



## SSC CGL 10 June 2019 Shift-2

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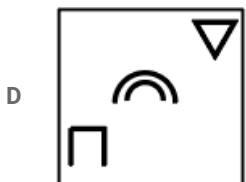
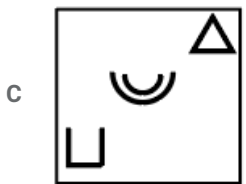
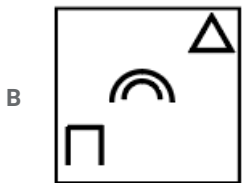
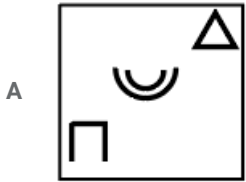
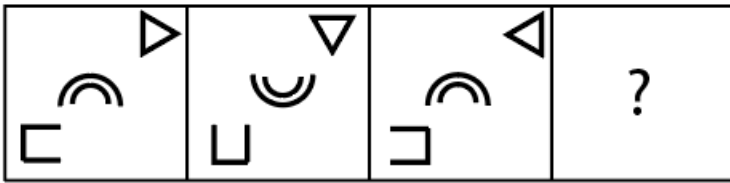
# Reasoning

## Instructions

For the following questions answer them individually

### Question 1

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



Answer: A

### Explanation:

In first and third figure triangle are opposite to each other.

Middle figure which is like semicircle are same in first and third.

And the figure which is left are opposite to each other.

## SSC CGL Free Mock Test

### Question 2

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

- A Big
- B Expensive
- C Costly

D Valuable

Answer: A

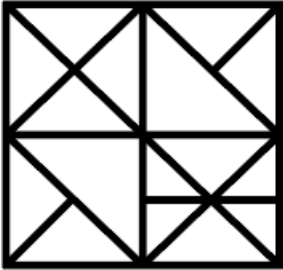
Explanation:

BIG is odd

Because EXPENSIVE , COSTLY , VALUEABLE are same in meaning.

Question 3

How many triangles are there in the following figure ?



A 34

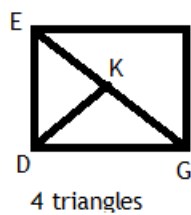
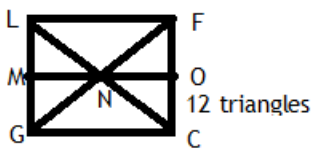
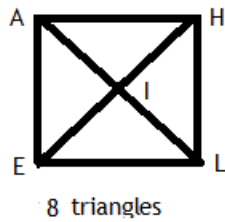
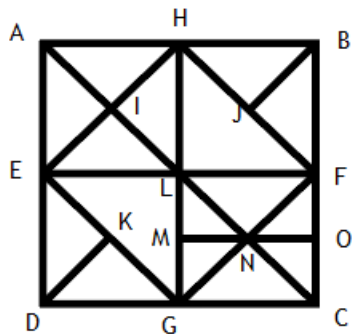
B 32

C 36

D 24

Answer: A

Explanation:



Total number of triangles=

AEH, AEI, AIH, EIL, HIL, EHL, AHL, AEL = 8

GLC, GLN, GNC, LFC, LFN, NFC, LGF, GFC, LMN, GMN, OFN, ONC = 12

BHJ, BJF, BHF, HLF = 4

DEK, DKG, DEG, EGL = 4

ADC, ABC = 2

EHF, GHF, FGE, GEH = 4

Total triangles are 34.

**Question 4**

Nisha and Deepak are a married couple and have a daughter named Tanya. Currently, Deepak is 5 years older than Nisha and Nisha is thrice the age of Tanya. If Tanya is 10 years old, what was her father's age at the time of his daughter's birth?

- A 35 years
- B 25 years
- C 30 years
- D 20 years

**Answer: B**

**Explanation:**

GIVEN that TANYA IS 10 YEARS OLD ,and NISHA IS THRICE OF TANYA

LET NISHA'S AGE IS "X"

DEEPAK IS= X+5

SO , AS GIVEN NISHA IS THRICE OF TANYA THAT IS  $3 \times 10 = 30$

DEEPAK AGE IS  $30+5 = 35$  .

FATHERS AGE IS AT THE TIME OF DAUGHTERS BIRTH :  $35-10 = 25$ .

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**Question 5**

Find the missing number from the below options.

19	78	20
25	144	47
16	?	13

- A 96
- B 76
- C 58
- D 29

**Answer: C**

**Explanation:**

$$(19 + 20) \times 2 = 78$$

$$(25 + 47) \times 2 = 144$$

$$(16 + 13) \times 2 = 58$$

**Question 6**

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

$$8 \times 2 + 5 - 16 \div 4 = 14$$

- A  $\times$  and  $-$

B  $\times$  and  $+$

C  $\div$  and  $\times$

D  $\div$  and  $+$

**Answer: B**

**Explanation:**

$$8 \times 2 + 5 - 16 \div 4 = 14$$

After interchanging  $\times$  and  $+$

$$8 + 2 \times 5 - 16 \div 4 = 14$$

$$18 - 4 = 14$$

$$14 = 14$$

**Question 7**

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

Season : Winter

A Week : Calendar

B Summer : Autumn

C Year : Century

D Month : April

**Answer: D**

**Explanation:**

Winter is the name of season in the same way april is the name of month.

