D 40

**Answer: B**

#### Explanation:

Relation between first and second number - a:b

$$b = a \times a - a$$

$$240 = 16 \times 16 - 16$$

Similarly, fourth number would be  $6 \times 6 - 6 = 30$ .

So, the answer would be Option b)30.

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#### Question 20

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

A Honesty

B Integrity

C Truthfulness

D Hypocrisy

**Answer: D**

#### Explanation:

Three of the following words - Honesty, Integrity & Truthfulness are synonyms. While Hypocrisy means a situation in which someone pretends to believe something that they do not really believe, or that is the opposite of what they do or say at another time.

So, the answer would be option d)Hypocrisy.

#### Question 21

Select the term that will replace the question mark (?) in the following series.

A, G, L, ?, S, U, V

A O

B P

C Q

D N

Answer: B

**Explanation:**

In this series, difference between every next letter is reduced by 1 from previous letter.

A-G → 5

G-L → 4

L-P → 3

P-S → 2

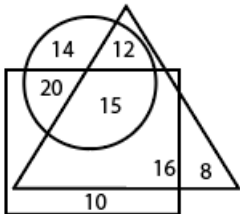
S-U → 1

U-V → 0

So, the answer would be option b)P.

**Question 22**

In the Venn diagram given below, the circle represents 'Ladies', the triangle represents 'Constables' and the square represents 'Married persons'. The numbers given in the diagram represents number of persons of that particular category.



How many lady constables are NOT married?

A 14

B 12

C 8

D 15

Answer: B

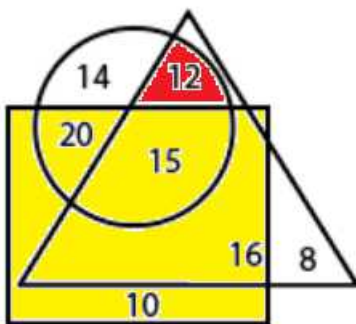
**Explanation:**

A Venn diagram consists of multiple overlapping closed curves, each representing a set.

circle -Ladies

triangle-Constables

Married is represented by square, highlighted in yellow.



Lady constables are NOT married - This will be represented by overlapping region of circle and triangle, which is not a part of square (highlighted in red).

So, the answer would be Option b)12.

## General Science Notes for SSC CGL

### Question 23

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

- A 4 : 16
- B 14 : 196
- C 12 : 244
- D 2 : 4

Answer: C

### Explanation:

Three pairs are similar in this way -  $a : a \times a$ . So, the answer would be Option c) 12:244

### Question 24

'Insulin' is related to 'Hormone' in the same way as 'Pepsin' is related to ' .....

- A Digestion
- B Vitamins
- C Stomach
- D Enzymes

Answer: D

### Explanation:

This is an analogy based question. Since there is a positive relation between Insulin & Hormone, we need to identify option with similar relation for Pepsin.

Pepsin is one of the digestive enzymes produced by stomach. So, the answer would be Option d) Enzymes.

### Question 25

Find the missing number from the below options.

9	25	49
6	11	13
9	16	?

- A 19
- B 20
- C 21
- D 18

Answer: B

### Explanation:

$$9 = 3^2 \quad 25 = 5^2 \quad 49 = 7^2$$

$$6 = 3 \times 2 \quad 11 = 5 \times 2 + 1 \quad 13 = 7 \times 2 - 1$$

$$9 = 3 \times 3 \quad 16 = 5 \times 3 + 1 \quad 20 = 7 \times 3 - 1$$

So, the answer would be option b) 20.

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### General knowledge

#### Instructions

For the following questions answer them individually

#### Question 26

The 'Tanakh' is the sacred text of which religion/sect?

- A Taoism
- B Confucianism
- C Zen Buddhism
- D Judaism

Answer: D

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#### Question 27

In which year was the 'Battle of Goa' fought?

- A 1510
- B 1502
- C 1524
- D 1514

Answer: A

#### Question 28

The phrase 'Survival of the fittest' as a way of describing the mechanism of natural selection was coined by \_\_\_\_\_.

- A Marie Curie
- B Charles Babbage
- C Herbert Spencer
- D Louis Pasteur

Answer: C

#### Question 29

In which province of China is the Huangguoshu National Park located which houses the world's largest waterfall cluster.

