SSC CGL 4th March 2020 Shift-3

Instructions

For the following questions answer them individually

Question 1

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

A

B

C

D
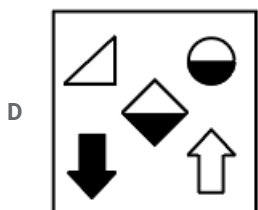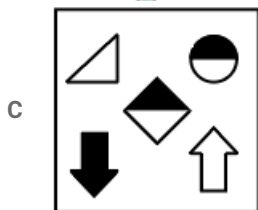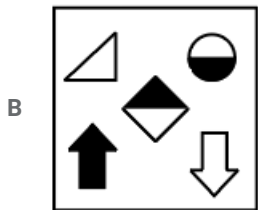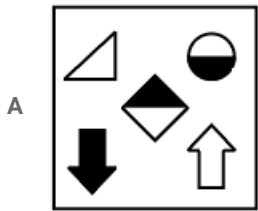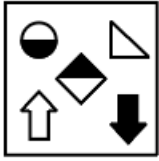
Answer: A

Explanation:

Option A is the mirror image of the question figure.

∴ The correct answer is option A.

SSC CGL Free Mock Test

Question 2

In a certain code language, 'EARTH' is coded as '8201815'. How will 'ORBIT' be coded as in that language?

A   18172372

B   20921815

C   37681026

D 17113912

Answer: B

Explanation:
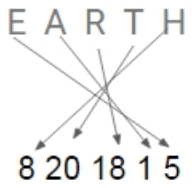
Similarly,
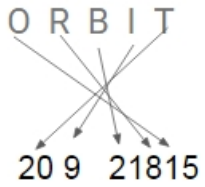
∴. The correct answer is option B.

Question 3

Select the option that is related to the third term in the same way as the second term is related to the first term and sixth term is related to fifth term.
72 : 14 :: 87 : ? :: 96 : 54

A 56

B 52

C 29

D 15

Answer: A

Explanation:
7 × 2 = 14
9 × 6 = 54
Similarly,
8 × 7 = 56
∴. The correct answer is option A.

Question 4

Select the option that depicts how the given transparent sheet of paper would appear if it is folded at the dotted line.

A

B

C

D
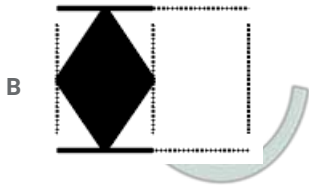
Answer: C

Explanation:

The sheet will be appear as,
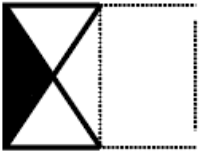
∴ The correct answer is option C.

125 SSC CGL Mocks for just Rs. 199

Question 5

How many rectangles are there in the given figure?
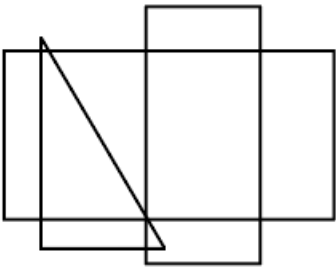
A   15

B   17

C   11

D   13

Answer: B

Explanation:
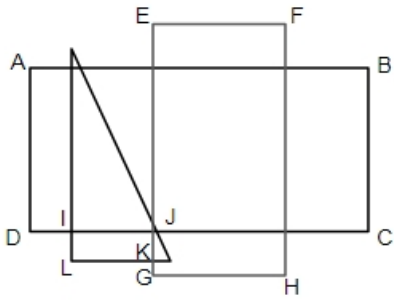
Number of rectangles in EFHG = 1 + 2 + 3 = 6
Number of rectangles in ABCD = 1 + 2 + 3 + 4 = 10
1 rectangle is IJKL.
So, total rectangles = 6 + 10 + 1 = 17
∴ The correct answer is option B.

Question 6

In the given Venn diagram, the 'rectangle' represents 'engineers', the 'circle' represents 'managers', and the 'triangle' represents 'married'. The numbers given in the diagram represent the number of persons in that particular category.
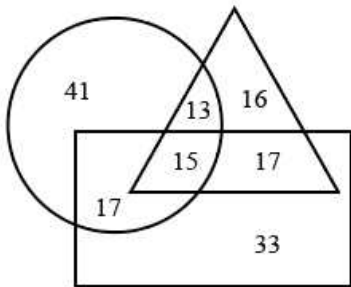
How many people are married but are NOT engineers?

A   29

B   16

C   70

D   13

   Answer: A

Explanation:
Number of people are married but are NOT engineers = 13 + 16 = 29
∴ The correct answer is option A.