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**Question 8**

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

A 56 : 49

B 64 : 54

C 104 : 91

D 32 : 28

**Answer: B**

**Explanation:**

$$A- 7 \times 8 = 56, 7 \times 7 = 49$$

$$C- 13 \times 8 = 104, 13 \times 7 = 91$$

$$D- 4 \times 8 = 32, 4 \times 7 = 28$$

$$B- 8 \times 8 = 64, 8 \times 7 = 56 \text{ but } 54 \text{ is given.}$$

**Question 9**

Find the missing number from the below options.

12	7	95
14	8	132
16	9	?

- A 175
- B 164
- C 185
- D 154

**Answer: A**

**Explanation:**

$$12 + 7 = 19 \times 5 = 95$$

$$14 + 8 = 22 \times 6 = 132$$

$$16 + 9 = 25 \times 7 = 175$$

**Question 10**

In a code language, COMPUTER is written as IVGFKNLX. How will TELEPHONE be written in that language?

- A VMNSKVOVG
- B GVOVKSLMV
- C VMLSKUOVG
- D VMLSKVOVG

**Answer: D**

**Explanation:**

Opposite letters have been written from right to left

COMPUTER = IVGFKNLX

Opposite of C = X, O = L, M = N and so on.

In the same way TELEPHONE is written as VMLSKVOVG.

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**Question 11**

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

3, 4, 5, 6, 9, 10, 11, 12, 15, ?

- A 16
- B 17
- C 14
- D 18

Answer: A

Explanation:

3,4,5,6

NOW SKIP TWO NUMBERS 7 & 8 .

9, 10,11,12

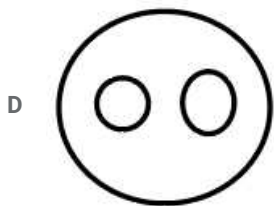
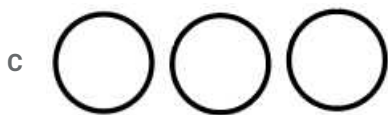
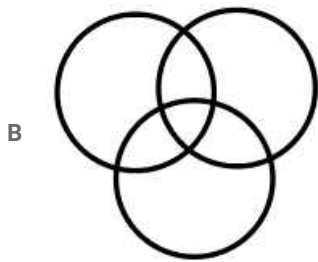
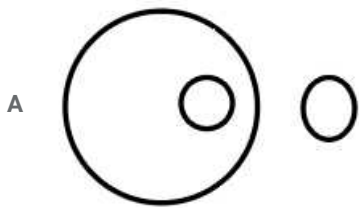
NOW SKIP AGAIN TWO NUMBERS 13 & 14

15, 16,17,18

SO THE NEXT IS 16.

Question 12

Select the Venn diagram that best represents the relationship among the given set of classes.  
Students, Teachers, School



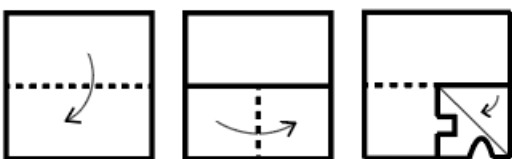
Answer: D

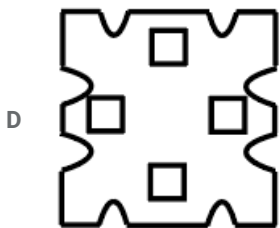
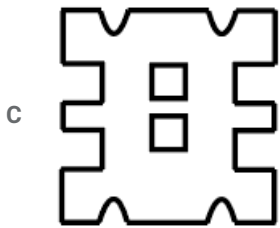
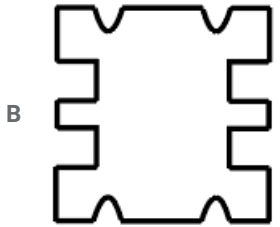
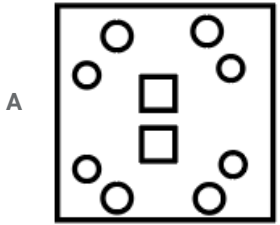
Explanation:

STUDENTS AND TEACHERS BOTH ARE AVAILABLE IN SCHOOL .

Question 13

A square paper is folded and cut as shown below. How will it appear when unfolded ?





Answer: D

Explanation:

If we do by using practical paper and follow from the last figure then we observe that figure of option D will appear when unfolded.

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Question 14

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

A, B, E, J, Q, ?

A A

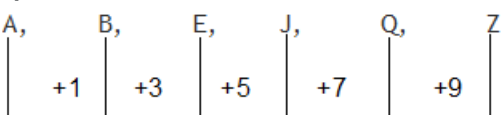
B Y

C X

D Z

Answer: D

Explanation:





**Question 15**

Select the option that is related to the third number in the same way as the second number is related to the first number.  
12 : 68 :: 21 : ?

- A 49
- B 117
- C 119
- D 79

**Answer:** C

**Explanation:**

$$12 : 68 = \frac{12}{68} = \frac{3}{17}$$

$$21 : 119 = \frac{21}{119} = \frac{3}{17}$$

**Question 16**

Saksham introduced Nidhi to his friend, "She is the daughter of the only son of my father's wife." How is Saksham related to Nidhi?

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

**Answer:** C

**Explanation:**

It says only son of my father's wife means his own father and mother. So the Saksham is father of Nidhi.

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**Question 17**

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

BOP, DPN, FQL, HRJ, ?