- A Yunnan
- B Jiangsu

C Guizhou

D Shandon

Answer: C

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Question 30

Bhavai' is a traditional dance form of \_\_\_\_\_.

A Punjab

B Maharashtra

C Bihar

D Gujarat

Answer: D

Question 31

DNA is stored majorly in \_\_\_\_\_ of the cell.

A plasma membrane

B nucleus

C cytoplasm

D golgi body

Answer: B

Question 32

The 'Friendship Highway' is a road that connects China to \_\_\_\_\_.

A Pakistan

B Myanmar

C Nepal

D India

Answer: C

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Question 33

The former princely state of Tripura in the north-eastern part of India was ruled by \_\_\_\_\_ Dynasty.

A Ahom

B Nagvanshi

C Manikya

D Haihaya

**Answer: C**

**Question 34**

Which of the following was a port city of the Indus Valley Civilization?

A Kalibangan

B Rakhigarhi

C Dholavira

D Lothal

**Answer: D**

**Question 35**

Cash Reserve Ratio (CRR) is calculated as a percentage of each bank's \_\_\_\_\_.

A savings of customers

B credit growth

C rate of inflation

D net demand and time liabilities

**Answer: D**

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**Question 36**

The Indus Water Treaty was signed between India and \_\_\_\_\_.

A China

B Bangladesh

C Pakistan

D Afghanistan

**Answer: C**

**Question 37**

In which part of the female flower does fertilisation take place?

A Ovary

B Filament

C Style

D Stigma

**Answer: A**



**Question 38**

Who among the following is the only Indian to have won the Amateur World title in both, snooker and billiards?

- A Michael Ferreira
- B Pankaj Advani
- C Subhash Agarwal
- D Geet Sethi

**Answer: B**

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**Question 39**

'World Water Day' is annually celebrated on \_\_\_\_\_.

- A 2<sup>nd</sup> June
- B 13<sup>th</sup> August
- C 15<sup>th</sup> January
- D 22<sup>nd</sup> March

**Answer: D**

**Question 40**

When was the Constitution of Pakistan enforced?

- A 1965
- B 1973
- C 1947
- D 1952

**Answer: B**

**Question 41**

Harsh Vardhan, the union minister for Environment, Forest and Climate Change launched the India Cooling Action Plan (ICAP). On which day was ICAP released?

- A 26<sup>th</sup> January
- B 8<sup>th</sup> March
- C 15<sup>th</sup> February
- D 27<sup>th</sup> February

**Answer: B**

**Question 42**

Night Blindness is caused by the deficiency of Vitamin \_\_\_\_\_.

- A A
- B C
- C K
- D B12

**Answer: A**

**Question 43**

About 70% of the sun is made up of \_\_\_\_\_.

- A Helium
- B Hydrogen
- C Oxygen
- D Carbon

**Answer: B**

**Question 44**

Which Indian author wrote the book 'The English Teacher'?

- A Ruskin Bond
- B R K Narayan
- C Khushwant Singh
- D Vikram Seth

**Answer: B**

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**Question 45**

Which one of the following is the highest altitude lake of Pakistan?

- A Satpara Lake
- B Paristan Lake
- C Attabad Lake
- D Rush Lake

**Answer: B**

**Question 46**

The interest rate charged by banks on short-term loans to their largest, most secure and most creditworthy customers is called \_\_\_\_\_.

- A Prime Lending Rate
- B Variable Rate
- C Amortised Rate
- D Discount Rate

**Answer: A**

**Question 47**

The Constitution of India was amended for the first time in which year?

- A 1954
- B 1961
- C 1951
- D 1960

**Answer: C**

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**Question 48**

\_\_\_\_\_ assumed the title of 'Gangaikondachola' or the conqueror of the river Ganga.

- A Rajaraja Chola I
- B Vijjalalay Chola
- C Rajendra Chola I
- D Rajadhiraja Chola

**Answer: C**

**Question 49**

Which of the following Indian authors is one of the four screenplay writers of the movie 'Kai Po Che'?

- A Chetan Bhagat
- B Ravinder Singh
- C Amish Tripathi
- D Durjoy Datta

**Answer: A**

**Question 50**

\_\_\_\_\_ became the most successful doubles player in the history of Davis Cup as on 2018.