Question 7

In a certain code language, 'JUPITER' is written as ' JVOJSFR '. How will 'NEPTUNE'be written as in that language?

A   NDPSVME

B   NGOUTOE

C   NFOUTOE

D   NFOSTOE

   Answer: C

Explanation:
J = J
U + 1 = V
P - 1 = O
I + 1 = J

T - 1 = S
E + 1 = F
R = R
Similarly,
N = N
E +1 = F
P - 1 = O
T + 1 = U
U - 1 = T
N + 1 = O
E = E
'NEPTUNE' is written as 'NFOUTOE'.
∴. The correct answer is option C.

SSC CGL Previous Papers (DOWNLOAD PDF)

Question 8

A product was marked for sale with a label price, which is at 20% discount on the printed price. At the time of sale, the shopkeeper gave an additional 10% discount on the label price. If a customer bought the product at ₹468, then what is the printed price of the product?

A ₹700

B ₹650

C ₹520

D ₹600

Answer: B

Explanation:
Let the printed price be 100%.
Discount = 20%

Label price = 100 - 20 = 80%
Additional discount = 10%

Selling price = 100 - 10 = 90% of label price = $80 \times \frac{90}{100}$ = 72%
72% = 468
Printed price(100%) = $\frac{650}{72} \times 100$ = 650

Question 9

$A + B$ means 'A is the wife of B';
$A - B$ means 'B is the daughter of A';
$A \times B$ means 'B is the brother of A';
$A \div B$ means 'A is the father of B'.
If, $P + R \times T - Q + S \div U$, then how is P related to the mother of U?

A Maternal grandmother

B Mother

C Paternal grandmother

D Aunt

Answer: D

Explanation:

In the diagram, Circle shows the female, square shows the male, vertical lines show the generation, single horizontal line shows the brother/sister and double horizontal lines show the couple.
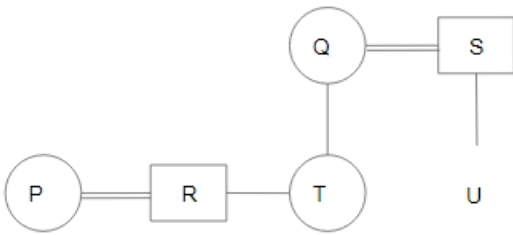
From the diagram,
Mother of 'U' is aunt of the 'P'.

Question 10

Arrange the following wordsin a logical and meaningful order (according to population).
1. Andhra Pradesh
2. Madhya Pradesh
3. Arunachal Pradesh
4. Uttar Pradesh
5. Himachal Pradesh

A   4-1-2-3-5

B   4-2-1-5-3

C   4-1-2-5-3

D   4-2-1-3-5

   Answer: B

Explanation:
State According to population,

Uttar Pradesh, Madhya Pradesh, Andhra Pradesh, Himachal Pradesh, Arunachal Pradesh
∴ The correct answer is option B.

25 SSC CHSL Mocks for just Rs. 149

Question 11

Select the option in which the words share the same relationship as that shared by the given pair of words.
Dentist : Doctor

A   Line : Circle

B   Algebra : Geometry

C   Chemistry : Science

D   Biology : Astrology

   Answer: C

Explanation:
Dentist come under the doctor similarly,

Chemistry come under the chemistry.
∴ The correct answer is option C.

Question 12

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

$121 + 11 - 42 \times 6 \div 7 = 83$

A $- \, and \, \div$

B $+ \, and \, \div$

C $\div \, and \, \times$

D $\times \, and \, -$

Answer: C

Explanation:
$121 + 11 - 42 \times 6 \div 7 = 83$
From the option C,
$121 + 11 - 42 \div 6 \times 7 = 83$
$121 + 11 - 42 \div \overset{1}{6} \times 7 = 83$
$121 + 11 - 49 = 83$
83 = 83
∴ The correct answer is option C.

Question 13

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

A

B

C

D

Answer: A

Explanation:

The question figure is shown by red line

∴ The correct answer is option A.

Question 14

Select the figure that can replace the question mark (?) in the following series.