- A JSH
- B JSI
- C ISH
- D ITI

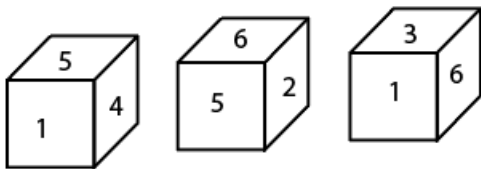
**Answer:** A

**Explanation:**

B	O	P,		D	P	N,		F	Q	L,		H	R	J,	J	S	H
			+2				+2				+2					+2	
			+2				+2				+2					+2	
			-2				-2				-2					-2	

**Question 18**

Three different positions of a dice are shown below. Which number appears on the face opposite number 3 ?



- A 5
- B 6
- C 2
- D 4

**Answer: A**

**Explanation:**

take two dice which contain common numbers . ex. we take last two dice 6 is same in both dice .

now start with common number and write in clockwise direction

6 2 5

6 1 3 ..now we see

2 is opposite of 1

5 is opposite to 3 and

remaining 6 is opposite to 4. so our ans is 5.

**Question 19**

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

- A POWZ
- B KNQT
- C FILO
- D QTWZ

**Answer: A**

**Explanation:**

Except option A all options have alphabetical difference is same. So, option A is odd.

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**Question 20**

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

**Statements:**

Some teachers are philosophers.

Some philosophers are writers.

**Conclusions:**

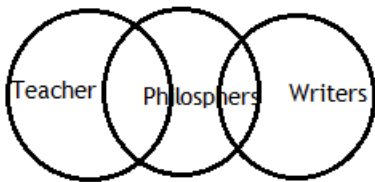
I. Some writers are teachers.

II. No writer is a teacher.

- A Only conclusion II follows
- B Either conclusion I or II follows
- C Neither conclusion I nor II follows
- D Only conclusion I follows

**Answer: B**

**Explanation:**



In the conclusion when subject and objects both are same . So in this case it only follows either or case.

**Question 21**

If **EAGER** is coded as **51759** then how will **CADET** be coded?

- A 31457
- B 34157
- C 31547
- D 31450

**Answer: A**

**Explanation:**

the last letter of both words are counted in reverse order,

EAGER : CADET

51759 : 31457

R is 9th from the last

T is 7th from the last

**Question 22**

Arrange the following words in a logical and meaningful order.

- 1) Egypt
- 2) Africa
- 3) Great Pyramid
- 4) World
- 5) Giza

- A 3, 5, 2, 1, 4

B 3, 5, 1, 2, 4

C 5, 3, 1, 2, 4

D 5, 3, 1, 4, 2

Answer: B

Explanation:

(Great Pyramids)of(Giza)are located in(Egypt) a country in (Africa)  
in (World)

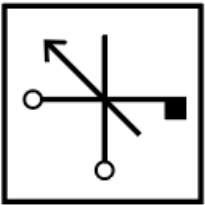
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Question 23

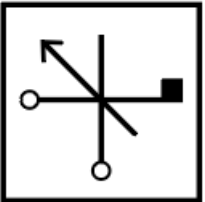
Select the correct mirror image of the given figure when the mirror is placed to the right of the figure.



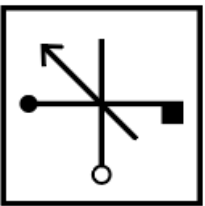
A



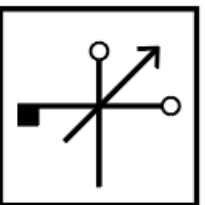
B



C



D



Answer: A

Explanation:

If mirror is place horizontally on right side of image then,

Top and bottom part will remain same

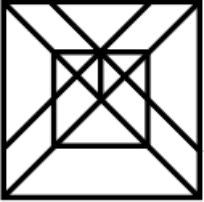
While, the left and Right Side of the image will interchange

Question 24

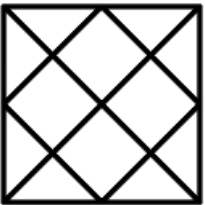
Select the figure in which the given figure is embedded.



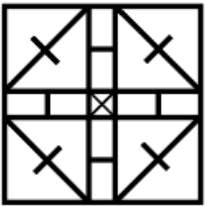
A



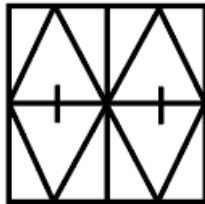
B



C



D



Answer: A

**Explanation:**

If we closely examine the given figure we can say it has 5 edges

and when we look at the options figure on option A has 5 edges slot given at the center of figure.

Question 25

'China' is related to 'Yuan' in the same way as 'Japan' is related to '.....'.

A Rand

B Sushi

C Lira

D Yen

Answer: D

**Explanation:**

China currency=Yuan

Japan currency=yen

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### General knowledge

#### Instructions

For the following questions answer them individually

#### Question 26

Who among the following was the first Indian origin recipient of the prestigious Pulitzer Prize?

- A Geeta Anand
- B Gobind Behari Lal
- C Siddhartha Mukherjee
- D Jhumpa Lahiri

Answer: B

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#### Question 27

Of which Indian state is 'Gamocha' a cultural symbol?

- A Kerala
- B Assam
- C Rajasthan
- D Haryana

Answer: B

#### Question 28

How many members are present in the Sri Lankan parliament?

- A 210
- B 215
- C 232
- D 225

Answer: D

#### Question 29

What is the popular name of 'Ascorbic Acid'?