- A Mark Woodforde

- B Henri Leconte
- C Leander Paes
- D Leon Smith

Answer: C

## SSC CGL Free Mock Test

### Quant

#### Instructions

For the following questions answer them individually

#### Question 51

The value of  $\sin^2 48^\circ + \sin^2 42^\circ - \sec^2 30^\circ + \tan^2 60^\circ$  is equal to:

- A 2
- B  $\frac{7}{3}$
- C  $\frac{8}{3}$
- D  $\frac{5}{3}$

Answer: C

#### Explanation:

$$\sin 42^\circ = \sin(90 - 48)^\circ = \cos 48^\circ$$

$$\sin^2 48^\circ + \cos^2 48^\circ - \sec^2 30^\circ + \tan^2 60^\circ = 1 - \frac{4}{3} + 3 = \frac{8}{3}$$

(Since we know that  $\sin^2\theta + \cos^2\theta = 1$ ,  $\tan 60^\circ = \sqrt{3}$ ,  $\sec 60^\circ = \frac{2}{\sqrt{3}}$ )

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#### Question 52

For what value of x is the seven digit number 46393x8 divisible by 11 ?

- A 3
- B 2
- C 7
- D 5

Answer: A

#### Explanation:

Divisibility rule of 11 : If the difference of the alternating sum of digits of  $N$  is 0 or a multiple of 11 , then  $N$  is divisible by 11.

$$46393x8$$

$$4 - 6 + 3 - 9 + 3 - x + 8 = 3 - x$$

So , value of x should be Option A) 3

**Question 53**

If  $a : b = 5 : 8$  and  $c : b = 4 : 3$ , then  $a : b : c$  is equal to:

A 15 : 24 : 32

B 15 : 24 : 28

C 5 : 6 : 8

D 5 : 8 : 6

**Answer:** A

**Explanation:**

$$a:b = 5:8 \text{ -----(1)}$$

$$c:b = 4:3 \rightarrow b:c=3:4 \text{ -----(2)}$$

LCM of 8 & 3 = 24

Multiply (1) with 3 and (2) with 8

$$a:b = 15:24 \text{ and } b:c=24:32$$

$$a:b:c = 15:24:32$$

So, the answer would be Option a) 15 : 24 : 32 .

**Question 54**

In  $\triangle ABC$ , P is a point on BC such that  $BP : PC = 1 : 2$  and Q is the mid point of BP. Then,  $\text{ar}(\triangle ABQ) : \text{ar}(\triangle ABC)$  is equal to:

A 1 : 6

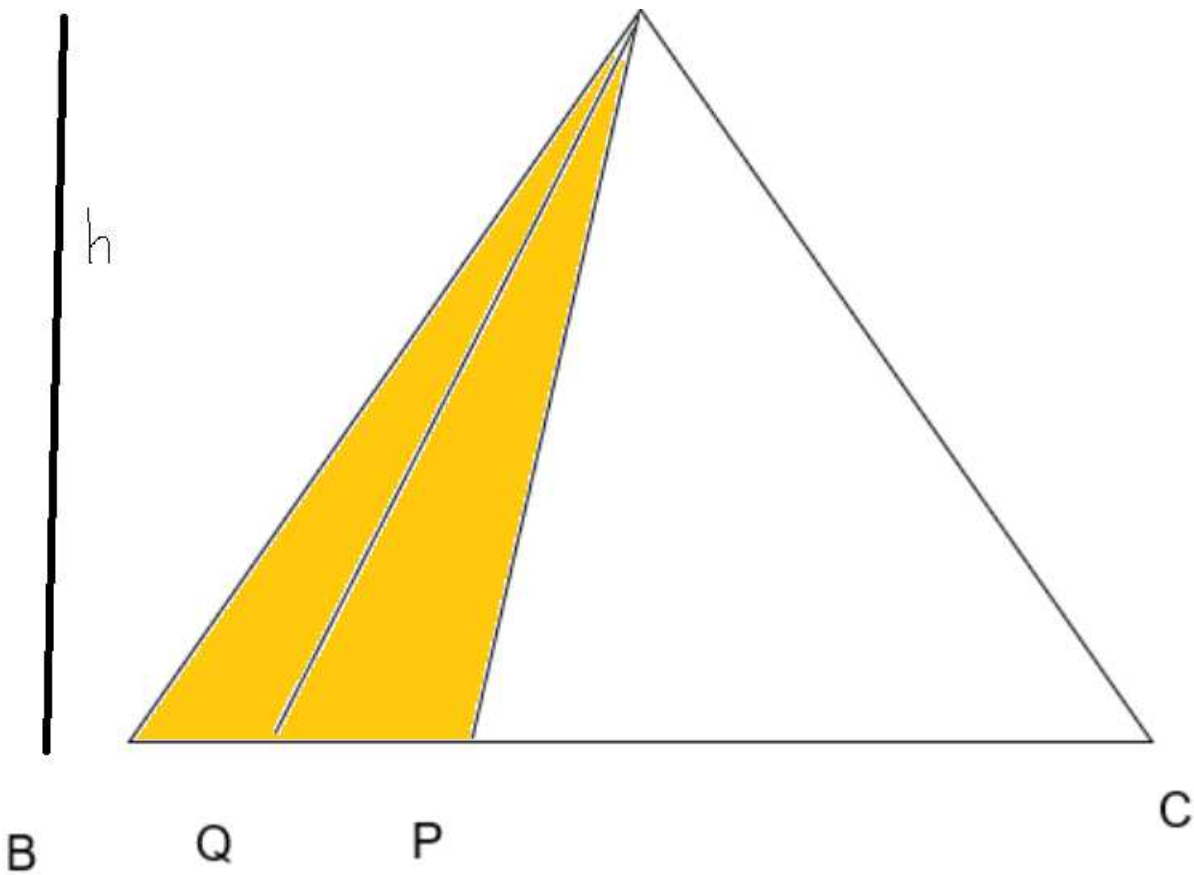
B 1 : 4

C 1 : 5

D 1 : 3

**Answer:** A

**Explanation:**



$\triangle ABP$  and  $\triangle APC$  are having same height and their bases are in ratio 1:2.

So the ratio of their areas would be  $x:2x$

$$\triangle ABQ = \frac{1}{2} \triangle ABP = \frac{x}{2}$$

$$\text{ar}(\triangle ABQ) : \text{ar}(\triangle ABC) = \frac{x}{2} / 3x = \frac{1}{6}$$

So, the answer would be Option a) 1:6.

## SSC CGL Previous Papers (DOWNLOAD PDF)

### Question 55

The difference between the compound interest and simple interest on ₹ $x$  at 12% per annum for 2 years is ₹18. What is the value of  $x$ ?

- A 1,250
- B 1,280
- C 1,340
- D 1,300

**Answer:** A

### Explanation:

Compound interest and Simple interest earned in first year would be same, i.e.  $\frac{12x}{100}$

Difference between them in second year would be interest earned on the interest of first year

$$\frac{12}{100} \times \frac{12x}{100} = \frac{144x}{100^2} = 18$$

$$x = 18 \times \frac{100^2}{144} = 1250$$

So, the answer would be option a) 1250.

Question 56

If  $a + b = 8$  and  $ab = \frac{32}{3}$ , then  $(a^3 + b^3)$  is equal to:

- A 128
- B 256
- C 384
- D 320

Answer: B

Explanation:

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

$$8^3 = a^3 + b^3 + 3 \times \frac{32}{3} \times 8$$

$$512 = a^3 + b^3 + 256$$

$$a^3 + b^3 = 256$$

Question 57

If  $a + b + c = 4$  and  $ab + bc + ca = 2$ , then  $a^3 + b^3 + c^3 - 3abc$  is equal to:

- A 32
- B 48
- C 40
- D 36

Answer: C

Explanation:

$$(a + b + c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$$

$$16 = a^2 + b^2 + c^2 + 4$$

$$a^2 + b^2 + c^2 = 12$$

$$a^3 + b^3 + c^3 - 3abc = (a + b + c)(a^2 + b^2 + c^2 - (ab + bc + ca)) = 4(12 - 2) = 40$$

So, the answer would be option c) 40.

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Question 58

A is 50% more efficient than B and C is 40% less efficient than B. Working together, they can complete a task in 10 days. In how many days will A alone complete 150% of that task?

- A 31
- B 33
- C 28
- D 35

Answer: A

**Explanation:**

$$\text{Efficiency of B} = \frac{1}{x}$$

$$\text{Efficiency of A} = \frac{1.5}{x}$$

$$\text{Efficiency of C} = \frac{0.6}{x}$$

$$\text{Total efficiency} = \frac{1}{x} + \frac{1.5}{x} + \frac{0.6}{x}$$

$$= \frac{1}{x} (1 + 1.5 + 0.6) = \frac{3.1}{x} = \frac{31}{10x} = 10$$

$$x = 31$$

$$\text{A's efficiency} = \frac{1.5}{31}$$

150% of that task will be completed in  $\frac{150}{100} \times \frac{15}{31} = 31$  days

So the answer would be option a) 31 days.