A

B

C

D
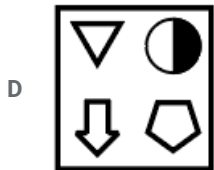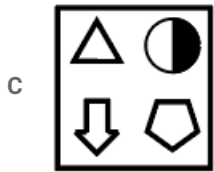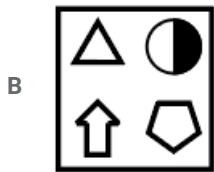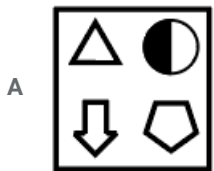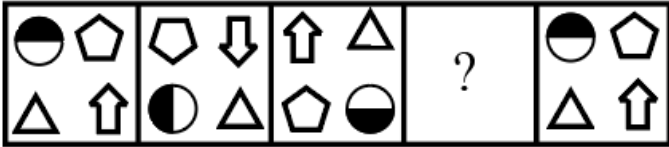
Answer: C

Explanation:

In the each figure, pentagon and arrow rotate 180 ˚ in each step and figure are also rotate 90 ˚ in anti clock direction so, Next step,
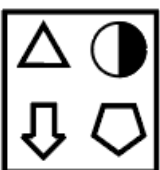
∴ The correct answer is option C.

Question 15

Four number-pairs have been given, out of which three are alike in some manner and one is different. Select the number-pair that is different.

A   10 : 123

B   17 : 290

C   14 : 227

D   11 : 146

   Answer: B

Explanation:
In 10 : 123,
$(10 + 1)^2 + 2$ = 121 + 2 = 123
In 17 : 290,
$(17 + 1)^2 + 2$ **= 324 - 34 = 290**
In 14 : 227,
$(14 + 1)^2 + 2$ = 225 + 2 = 227
In 11 : 146,
$(11 + 1)^2 + 2$ = 144 + 2 = 146
∴ The correct answer is option B.

Question 16

Select the option in which the number set shares the same relationship as that shared by the given number set.
(17, 24, 45)

A   (18, 23, 46)

B   (19, 26, 34)

C   (15, 20, 43)

D   (12, 19, 40)

   Answer: D

Explanation:
In (17, 24, 45),
17 + 7 = 24 + 21 = 45

Similarly,
From (12, 19, 40),
12 + 7 = 19 + 21 = 40
∴ The correct answer is option D.

Question 17

Read the given statement(s) and conclusions carefully. Assuming that the information given in the statements is true, even if it appears to be at variance with commonly known facts, decide which of the given conclusions logically follow(s) from the statement(s).
Statements:
All singers are dancers.
No dancer is a plumber.
Conclusions:
I. No plumber is a singer.
II. Some singers are plumbers.
III. Some dancers are singers.

A Only conclusion I follows.

B Only conclusions II and III follow.

C Only conclusions I and III follow.

D Only conclusion II follows.

   Answer: C

Explanation:
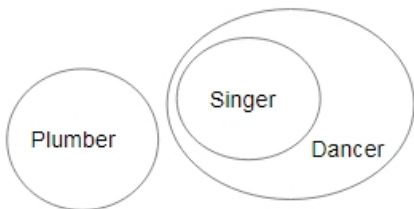
From the Venn diagram,
Only conclusions I and III follow.
∴. The correct answer is option C.

Question 18

Select the number that can replace the question mark (?) in the following series.
1537, 1539, 1543, ?, 1557, 1567

A 1553

B 1550

C 1546

D 1549

   Answer: D

Explanation:
The series follows pattern as,
1537 + 2 = 1539
1539 + 4 = 1543
1543 + 6 = 1549
1549 + 8 = 1557
1567 + 10 = 1577
∴. The correct answer is option D.

Question 19

Four words have been given, out of which three are alike in some manner andoneis different. Select the odd word.

A Hyderabad

B Aurangabad

C Chennai

D Gangtok

Answer: B

Explanation:
Except option B, remaining all are capitals.

1500 + Free Must Solved SSC Questions (With Solutions)

Question 20

Select the letter-cluster that can replace the question mark (?) in the following series.
DAG, FCI, ? , JGM, LIO

A GDJ

B IFL

C HKE

D HEK

Answer: D

Explanation:
The series follows pattern as,
(D + 2)(A + 2)(G + 2) = FCI
(F + 2)(C + 2)(I + 2) = HEK
(H + 2)(E + 2)(K + 2) = JGM
(J + 2)(G + 2)(M + 2) = LIO
∴ The correct answer is option D.

Question 21

'Wheat' is related to 'Bread' in the same way as 'Sugarcane' is related to '..................'

A Jaggery

B Mayonnaise

C Grass

D Ketchup

Answer: A

Explanation:
'Bread' made by 'Wheat' similary,
'Jaggery' Made by 'Sugarcane'.
∴ The correct answer is option A.

Question 22

Fourletter-clusters have been given, out of which three are alike in some manner andone is different. Select the odd letter-cluster.

A FGL

B ABF

C IJN

D MNR

   Answer: A

Explanation:
F + 1 = G + 5 = L
A + 1 = B + 4 = F
I + 1 = J + 4 = N
M + 1 = N + 4 = R
So, option A is odd.
∴ The correct answer is option A.