- A Vitamin A
- B Vitamin B12

C Vitamin K

D Vitamin C

Answer: D

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### Question 30

Viyahula Giddha' is a popular folk dance performed during marriages in the Indian state of \_\_\_\_\_ .

A Odisha

B Gujarat

C Punjab

D Jharkhand

Answer: C

### Question 31

Who became the first Indian player to represent India at the Wimbledon Tennis Championship of Independent India?

A Ramesh Krishnan

B Vijay Amritraj

C Leander Paes

D Ramanathan Krishnan

Answer: D

### Question 32

The explosion of crackers is an example of \_\_\_\_\_ .

A Combustion

B Precipitation

C Decomposition

D Evaporation

Answer: A

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### Question 33

World Global Recycling Day was observed on \_\_\_\_\_ in 2019.

A 2<sup>nd</sup> January

B 10<sup>th</sup> February

- C 18<sup>th</sup> March
- D 16<sup>th</sup> February

Answer: C

**Question 34**

Who among the following was the first president of Pakistan?

- A Zulfikar Ali Bhutto
- B Yahya Khan
- C Iskander Mirza
- D Ayub Khan

Answer: C

**Question 35**

An economic condition when there is one buyer and many sellers is called \_\_\_\_\_.

- A Oligopoly
- B Monopoly
- C Perfect Competition
- D Monopsony

Answer: D

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**Question 36**

Which of the following is a vestigial organ?

- A Heart
- B Kidney
- C Lungs
- D Appendix

Answer: D

**Question 37**

Which of the following countries has the largest parliament in the world?

- A UK
- B India
- C China
- D Japan



Answer: C

**Question 38**

Which one of the following is the brightest star in the Orion Constellation?

- A Betelgeuse
- B Alnilam
- C Rigel
- D Eta Orionis

Answer: C

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**Question 39**

What is the dominant chemical present in vinegar?

- A Malic acid
- B Formic acid
- C Sulphuric acid
- D Ethanoic acid

Answer: D

**Question 40**

Which of the following Indian islands lies in the Bay of Bengal?

- A Andaman and Nicobar
- B Lakshadweep
- C Diu
- D Daman

Answer: A

**Question 41**

Mahatma Gandhi formed the Natal Indian Congress in the year \_\_\_\_\_.

- A 1874
- B 1894
- C 1854
- D 1863

Answer: B

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### Question 42

What is the geographic name given to a deep and narrow valley consisting of steep sides created by weathering and erosion by rivers, wind, rain and tectonic activity?

- A Buttes
- B Ridge
- C Canyon
- D Basin

**Answer: C**

### Question 43

The First Anglo-Burmese War ended with the signing of the \_\_\_\_\_.

- A Treaty of Yandabo
- B Treaty of Titalia
- C Treaty of Purandar
- D Treaty of Salbai

**Answer: A**

### Question 44

Who among the following is the author of the book 'A Passage to England'?

- A Nirad C Chaudhuri
- B V S Naipaul
- C Salman Rushdie
- D Khushwant Singh

**Answer: A**

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### Question 45

Who authored 'A Century is not Enough' in 2018?

- A Sourav Ganguly
- B Sachin Tendulkar
- C MS Dhoni
- D Virat Kohli

**Answer: A**

Question 46

Who among the following became the first woman to win the Abel Prize 2019?

- A Sophie Germain
- B Maryam Mirzakhani
- C Karen Uhlenbeck
- D Julia Robinson

Answer: C

Question 47

In which year did Independent India win its first Olympic Gold in the game of hockey?

- A 1952
- B 1960
- C 1948
- D 1956

Answer: C

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Question 48

Silent Valley National Park is located in the Indian state of \_\_\_\_\_.

- A Madhya Pradesh
- B West Bengal
- C Kerala
- D Uttarakhand

Answer: C

Question 49

The Bangladesh Liberation War ended on \_\_\_\_\_.

- A 14<sup>th</sup> November 1972
- B 16<sup>th</sup> December 1971
- C 17<sup>th</sup> October 1971
- D 2<sup>nd</sup> October 1974

Answer: B

Question 50

What is the name given to the graph that shows all the combinations of two commodities that a consumer can afford at given market prices and within the particular income level in economic terms?

- A Demand Curve
- B Isocost Line
- C Supply Curve
- D Budget Line

Answer: D

## SSC CGL Free Mock Test

### Quant

#### Instructions

For the following questions answer them individually

#### Question 51

An article is sold for ₹528 after successive discounts of 20% and 12%. What is the marked price of the article?

- A ₹760
- B ₹740
- C ₹750
- D ₹780

Answer: C

#### Explanation:

let MP be x

According to the question,

$$x \times \frac{80}{100} \times \frac{88}{100} = 528$$

$$x = 750$$

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#### Question 52

The table below shows the number of students enrolled in five colleges over the five years (2010 to 2014).

Colleges →	A	B	C	D	E
Year ↓					
2010	400	270	350	430	470
2011	430	300	330	450	490
2012	370	250	360	470	410
2013	410	310	370	420	430
2014	420	290	340	480	480

What is the average number of students studying in college D over the given years?

- A 450

- B 420
- C 430
- D 440

**Answer: A**

**Explanation:**

$$\begin{aligned} \text{Required average} &= \frac{(430+450+470+420+480)}{5} \\ &= \frac{2250}{5} \\ &= 450 \end{aligned}$$

**Question 53**

A train without stoppage travels with an average speed of 50 km/h, and with stoppage, it travels with an average speed of 40 km/h. For how many minutes does the train stop on an average per hour?