**Question 59**

If  $\sqrt{x} + \frac{1}{\sqrt{x}} = \sqrt{7}$ , then  $x^3 + \frac{1}{x^3}$  is equal to:

A 110

B 130

C 120

D 140

**Answer: A**

**Explanation:**

$$(\sqrt{x} + \frac{1}{\sqrt{x}})^2 = x + \frac{1}{x} + 2 = 7$$

$$x + \frac{1}{x} = 5$$

$$(x + \frac{1}{x})^3 = x^3 + \frac{1}{x^3} + 3 * x * \frac{1}{x} (x + \frac{1}{x})$$

$$125 = x^3 + \frac{1}{x^3} + 15$$

$$x^3 + \frac{1}{x^3} = 110$$

So, the answer would be option a) 110.

**Question 60**

If  $\sec \theta = \frac{13}{5}$ , then  $\tan \theta - \sin \theta + \cos \theta$  is equal to:

A  $\frac{23}{13}$

B  $\frac{118}{65}$

C  $\frac{121}{65}$

D  $\frac{124}{65}$

**Answer: C**

**Explanation:**

$$\sec \theta = \frac{13}{5}$$

$$\cos \theta = \frac{5}{13}$$



$$\sin \theta = \sqrt{1 - \cos^2 \theta} = \sqrt{1 - \frac{5^2}{13^2}} = \frac{12}{13}$$

$$\tan \theta = \frac{\sin \theta}{\cos \theta} = \frac{12}{13} \div \frac{5}{13} = \frac{12}{5}$$

$$\tan \theta - \sin \theta + \cos \theta = \frac{12}{5} - \frac{12}{13} + \frac{5}{13} = \frac{121}{65}$$

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### Question 61

This table shows the number of students studying in various streams in different colleges.

Streams	Colleges				
	A	B	C	D	E
Arts	580	460	320	470	370
Science	620	680	540	360	400
Commerce	480	520	350	520	330

What is the ratio of the number of students studying science in colleges A and B together to the number of students studying commerce in colleges D and E together?

A 13 : 8

B 23 : 15

C 21 : 17

D 26 : 17

Answer: D

Explanation:

Number of students studying science in colleges A+B = 620 + 680 = 1300

Number of students studying commerce in colleges D+E = 520 + 330 = 850

Required ratio = 1300 : 850 = 26 : 17

### Question 62

If  $\sin 5\theta = \cos(50^\circ - 3\theta)$ , then  $\theta$  is equal to:

A  $25^\circ$

B  $15^\circ$

C  $20^\circ$

D  $30^\circ$

Answer: C

Explanation:

$$\sin 5\theta = \cos(50^\circ - 3\theta)$$

$$\cos(90^\circ - 5\theta) = \cos(50^\circ - 3\theta)$$

$$90^\circ - 5\theta = 50^\circ - 3\theta$$

$$\theta = 20^\circ$$

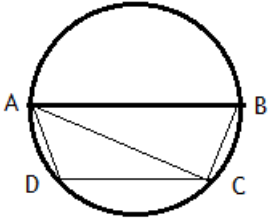
### Question 63

In a circle with centre O, AB is the diameter and CD is a chord such that ABCD is a trapezium. If  $\angle BAC = 24^\circ$ , then  $\angle CAD$  is equal to:

- A 48
- B 36
- C 42
- D 24

Answer: C

Explanation:



$$\angle BAC = 24$$

$$\angle ACB = 90 \text{ (Angle on semicircle)}$$

ABCD is a trapezium, so AB is parallel to CD

$$\angle ACD = \angle BAC = 24 \text{ (Alternate angle)}$$

$$\angle BCD = \angle ACB + \angle ACD = 90 + 24 = 114$$

ABCD is a cyclic quadrilateral because all points lie on the same circle

$$\angle BAD + \angle BCD = 180$$

$$\angle BAD + 114 = 180$$

$$\angle BAD = 66$$

$$\angle BAD = \angle BAC + \angle CAD$$

$$66 = 24 + \angle CAD$$

$$\angle CAD = 66 - 24 = 42$$

## SSC CGL Important Questions PDF

Question 64

The price of sugar is increased by 21%. A person wants to increase his expenditure by 12% only. By what percent, correct to one decimal place, should he reduce his consumption?