General Science Notes for SSC CGL

Question 23

Select the letter that can replace the question mark (?) in the following series.
A, E, J, ?, W

A R

B P

C S

D Q

   Answer: B

Explanation:
The series follows pattern as,
A + 4 = E
E + 5 = J
J + 6 = P
P + 7 = W
∴ The correct answer is option B.

Question 24

Three different positions of the same dice are shown. Select the symbol that will be on the face opposite to the one showing ' = '.

A $

B #

C %

D *
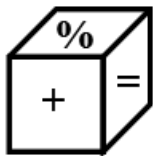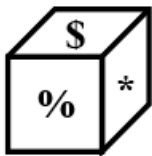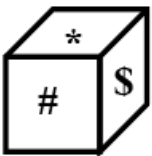
   Answer: A

Explanation:
From last 2 figures,

'%' = '%'
'$' = '='
'*' = '+'
Opposite face of '=' = '$'
∴ The correct answer is option A.

Question 25

Study the given pattern carefully and select the number that can replace the question mark (?) in it.
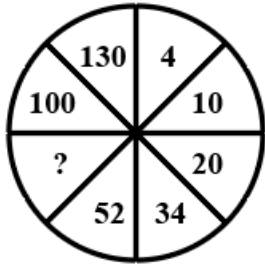
A   64

B   96

C   82

D   74

   Answer: D

Explanation:
4 + 6 = 10
10 + (6 + 4 = 10) = 20
20 + (10 + 4 = 14) = 34
34 + (14 + 4 = 18) =52
52 + (18 + 4 = 22) = 74
74 + (22 + 4 = 26) = 100
100 + (26 + 4 = 30) = 130
∴ The correct answer is option D.

Free SSC Study Material (18,000 Solved Questions)

General Awareness

Instructions
For the following questions answer them individually

Question 26

Four multi-storied illegal constructions - Jain Coral Cove, H20 Holy Faith, Alfa Serene and Golden Kayaloram - were razed to the ground in January 2020 following Supreme Court instructions. In which state did this happen?

A   Karnataka

B   Goa

C   Kerala

D   Tamil Nadu

   Answer: C

Question 27

Name the company that has acquired an online travel portal Yatra Online Inc., for an enterprise value of $337.8 million, in an all-stock transaction.

A Make my trip.com

B Trivago

C Ebix Inc.

D Trip Advisor

Answer: C

Question 28

Which of the following is an INCORRECT sequence of Mughal rulers?

A Jahangir, Shah Jahan, Aurangzeb

B Akbar, Shah Jahan, Jahangir

C Babur, Humayun, Akbar

D Akbar, Jahangir, Shah Jahan

Answer: B

Question 29

The recently revoked 'Article 370' is associated with which of these states of India?

A Assam

B Sikkim

C Nagaland

D Kashmir

Answer: D

SSC Free Preparation App

Question 30

Bhavai and Kalbelia as traditional dance forms, owe their genesis to which Indian state?

A Punjab

B Rajasthan

C Assam

D Odisha

Answer: B

Question 31

Iranian Major General Qasem Soleimani was recently (2020) assassinated by the US military in _____.

A United Arab Emirates

B Iraq

C Saudi Arabia

D Pakistan

Answer: B

Question 32

Who is the only scientist in the world to have won the Nobel prize in Chemistry twice?

A Linus Carl Pauling

B Roger D. Kornberg

C Madame Curie

D Frederick Sanger

Answer: D

Daily Free SSC Practice Set

Question 33

The American scientist Edwin Hubble's name is associated with which of these theories?

A Lattice Gauge Theory

B Quantum Chromodynamics Theory

C Partial Coherence of Light Theory

D The Big Bang Theory

Answer: D

Question 34

The city of Vijayawada lies on the banks of which of these rivers?

A Mahanadi

B Tapti

C Krishna

D Godavari

Answer: C

Question 35

Only one Indian batsman has scored a triple century in test cricket other than Virender Sehwag. Name this batsman.

A Ajinkya Rahane

B Rohit Sharma

C Shikhar Dhawan

D Karun Nair

Answer: D

SSC CGL Free Online Coaching

Question 36

What is the name of the phenomena in physics and astronomy which involves the splitting of a spectral line into two or more components of slightly different frequency when the light source is placed in a magnetic field?

A Lumen Effect

B Alpenglow Effect

C Zeeman Effect

D Raman Effect

Answer: C

Question 37

When does the entire earth experience equal days and nights?

A Day of winter solstice

B Day of summer solstice

C At orbital plane

D Day of equinox

Answer: D

Question 38

Who among the following is the current (January 2020) Governor of Kerala?