- A 12
- B 13
- C 14
- D 15

**Answer: A**

**Explanation:**

with stoppage 50 km/hr

without stoppage 40 km/hr

taking LCM 200

now with stoppage it takes  $\frac{200}{40} = 5$  hrs and without stoppage it takes  $\frac{200}{50} = 4$  hrs

difference(stoppages) is of 1 hrs means in the trip of 5 hours 1 hours spent on stoppages

therefore per hour train stop for =  $\frac{1}{5} \times 60 = 12$  min s

**Question 54**

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

- A 27
- B 36
- C 24
- D 18

**Answer: D**

**Explanation:**

$$x + \frac{1}{x} = 3,$$

Cubing both side,

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

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

$$x^3 + \frac{1}{x^3} + 3 \times 3 = 27$$

$$x^3 + x^{\frac{1}{3}} = 27 - 9 = 18$$

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### Question 55

A is 40% more efficient than B and C is 20% less efficient than B. Working together, they can finish a work in 5 days. In how many days will A alone complete 70% of that work?

- A 9
- B 7
- C 10
- D 8

Answer: D

### Explanation:

Let efficiency of B be 10 therefore,

Efficiency of A = (140% of B) = 14

Efficiency of C = (80% of B) = 8

now, total efficiency \* total day = total work

$$(14+10+8)*5=160$$

time taken by A to complete 70% work,

$$(160*70/100)/14$$

$$=8$$

### Question 56

If  $\tan \theta = \frac{2}{3}$ , then  $\frac{3 \sin \theta - 4 \cos \theta}{3 \sin \theta + 4 \cos \theta}$  is equal to:

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

Answer: A

### Explanation:

$$\tan \theta = \frac{2}{3}$$

$$\frac{\text{perpendicular}}{\text{base}} = \frac{2}{3}, \text{hypotenuse} = \sqrt{13}$$

$$\sin \theta = \frac{p}{h}, \cos \theta = \frac{b}{h}$$

$$\frac{3 \sin \theta - 4 \cos \theta}{3 \sin \theta + 4 \cos \theta}$$

$$\left( \frac{\frac{6}{\sqrt{3}} - \frac{12}{\sqrt{3}}}{\frac{6}{\sqrt{3}} + \frac{12}{\sqrt{3}}} \right) = \frac{6}{18} = \frac{1}{3}$$

### Question 57

If  $\sec 4\theta = \operatorname{cosec}(\theta + 20^\circ)$ , then  $\theta$  is equal to:

- A  $22^\circ$
- B  $18^\circ$
- C  $14^\circ$
- D  $20^\circ$

Answer: C

Explanation:

$$\sec 4\theta = \operatorname{cosec}(\theta + 20^\circ)$$

$$\operatorname{cosec}(90 - 4\theta) = \operatorname{cosec}(\theta + 20^\circ)$$

$$90 - 4\theta = \theta + 20^\circ = 5\theta = 70^\circ$$

$$\theta = 14^\circ$$

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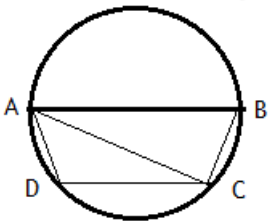
Question 58

In a circle with centre O, AB is the diameter and CD is a chord such that ABCD is a trapezium. If  $\angle BAC = 40^\circ$ , then  $\angle CAD$  is equal to:

- A  $15^\circ$
- B  $20^\circ$
- C  $50^\circ$
- D  $10^\circ$

Answer: D

Explanation:



$$\angle BAC = 40$$

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

ABCD is a trapezium, so AB is parallel to CD

$$\angle ACD = \angle BAC = 40 \text{ (Alternate angle)}$$

$$\angle BCD = \angle ACB + \angle ACD = 90 + 40 = 130$$

ABCD is a cyclic quadrilateral because all point lies on same circle

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

$$\angle BAD + 130 = 180$$

$$\angle BAD = 50$$

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

$$50 = 40 + \angle CAD$$

$$\angle CAD = 50 - 40 = 10$$

**Question 59**

The value of  $\sin^2 38^\circ + \sin^2 52^\circ + \sin^2 30^\circ - \tan^2 45^\circ$  is equal to:

- A  $\frac{1}{3}$
- B  $\frac{1}{4}$
- C  $\frac{3}{4}$
- D  $\frac{1}{2}$

**Answer: B**

**Explanation:**

$$\sin^2 38^\circ + \sin^2 52^\circ + \sin^2 30^\circ - \tan^2 45^\circ$$

$$\sin^2 38^\circ + \sin^2(90 - 38)^\circ + \sin^2 30^\circ - \tan^2 45^\circ$$

$$\sin^2 38^\circ + \cos^2 38^\circ + \sin^2 30^\circ - \tan^2 45^\circ$$

$$1 + \frac{1}{4} - 1 = \frac{1}{4}$$

**Question 60**

$\triangle ABC \sim \triangle RQP$  and  $AB = 4$  cm,  $BC = 6$  cm and  $AC = 5$  cm. If  $\text{ar}(\triangle ABC) : \text{ar}(\triangle PQR) = 9 : 4$ , then  $PQ$  is equal to:

- A  $\frac{20}{9}$  cm
- B  $\frac{8}{3}$  cm
- C 4 cm
- D  $\frac{10}{3}$  cm

**Answer: B**

**Explanation:**

If two triangle are similar then ratio of area of triangle is equals to the ratio of square of corresponding sides.

$$\frac{\text{Area of } \triangle ABC}{\text{Area of } \triangle PQR} = \frac{AB^2}{PQ^2}$$

$$\frac{9}{4} = \frac{16}{PQ^2} \text{ Hence, } PQ = \frac{8}{3} \text{ cm}$$

## SSC CGL Tier-2 Previous Papers PDF

**Question 61**

The table below shows the number of students enrolled in five colleges over the five years (2010 to 2014).