- A 7.6%
- B 7.2%
- C 7.8%
- D 7.4%

Answer: D

Explanation:

Let a man buy 100 kg of sugar in Rs 100

21% price increased then,

100 kg price will be Rs 121

Man increased his expenditure by 12% = 112

Rs 121=100 kg sugar

$$\text{Rs } 112 = \frac{11200}{121} = 92.60 \text{ kg}$$

So he have to reduce his consumption by  $100 - 92.60 = 7.40\%$

**Question 65**

Two chords AB and CD of a circle intersect at a point P inside the circle. If AB = 7 cm, PC = 2 cm and AP = 4 cm, then CD is equal to:

- A 4 cm
- B 6 cm
- C 8 cm
- D 5 cm

**Answer:** C

**Explanation:**

When two chords intersect at point P inside the circle then  $PA \times PB = PC \times PD$

$$4 \times 3 = PD \times 2$$

$$PD = 6$$

Therefore,  $CD = PC + PD = 2 + 6 = 8 \text{ cm}$ .

**Question 66**

train without stoppage travels with an average speed of 80 km/h and with stoppage, it travels with an average speed of 72 km/h. For how many minutes does the train stop on an average per hour?

- A 6
- B 8
- C 9
- D 7

**Answer:** A

**Explanation:**

With stoppages speed = 72 kmph

Without stoppages speed = 80 kmph

Let the total distance = L.C.M of 80 and 72 = 720

$$\text{So, time taken with stoppages} = \frac{720}{72} = 10 \text{ hr}$$

$$\text{Time taken without stoppages} = \frac{720}{80} = 9 \text{ hr}$$

Difference = 1 hr

In 10 hour trip 1 hour is spend on stoppages.

$$\text{Per hour train stops for} = \frac{1}{10} \times 60 = 6$$

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Question 67

This table shows the number of students studying in various streams in different colleges.

Streams	Colleges				
	A	B	C	D	E
Arts	580	460	320	470	370
Science	620	680	540	360	400
Commerce	480	520	350	520	330

The number of students in the science stream of college C is approximately what percentage of students studying in that college?

- A 43%
- B 42%
- C 44%
- D 45%

Answer: D

Explanation:

Total number of students in science stream =  $(320+540+350)=1210$

$$\text{Required percentage} = \frac{540}{1210} \times 100 = 45\%$$

Question 68

The radii of the two circular faces of the frustum of a cone of height 14 cm are 5 cm and 2 cm. What is its volume in  $\text{cm}^3$  ( $\pi = \frac{22}{7}$ )

- A 540
- B 572
- C 520
- D 560

Answer: B

Explanation:

$$\begin{aligned} \text{Volume of frustum of cone} &= \frac{1}{3} \times \pi \times H \times \{(R_1^2 + R_2^2) + (R_1 \times R_2)\} \\ &= \frac{1}{3} \times \frac{22}{7} \times 14 \times \{(5^2 + 2^2) + (5 \times 2)\} \\ &= \frac{44}{3} \times \{(25 + 4) + 10\} \\ &= \frac{44}{3} \times 39 = 572 \end{aligned}$$

Question 69

$\triangle ABC \sim \triangle PQR$  and  $AB = 8$  cm,  $BC = 12$  cm and  $AC = 6$  cm. If  $\text{ar}(\triangle ABC) : \text{ar}(\triangle PQR) = 16 : 25$ , then  $RQ$  is equal to:

- A 10 cm
- B 15 cm
- C 7.5 cm
- D 12.5 cm

Answer: C

**Explanation:**

If two triangles are similar, then the ratio of the area of both triangles is proportional to the square of the ratio of their corresponding sides.

$$\frac{\text{area of } \triangle ABC}{\text{area of } \triangle PQR} = \left(\frac{BC}{QR}\right)^2$$

$$\frac{16}{25} = \left(\frac{AC}{QR}\right)^2$$

$$\frac{6}{QR} = \frac{4}{5}$$

$$QR = \frac{30}{4}$$

$$QR = 7.5$$

## General Science Notes for SSC CGL

**Question 70**

This table shows the number of students studying in various streams in different colleges.