A Arif Mohammed Khan

B Satya Pal Mallik

C Lalji Tandon

D B.D. Mishra

Answer: A

SSC CHSL Previous Question papers (download pdf)

Question 39

Name the two Indian actors who shared the National Best Actor Award (Male) in the 66th National Film Awards 2019.

A Ayushmann Khurrana and Vicky Kaushal

B Ranbir Kapoor and Akshay Kumar

C Nana Patekar and Mohanlal

D Amitabh Bachchan and Ranbir Kapoor

Answer: A

Question 40

Former union minister and former Karnataka CM, D.V. Sadananda Gowda is a cabinet minister in the current central cabinet (February-2020). What is his portfolio?

A Law and Justice

B Chemicals and Fertilizers

C Public Distribution

D Tribal Affairs

Answer: B

Question 41

Who among the following is known as the 'father of Muslim renaissance' in Bengal?

A Sir Sayed Ahmed Khan

B Ameer Ali

C Nawab Abdul Latif Khan

D Nawab Salimullah Khan

Answer: C

Free SSC Study Material (18,000 Solved Questions)

Question 42

Name the author of the 2019 released book - 'The Scent of God'.

A Nayantara Sehgal

B Githa Hariharan

C Saikat Majumdar

D Himanjali Sankar

Answer: C

Question 43

What is the name of the phenomena (driven by the scattering of light) in which mountain tops acquire a rosy or orange hue around sunrise and sunset?

A   Brillouin scattering

B   Circle of confusion

C   Alpenglow

D   Barrel distortion

Answer: C

Question 44

How many members did the International Monetary Fund (IMF) have as of January 2020?

A   164

B   174

C   189

D   182

Answer: C

Latest Job Updates on Telegram - Join here

Question 45

The 3rd Khelo India Youth Games 2020 is hosted by which Indian state?

A   Assam

B   Kerala

C   Karnataka

D   Punjab

Answer: A

Question 46

From which of the following states does 2019 Padma Vibhushan winner, Teejan Bai hail?

A   Chhattisgarh

B   Gujarat

C   Odisha

D   Telangana

Answer: A

Question 47

Which of these is the energy conversion that happens in the process called photosynthesis?

A   Potential energy to chemical energy

B   Light energy to chemical energy

C   Heat energy to chemical energy

D   Heat energy to light energy

    Answer: B

Question 48

Who was the then Governor-General of British India, when 'Sati Pratha' became illegal and punishable?

A   Lord Cornwallis

B   Lord Wellesley

C   Lord William Bentinck

D   Warren Hastings

    Answer: C

Question 49

Which of the following is an Indian Research Station in the Antarctica Region?

A   Orcadas

B   Maitri

C   Hope Bay

D   Mawson

    Answer: B

Question 50

Who is the author of the delightful and anecdotal history of Indian cricket titled - 'A Corner of a Foreign Field: The Indian History of a British Sport'?

A   Sanjay Singh

B   Ramachandra Guha

C   Bipin Chandra

D   Romila Thapar

    Answer: B

SSC CGL Free Mock Test

Quantitative Aptitude

Instructions

For the following questions answer them individually

Question 51

The given table represents the production of different types of motorcycles (in thousands) over a period of six years.
Study the table carefully and answer the question that follows.

Year → Motorcycles (type) ↓	2013	2014	2015	2016	2017	2018
A	95	84	85	89	80	98
B	98	87	89	88	96	92
C	104	89	95	92	100	110
D	103	100	102	95	104	120

During 2015, the production of which type of motorcycle was more than 25% of the total production of all types of motorcycles in 2017?

A   A

B   B

C   C

D   D

Answer: D

Explanation:

Total production of all types of motorcycles in 2017 = 80 + 96 + 100 + 104 = 380

25% of the total production of all types of motorcycles in 2017 = $380 \times \frac{25}{100}$ = 95

During 2015, the production of D type of motorcycle was more than 25% of the total production of all types of motorcycles in 2017

Question 52

The average age of a number of persons in a group was calculated as 35 years, which was 2.5 years more than the correct average as there was an error in recording the age of two persons as 38.5 years and 40 years instead of 29 years and 22 years respectively. The number of persons in the group was:

A   11

B   12

C   15

D   13

Answer: A

Explanation:

Let the number of persons be x.