Colleges →	A	B	C	D	E
Year ↓					
2010	400	270	350	430	470
2011	430	300	330	450	490
2012	370	250	360	470	410
2013	410	310	370	420	430
2014	420	290	340	480	480

In the year 2014, what percent of students were enrolled in college C (correct to one decimal place)?



- A 16.9%
- B 17.3%
- C 16.7%
- D 17.1%

**Answer: A**

**Explanation:**

Total students enrolled in 2014 = 420+290+340+480+480=2010

$$\text{Required percentage} = \frac{340}{2010} \times 100 = 16.9\%$$

**Question 62**

**The radius of a sphere is reduced by 40%. By what percent will its volume decrease?**

- A 60%
- B 64%
- C 72.5%
- D 78.4%

**Answer: D**

**Explanation:**

$$\text{Volume of sphere} = \frac{4}{3} \pi r^3$$

So radius is reduced by 40%

$$\text{Net change} = +x + y + \frac{(x \times y)}{100}$$

$$\text{Area will decreased by} = -40 - 40 + \frac{(-40 \times -40)}{100} = -80 + 16 = -64\%$$

$$\text{Now volume will decreased by} = -64 - 40 + \frac{(-64 \times -40)}{100} = -104 + 25.6 = -78.4\%$$

**Question 63**

**If  $\sqrt{x} - \frac{1}{\sqrt{x}} = 4$ , then  $x^2 + \frac{1}{x^2}$  is equal to:**

- A 192
- B 326
- C 322
- D 256

**Answer: C**

**Explanation:**

$$\sqrt{x} - \frac{1}{\sqrt{x}} = 4$$

Squaring both side,

$$\left(\sqrt{x} - \frac{1}{\sqrt{x}}\right)^2 = 4^2$$

$$x + \frac{1}{x} = 16 + 2 = 18$$

Again squaring both side we get,

$$(x + \frac{1}{x})^2 = 18^2$$

$$x^2 + \frac{1}{x^2} + 2 = 324$$

$$x^2 + \frac{1}{x^2} = 322$$

## SSC CGL Important Questions PDF

### Question 64

The table below shows the number of students enrolled in five colleges over the five years (2010 to 2014).

Colleges →	A	B	C	D	E
Year ↓					
2010	400	270	350	430	470
2011	430	300	330	450	490
2012	370	250	360	470	410
2013	410	310	370	420	430
2014	420	290	340	480	480

What is the ratio of the total students enrolled in colleges A and B in the year 2012 to the total students enrolled in colleges D and E in the year 2013?

- A 62 : 85
- B 62 : 88
- C 63 : 86
- D 58 : 63

Answer: A

**Explanation:**

$$2012 (A+B) = 370+250=620$$

$$2013 (D+E) = 420+430=850$$

$$\text{Required ratio} = 620:850 = 62:85$$

### Question 65

The price of sugar is increased by 20%. A person wants to increase his expenditure by 8% only. By what percent should he decrease his consumption?

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

Answer: A

**Explanation:**

$$\frac{(100 \times 100)}{120} = 83.33 \text{ kg}$$

Let the man have Rs 100 and price of 100 kg sugar is Rs 100

Now price is increased,

New price of sugar = Rs 120 for 100 kg

And man his increase his expenditure by 8% = Rs 108

$$\text{So, man will buy in Rs 108} = \frac{(100 \times 108)}{120} = 90 \text{ kg}$$

So he have to decrease his consumption by  $100 - 90 = 10\%$ .

**Question 66**

The value of  $4.5 - (3.2 \div 0.8 \times 5) + 3 \times 4 \div 6$  is:

- A -13.5
- B 4.2
- C -8.5
- D 5.7

**Answer: A**

**Explanation:**

we have to solve this question according to the vobodmas rule

$$\begin{aligned} &4.5 - (3.2 \div 0.8 \times 5) + 3 \times 4 \div 6 \\ &= 4.5 - (4 \times 5) + 2 \\ &= 4.5 - 20 + 2 \\ &= 6.5 - 20 \\ &= -13.5 \end{aligned}$$

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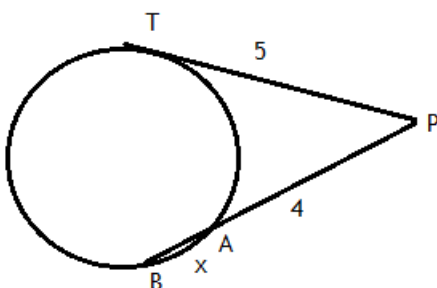
**Question 67**

From a point P outside a circle, PAB is a secant and PT is a tangent to the circle, where, A, B and T are points on the circle. If  $PT = 5$  cm,  $PA = 4$  cm and  $AB = x$  cm, then x is equal to:

- A 2.25 cm
- B 2.75 cm
- C 2.45 cm
- D 1.75 cm

**Answer: A**

**Explanation:**



According to the question

$$PT = 5\text{cm}, PA = 4\text{cm}, AB = x\text{cm}$$

$$PA \times PT = PT^2$$

$$4(4+x) = 5 \times 5$$

$$4+x = \frac{25}{4}$$

$$x = \frac{9}{4} = 2.25 \text{ cm}$$

### Question 68

The average marks of 40 students was found to be 68. If the marks of two students were incorrectly entered as 48 and 64 instead of 84 and 46 respectively, then what is the correct average?