Streams	Colleges				
	A	B	C	D	E
Arts	580	460	320	470	370
Science	620	680	540	360	400
Commerce	480	520	350	520	330

What is the average of the number of students in the arts stream in all the colleges taken together?

- A 440
- B 460
- C 450
- D 470

**Answer: A**

**Explanation:**

$$\text{Required average} = \frac{(580+460+320+470+370)}{5} = 440$$

**Question 71**

The value of:  $5.8 + (7.4 \div 3.7 \times 5) - 6 \times 2 \div 2.5$

- A 12
- B 11
- C 9
- D 10

**Answer: B**

**Explanation:**

$$5.8 + (7.4 \div 3.7 \times 5) - 6 \times 2 \div 2.5$$

$$5.8 + ((2 \times 5) - 6 \times \frac{2}{2.5})$$

$$15.8 - \frac{12}{2.5}$$

$$15.8 - 4.8 = 11$$

Question 72

An article is sold for ₹535.50 after two successive discounts of 25% and 15%. What is the marked price of the article?

- A ₹820
- B ₹800
- C ₹840
- D ₹830

Answer: C

Explanation:

Let the marked price be  $x$

$$\text{Then } x \times \frac{75}{100} \times \frac{85}{100} = 535.50$$

$$x = 840$$

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Question 73

In a class of 50 students, 46% are girls and the remaining are boys. The average of the boys' marks is 58 and that of the girls is 62. What are the average marks of the whole class?

- A 60.38
- B 60.65
- C 59.84
- D 60.12

Answer: C

Explanation:

$$\text{Number of girls} = 50 \times \frac{46}{100} = 23$$

$$\text{Number of boys} = 50 - 23 = 27$$

$$\text{Required average} = \frac{(27 \times 58 + 23 \times 62)}{50} = 59.84$$

Question 74

This table shows the number of students studying in various streams in different colleges.

Streams	Colleges				
	A	B	C	D	E
Arts	580	460	320	470	370
Science	620	680	540	360	400
Commerce	480	520	350	520	330

If the data about students of the commerce stream in all colleges is represented by a pie-chart, what is the central angle of the sector representing college D, to the nearest degree?

- A  $85^\circ$
- B  $88^\circ$
- C  $80^\circ$

D  $82^\circ$

Answer: A

Explanation:

In pie chart  $360^\circ = 100\%$  and  $1\% = \frac{18}{5}$  or  $3.6^\circ$

Total students of commerce =  $480+520+350+520+330=2200$

central angle of the sector representing college D =  $\frac{520}{2200} \times 100 \times 3.6 = 85\%$

Question 75

Two articles are sold for ₹2508 each. On one, there is a gain of 14% and on the other, there is a loss of 12%. What is the overall gain or loss percent to nearest one decimal place?

A 0.5% gain

B 0.7% loss

C 0.7% gain

D 0.5% loss

Answer: B

Explanation:

S.P of 1st article = 2508, gain = 14%

C.P =  $2508 \times \frac{100}{114} = 2200$

S.P of 2nd article = 2508, loss = 12%

C.P =  $2508 \times \frac{100}{88} = 2850$

Total C.P =  $2200+2850=5050$

Total S.P =  $2508+2508=5016$

Overall loss% =  $\frac{(34 \times 100)}{5050} = 0.70$

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Instructions

For the following questions answer them individually

Question 76

Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select No improvement.

She was so tired to work any longer.

A so tired to not work

B so tiring to work

C No improvement

D too tired to work

Answer: D

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### Question 77

In the sentence identify the segment which contains the grammatical error.  
He is more smarter than his brother though he does not earn much money.

- A though he does not earn
- B much money
- C He is more smarter
- D than his brother

**Answer: C**

### Instructions

Select the most appropriate option to fill in the blank.

### Question 78

The accident victim \_\_\_\_\_ to his injuries before he could be taken to the hospital.

- A surrendered
- B succumbed
- C subscribed
- D submitted

**Answer: B**

### Question 79

We should never \_\_\_\_\_ with the rules of driving.

- A temper
- B trifle
- C reckon
- D tamper

**Answer: D**

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### Instructions

For the following questions answer them individually

### Question 80

Select the most appropriate synonym of the given word.  
EXALT

- A praise
- B condemn



C challenge

D extract

Answer: A

Question 81

Select the correctly spelt word.