Wrong average = 35

Total age for wrong average = 35x

Correct average = 35 - 2.5 = 32.5

Total age for correct average = 32.5x

Correct age of two persons = 29 + 22 = 51

Wrong age of two persons = 38.5 + 40 = 78.5

Difference = 78.5- 51

$35x - 32.5x = 27.5$

$x = 27.5/2.5 = 11$

Question 53

If $\sec \theta + \tan \theta = p, 0° < \theta < 90°$, then $\frac{p^2 - 1}{p^2 + 1}$ **is equal to:**

A $\operatorname{cosec} \theta$

B $\sin \theta$

C $\cos \theta$

D $2 \operatorname{cosec} \theta$

Answer: B

Explanation:

$\sec \theta + \tan \theta = p$

$(\sec \theta + \tan \theta)^2 = p^2$ ---(1)

$\frac{p^2 - 1}{p^2 + 1}$

From eq(1),

$= \dfrac{(\sec \theta + \tan \theta)^2 - 1}{(\sec \theta + \tan \theta)^2 + 1}$

$= \dfrac{\sec^2 \theta + \tan^2 \theta + 2 \sec \theta \tan \theta - 1}{\sec^2 \theta + \tan^2 \theta + 2 \sec \theta \tan \theta + 1}$

$= \dfrac{(\sec^2 \theta - 1) + \tan^2 \theta + 2 \sec \theta \tan \theta}{\sec^2 \theta + 2 \sec \theta \tan \theta + (\tan^2 \theta + 1)}$

$= \dfrac{2 \tan^2 \theta + 2 \sec \theta \tan \theta}{2 \sec^2 \theta + 2 \sec \theta \tan \theta}$

$= \dfrac{\tan^2 \theta + \sec \theta \tan \theta}{\sec^2 \theta + \sec \theta \tan \theta}$

$= \dfrac{\tan \theta (\tan \theta + \sec \theta)}{\sec \theta (\sec \theta + \tan \theta)}$

$= \dfrac{\tan \theta}{\sec \theta} = \sin \theta$

Question 54

The chords AB and CD ofa circle intersect at E. IfAE = 12 cm, BE = 20.25 cm and CE = 3 DE,thenthe length (in cm) of CE is:

A 27

B 25.5

C 18

D 28.5

Answer: A

Explanation:
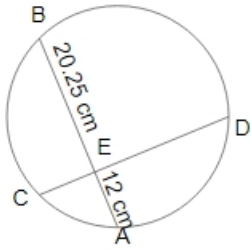
By the property,

$AE \times EB = DE \times CE$

$12 \times 20.25 = DE \times 3DE$

$243 = 3DE^2$

$DE^2 = 81$

DE = 9 cm

CE = 3DE = 3 $\times$ 9 = 27 cm

Question 55

If x + y + z = 3, and $x^2 + y^2 + z^2 = 101$, then what is the value of $\sqrt{x^3 + y^3 + z^3 - 3xyz}$?

A   19

B   21

C   24

D   28

   Answer: B

Explanation:
x³ + y³ + z³ - 3xyz = (x+y+z) [(x + y + z)² - 3(xy + yz + zx)] ---(1)

And,

(x + y + z)² = x² + y² + z² + 2(xy + yz + zx)

On put the values,

$3^2 = 101 + 2(xy + yz + zx)$

(xy + yz + zx) = -92/2 = -46

From the eq(1),

x³ + y³ + z³ - 3xyz = (3) [(3)² - 3(-46)] = 3 $\times$ 147 = 441

$\sqrt{x^3 + y^3 + z^3 - 3xyz} = \sqrt{441}$ = 21

Question 56

If $12x^2 - 21x + 1 = 0$, then what is the value of $9x^2 + (16x^2)^{-1}$?

A $\frac{429}{8}$

B $\frac{465}{16}$

C $\frac{417}{16}$

D $\frac{453}{8}$

Answer: C

Explanation:

$12x^2 - 21x + 1 = 0$

Divide by 4x,

$3x - 21/4 + 1/4x = 0$

$3x + \frac{1}{4x} = \frac{21}{4}$

On taking square,

$(3x + \frac{1}{4x})^2 = (\frac{21}{4})^2$

$9x^2 + \frac{1}{16x^2} + 2.3x.\frac{1}{4x} = \frac{441}{16}$

$9x^2 + \frac{1}{16x^2} = \frac{441}{16} - \frac{3}{2}$

$9x^2 + \frac{1}{16x^2} = \frac{417}{16}$

Question 57

A sum of ₹ x was divided between A, B, C and D in the ratio $\frac{1}{3} : \frac{1}{5} : \frac{1}{6} : \frac{1}{9}$. If the difference between the shares of B and D is ₹832, then the value of x is:

A ₹7,592

B ₹7,384

C ₹7,696

D ₹7,488

Answer: A

Explanation:

Ratio of A, B, C and D = $\frac{1}{3} : \frac{1}{5} : \frac{1}{6} : \frac{1}{9}$ = 30 : 18 : 15 : 10

Let the share of A, B, C and D be 30p, 18p, 15p and 10p.