- A 68.25
- B 68.15
- C 68.45
- D 68.35

**Answer: C**

### Explanation:

According to the question,

$$\text{Required average} = \frac{(40 \times 68 + 130 - 112)}{40} = \frac{2738}{40} = 68.45$$

### Question 69

If  $a + b + c = 13$  and  $ab + bc + ca = 54$ , then  $a^3 + b^3 + c^3 - 3abc$  is equal to:

- A 793
- B 273
- C 91
- D 182

**Answer: C**

### Explanation:

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

$$13^2 = a^2 + b^2 + c^2 + 2 \times 54$$

$$169 = a^2 + b^2 + c^2 + 108$$

$$a^2 + b^2 + c^2 = 169 - 108 = 61$$

$$\begin{aligned} a^3 + b^3 + c^3 - 3abc &= (a + b + c)(a^2 + b^2 + c^2 - ab - bc - ac) \\ &= (a + b + c) \{ (a^2 + b^2 + c^2) - (ab + bc + ca) \} \\ &= 13 \times (61 - 54) = 13 \times 7 = 91 \end{aligned}$$

## General Science Notes for SSC CGL

### Question 70

If  $a : b = 3 : 2$ , then  $(5a + 2b) : (3a + 4b)$  is equal to:

- A 16:15
- B 8:7
- C 19:17
- D 17:14

**Answer: C**

**Explanation:**

$a : b = 3 : 2$ , then  $(5a + 2b) : (3a + 4b)$

$$\frac{a}{b} = \frac{3}{2}$$

So,  $a=3$  and  $b=2$

$(5a + 2b) : (3a + 4b)$

$$(5 \times 3 + 2 \times 2) : ((3 \times 3 + 4 \times 2) = 19 : 17)$$

**Question 71**

Two articles are sold for ₹9,720 each. On one, the seller gains 8% and on the other, he loses 10%. What is his overall gain or loss?

A ₹380 gain

B ₹380 loss

C ₹360 loss

D ₹360 gain

**Answer: C**

**Explanation:**

According to the question,

$$\text{CP of first article} = 9720 \times \frac{100}{108} = 9000$$

$$\text{CP of 2nd article} = 9720 \times \frac{100}{90} = 10800$$

$$\text{Total CP} = 9000 + 10800 = 19800$$

$$\text{Total SP} = 9720 + 9720 = 19440$$

There will be loss because CP is greater than SP

$$19800 - 19440 = 360 \text{ loss.}$$

**Question 72**

The difference between the compound interest and simple interest on ₹  $x$  at 8% per annum for 2 years is ₹19.20. What is the value of  $x$ ?

A 2,500

B 3,200

C 2,800

D 3,000

**Answer: D**

**Explanation:**

It will directly solved by formula which is;  $\text{CI-SI} = \frac{PR^2}{100^2}$

$\text{CI-SI} = 19.20$ ,  $R = 8\%$ ,  $P = ?$

$$19.20 = \frac{(P \times 8 \times 8)}{100 \times 100}$$

$$P = \frac{(19.20 \times 100 \times 100)}{64} = 3000$$

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### Question 73

The table below shows the number of students enrolled in five colleges over the five years (2010 to 2014).

Colleges →	A	B	C	D	E
Year ↓					
2010	400	270	350	430	470
2011	430	300	330	450	490
2012	370	250	360	470	410
2013	410	310	370	420	430
2014	420	290	340	480	480

The number of students studying in college E in the year 2013 is approximately what percent of the number of students studying in colleges B, C and D taken together in the year 2013 (nearest to one decimal place)?

- A 38.2%
- B 38.6%
- C 39.1%
- D 39.4%

Answer: C

#### Explanation:

Number of students in college E in 2013 = 430

No. of students in college B,C and D in 2013 =  $310 + 370 + 420 = 1100$

$$= \frac{430}{1100} \times 100$$

$$= 39.1\%$$

### Question 74

In  $\triangle ABC$ , AD is the median and G is a point on AD such that  $AG : GD = 2 : 1$ . Then  $\text{ar}(\triangle BDG) : \text{ar}(\triangle ABC)$  is equal to:

- A 1 : 4
- B 1 : 9
- C 1 : 6
- D 1 : 3

Answer: C

### Question 75

If the six digit number  $15x1y2$  is divisible by 44, then  $(x + y)$  is equal to:

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

**Answer: B**

**Explanation:**

15x1y2 will be divisible by 44

to divide that no it should be divided by 4 and 11 both

1. for divisibility by 4 the last two digit will be divided by 4 the last digit is 2 so y will be 3,5,7 and 9
2. but for divisibility by 11 the sum of odd digit places no - sum of even digit place no will be 0 or divisible by 11
3. y = 7 and x=0 then only this no will be divisible by 44
4.  $x+y=7$ ;  $7+0=7$

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### English

**Instructions**

For the following questions answer them individually

**Question 76**

Select the most appropriate antonym of the given word.