A manipulate

B manipulete

C menipulate

D manepulate

Answer: A

Question 82

Select the correct passive form of the given sentence  
It is time to serve dinner.

A It is time for dinner to be served.

B It is time that dinner is serve.

C It is dinner serving time.

D It is time so dinner should be served.

Answer: A

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Question 83

Select the most appropriate antonym of the given word.  
VIGILANT

A visible

B careless

C careful

D elusive

Answer: B

Question 84

Select the correct active form of the given sentence.  
Superstitions are still believed in by people.

A People still believed in superstitions.

B People are still believing in superstitions.

C People have still believed in superstitions.

D People still believe in superstitions.

Answer: D

Question 85

Select the word which means the same as the group of words given.  
The act of looking back on past time

- A introspection
- B inspection
- C circumspection
- D retrospection

Answer: D

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Question 86

Select the correctly spelt word.

- A arguement
- B argeument
- C arguemant
- D argument

Answer: D

Question 87

Select the most appropriate antonym of the given word.  
EXTRAVAGANT

- A thrifty
- B deficit
- C pauper
- D generous

Answer: A

Question 88

In the sentence identify the segment which contains the grammatical error.  
The child along with his parents were waiting for the programme to begin.

- A The child
- B along with his parents
- C were waiting for the
- D programme to begin

Answer: C

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### Question 89

Given below are four jumbled sentences. Select the option that gives their correct order.

- A. The first of these states that the only way to have a friend is to be one.
- B. Like all relationships, it is also governed by some well-defined principles.
- C. Friendship is one of the most coveted relationships on earth.
- D. Thus, one must be reliable as a friend to expect reliability in others.

A BDAC

B CBAD

C ACBD

D CDBA

Answer: B

### 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:

The Bhopal gas tragedy has been described as the world's (1)\_\_\_\_\_ industrial disaster. Forty two tonnes of methyl isocyanate (2)\_\_\_\_\_ from the steel containers (3)\_\_\_\_\_ the Union Carbide factory and released a cloud of (4)\_\_\_\_\_ gas. It left a legacy of instant and (5)\_\_\_\_\_ death.

### Question 90

Select the most appropriate option to fill in blank No.1

A worse

B bad

C worst

D best

Answer: C

### Question 91

Select the most appropriate option to fill in blank No.2

A leaked

B flowed

C released

D emitted

Answer: A

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**Question 92**

Select the most appropriate option to fill in blank No.3

- A beside
- B along
- C at
- D across

**Answer: C**

**Question 93**

Select the most appropriate option to fill in blank No.4

- A merciless
- B deathly
- C abominable
- D incurable

**Answer: B**

**Question 94**

Select the most appropriate option to fill in blank No.5

- A deferred
- B momentary
- C averted
- D detained

**Answer: A**

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**Instructions**

For the following questions answer them individually

**Question 95**

Select the most appropriate option to substitute the underlined segment in the given sentence. If no substitution is required, select **No improvement**.

He made a desperate but also partial successful effort to change the ghastly topic.

- A No improvement
- B but partially successful effort
- C yet also partial successful effort
- D though part successful effort

**Answer: B**

**Question 96**

Given below are four jumbled sentences. Select the option that gives their correct order.

- A. But that is for an emotional reason.
- B. Learning our mother tongue is important and everyone should start there.
- C. This is because proficiency in the language can lead to better opportunities.
- D. Learning English, however, is important for practical reasons.

A BADC

B DACB

C BDCA

D DBAC

**Answer: A**

**Question 97**

Select the word which means the same as the group of words given.  
That which cannot be satisfied

- A insatiable
- B impossible
- C improbable
- D incredible

**Answer: A**

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**Question 98**

Select the most appropriate synonym of the given word.  
**CONCISE**

- A detailed
- B brief
- C lengthy
- D complex

**Answer: B**

**Instructions**

Select the most appropriate meaning of the underlined idiom in the given sentence.

**Question 99**

One must learn to prioritize in life. It never pays to put the cart before the horse.

- A do last things first
- B postpone till the last moment

C perform many tasks simultaneously

D do things spontaneously

Answer: A

Question 100

His success at such a young age speaks volumes for his talent.

A publically announces

B showers praise

C boasts a lot

D gives enough proof

Answer: D

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