The difference between the shares of B and D = 832

18p - 10p = 832

p = 832/8 = 104

x = 30p + 18p + 15p + 10p = 73p

x = 73 × 104 = Rs.7592

25 SSC CHSL Mocks for just Rs. 149

Question 58

The area of a field in the shape of a regular hexagon is $2400\sqrt{3}m^2$. The cost of fencing the field at ₹16.80/metre is:

A ₹4,536

B ₹3,024

C ₹4,032

D ₹3,528

Answer: C

Explanation:

Area of a hexagon = $\frac{3\sqrt{3}a^2}{2}$

a = side

$2400\sqrt{3} = \frac{3\sqrt{3}a^2}{2}$

$a^2 = 1600$

a = 40 m

Perimeter = 6a = 6 $\times$ 40 = 240 m

The cost of fencing the field = 240 $\times$ 16.8 = Rs.4032

Question 59

Places A and B are 144 km apart. Two cars start simultaneously, one from A and the other from B. If they move in the same direction, they meet after 12 hours, but if they move towards each other they meet after $\frac{9}{8}$ hours. The speed (in km/h)of the car moving at a faster speed, is:

A 70

B 72

C 60

D 64

Answer: A

Explanation:

Speed of faster car = v1

Speed of slower car = v2

Case I: Cars travel in same direction

144 km distance covered in 12 hours so,

Relative speed = v1 - v2

v1 - v2 = 144/12 = 12 ---(1)

Case II: Cars in opposite direction

144 km distance covered in $\frac{9}{8}$ hours so,

Relative speed = v1 + v2

v1 + v2 = $\frac{144}{\frac{9}{8}}$ = 128 ---(2),

From eq(1) and (2),

2v1 = 12 + 128

v1 = 140/2 = 70 km/hr

$\therefore$ The speed of faster car is 70 km/hr.

Question 60

A, B and C donate 8%, 7% and 9%,of their salaries, respectively to a charitable trust. The salaries of A and B are same and the difference between their donations is ₹259. Thetotal donation of A and B is ₹1,185 more than that of C. The total donation ofA and C is what percentage ofthe total salaries of A, B and C? (Correct to one decimalplace)

A 6.2%

B 5.8%

C 6.4%

D 7.1%

    Answer: B

Explanation:

Let the salaries of A, B and C be x, x, y.

Donation of A, B and C = 0.08x, 0.07x and 0.09z

Difference between donations of A and B = 259

0.08x - 0.07x = 259

x = 259/0.01 = 25900

Total donation of A and B = donation of A + 1185

0.08x + 0.07x = 0.09z + 1185

0.15x = 0.09z + 1185

0.09z = 0.15 × 25900 - 1185 = 2700

z = 2700/0.09 = 30000

Total donation of A and C = 0.08x + 0.09z

=0.08 × 25900 + 2700 = 2072 + 2700 = 4772

Total salaries of A, B and C = 25900 + 25900 +30000 = 81800

Required percentage = $$\frac{4772}{81800} \times 100 = 5.8\%$$

SSC CGL Tier-2 Previous Papers PDF

Question 61

Four men and 6 women can complete a certain piece of work in 5 days whereas three men and 4 women can complete it in 7 days. How many men should assist 25 women to complete $2\frac{1}{2}$ times the same work in 5 days?

A 8

B 10

C 4

D 5

    Answer: D

Explanation:

Total work = number of (man\woman) $\times time$

Four men and 6 women can complete a certain piece of work in 5 days whereas three men and 4 women can complete it in 7 days so,

(4m + 6w) $\times 5 = (3m + 4w) \times 7$

20m + 30w = 21m + 28w

m = 2w

Now,

Work = $2\frac{1}{2}$ times the same work

Work = $\frac{5}{2} \times$ same work

(m/w) $\times 5 = \frac{5}{2} \times (4m + 6w) \times 5$

$$w \times 5 = \frac{5}{2} \times (4 \times 2w + 6w) \times 5$$

$$w \times 5 = \frac{5}{2} \times 14w \times 5$$

w = 35 women

So need for worker = 25w + 10 w

Number of man = 10 $\times$ m/2 = 5 man

Question 62

In $\triangle ABC$, $\angle B = 72°$ and $\angle C = 44°$. Side BC is produced to D. The bisectors of $\angle B$ and $\angle ACD$ meet at E. What is the measure of $\angle BEC$?