**ACCEPT**

- A reject
- B acquire
- C obtain
- D release

**Answer: A**

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**Question 77**

Select the most appropriate option to fill in the blank.

Technology can be \_\_\_\_\_ and people seem to be more attached to screens than ever before.

- A addictive
- B infatuated
- C incorrigible
- D contagious

**Answer: A**

**Question 78**

Select the correctly spelt word.

- A challeng
- B challange
- C chalenge
- D challenge

Answer: D

Question 79

Select the correct active form of the given sentence.  
Let the bell be rung every forty minutes.

- A The bell should be rung every forty minutes
- B Ring the bell every forty minutes.
- C The bell ought to be rung every forty minutes
- D Let the bell keep ringing every forty minutes.

Answer: B

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Question 80

Select the word which means the same as the group of words given.  
Something which is fit to be eaten

- A unpalatable
- B delicious
- C edible
- D tasty

Answer: C

Question 81

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

Biologists believe that increased human activity means an accelerated rate of change in habitat for all creatures of the world.

- A No improvement
- B human activity meant a accelerated rate in change
- C human activities mean an accelerated rate from change
- D human activity is meaning an accelerated rate of change

Answer: A

Question 82

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

- A. Here, the picture perfect French Quarter and heritage laden Tamil streets blend into one another.
- B. The conflict of coexistence is evident in many metropolitan cities.
- C. The old and new, like two different worlds, surviving side by side yet never crossing that chasm.
- D. There is a place though- Puducherry, where contrasts are celebrated like nowhere else.

- A BACD
- B BCDA



C DCBA

D CDAB

Answer: B

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Question 83

Select the word which means the same as the group of words given.  
Something which cannot be understood

A illegible

B incomprehensible

C inexplicable

D infallible

Answer: B

Question 84

Select the correct passive form of the given sentence.  
He is clicking good pictures with his new camera.

A Good pictures were clicked with his new camera.

B Good pictures have been clicked with his new camera.

C Good pictures are being clicked with his new camera.

D Good pictures are clicked with his new camera.

Answer: C

Question 85

In the sentence identify the segment which contains the grammatical error.  
No sooner did he see the tiger when he ran as fast as he could.

A no sooner did

B he see the tiger

C when he ran

D as fast as he could

Answer: C

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Question 86

Select the most appropriate synonym of the given word.  
PENSIVE

- A spontaneous
- B spiteful
- C reflective
- D tragic

Answer: C

**Question 87**

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

Coming from an affluent family, she found herself a square peg in a round hole when she married a poor farmer and moved to a small village.

- A in a favourable situation
- B unhappy and regretful
- C a misfit in the environment
- D in a financial crisis

Answer: C

**Question 88**

Select the most appropriate synonym of the given word.

**VINDICTIVE**

- A watchful
- B revengeful
- C forceful
- D helpful

Answer: B

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**Question 89**

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

When his envious competitor extended a hand of friendship, he smelt a rat.

- A detected something wrong
- B felt very pleased
- C became complaisant
- D behaved arrogantly

Answer: A

**Question 90**

In the sentence identify the segment which contains the grammatical error.  
The match is about to begin since the captain as well as the team are on the field.

- A are on the field
- B The match is about to begin
- C since the captain
- D as well as the team

**Answer: A**

**Question 91**

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

- A. European cloth manufacturers therefore had to depend on a plant called woad to make dyes.
- B. However, cloth dyers preferred indigo which produced a rich blue colour.
- C. Being a plant of the temperate zones, woad was easily available in Europe.
- D. Indian indigo was very expensive and only small quantities reached the European markets.

- A CBDA
- B DCAB
- C ACBD
- D DACB

**Answer: D**

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**Question 92**

Select the most appropriate antonym of the given word.  
**AFFINITY**

- A aversion
- B attraction
- C empathy
- D preference

**Answer: A**

**Question 93**

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

A reason why there are so much misconception on dyslexia could be the sheer invisibility of the disorder.

- A there are so much misconceptions against dyslexia
- B there are so many misconceptions about dyslexia
- C there are so many misconception around dyslexia

D No improvement

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:

Telling someone something that you admire about them can be called a random act (1)\_\_\_\_\_ kindness. It takes almost no (2)\_\_\_\_\_, yet it pays enormous dividends. Many people (3)\_\_\_\_\_ their entire lives wishing that others would (4)\_\_\_\_\_ them. Expectations are more from family and friends, (5)\_\_\_\_\_, even compliments from strangers feel good if they are genuine.

### Question 94

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

A with

B of

C from

D in

Answer: B

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### Question 95

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

A venture

B work

C effort

D attempt

Answer: C

### Question 96

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

A spent

B had spent

C have been spending

D spend

Answer: D

### Question 97

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

A confess

B acknowledge

C concede

D admit

Answer: B

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### Question 98

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

A so

B however

C and

D unless

Answer: B

### Instructions

For the following questions answer them individually

### Question 99

Select the most appropriate option to fill in the blank.

People of the older generation \_\_\_\_\_ over the good old school days.

A remember

B remind

C retribute

D reminisce

Answer: D

### Question 100

Select the correctly spelt word.

A concentious

B conscentious

C conscientious

D consenteous

Answer: C

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