A $58°$

B $46°$

C $32°$

D $36°$

Answer: C

Explanation:
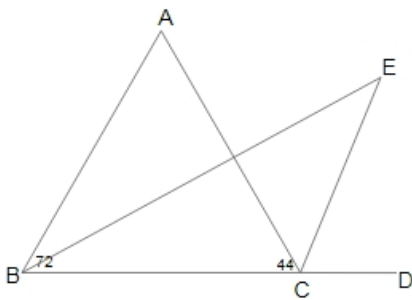
In $\triangle ABC$,

$$\angle A + \angle B + \angle C = 180°$$

$$\angle A = 180 - 72 - 44 = 64°$$

By angle bisector property,

$$\angle BEC = \frac{\angle A}{2}$$

$$\angle BEC = \frac{64°}{2} = 32°$$

Question 63

In $\triangle ABC$, $AC = 8.4cm$ and $BC = 14cm$. P is a point on AB such that CP= 11.2 cm and $\angle ACP = \angle B$. What is the length (in cm) of BP?

A 4.12

B 2.8

C 3.78

D 3.6

Answer: C

Explanation:
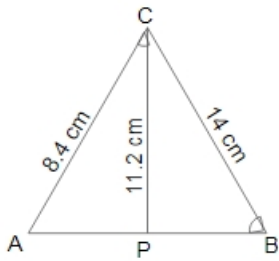
$$\triangle ACP \sim \triangle ABC$$

($\because \angle$ A is common and $\angle ACP = \angle B$)

$\frac{AB}{AC} = \frac{BC}{CP} = \frac{AC}{AP}$

From first two,

$\frac{AB}{AC} = \frac{BC}{CP}$

$\frac{AB}{8.4} = \frac{14}{11.2}$

AB = 10.5

From last two,

$\frac{BC}{CP} = \frac{AC}{AP}$

$\frac{14}{11.2} = \frac{8.4}{AP}$

AP = 6.72 cm

BP = AB - AP = 10.5 - 6.72 = 3.78 cm

SSC CGL Important Questions PDF

Question 64

If $2x^2 + y^2 + 8z^2 - 2\sqrt{2}xy + 4\sqrt{2}yz - 8zx = (Ax + y + Bz)^2$, **then the value of** $(A^2 + B^2 - AB)$ **is:**

A 16

B 14

C 6

D 18

Answer: C

Explanation:

$2x^2 + y^2 + 8z^2 - 2\sqrt{2}xy + 4\sqrt{2}yz - 8zx = (Ax + y + Bz)^2$

= $2x^2 + y^2 + 8z^2 + 2(-\sqrt{2}xy - 2\sqrt{2}yz + 4zx) = (Ax + y + Bz)^2$,

= $2x^2 + y^2 + 8z^2 + 2(-\sqrt{2}x.y - y.2\sqrt{2}z + \sqrt{2}x.2\sqrt{2}z) = (Ax + y + Bz)^2$

= $(+\sqrt{2}x - y + 2\sqrt{2}z)^2 = (Ax + y + Bz)^2$

Ax = $\sqrt{2}x$

A = $\sqrt{2}$

y = -1

B = $2\sqrt{2}$

Now,

$(A^2 + B^2 - AB)$

$((\sqrt{2})^2 + (2\sqrt{2})^2 - \sqrt{2}.2\sqrt{2})$

= 2 + 8 - 4 = 6

Question 65

How many numbers are there from 200 to 800 which are neither divisible by 5 nor by 7?

A 407

B 410

C 413

D 411

Answer: D

Explanation:

Total numbers = (800 - 200) + 1 = 601

Number of terms which divide by 5

l = 800

a = 200

Common difference(d) = 5

l = a + (n-1)d

800 = 200 + (n - 1)5

n-1 = 120

n = 121

Number of terms which divide by 7

l = 798

a = 203

Common difference(d) = 7

l = a + (n-1)d

798 = 203 + (n - 1)7

n-1 = 85

n = 86

Number of terms which divide by 5 and 7

l = 770

a = 210

Common difference(d) = 35

l = a + (n-1)d

770 = 210 + (n - 1)35

n-1 = 16

n = 17

Number of terms which divide by either 5 or 7 = 121 + 86 - 17 = 190

Number of terms which divide by neither 5 nor 7 = 601 - 190 = 411

Question 66

The value of $\dfrac{8 \div [(8-3) \div \{(4 \div 4 of 8) + 4 - 4 \times 4 \div 8\} - 2]}{8 \times 8 \div 4 - 8 \div 8 of 2 - 7}$ **is:**

A $\frac{17}{8}$

B $\frac{8}{3}$

C $\frac{16}{170}$

D $\frac{2}{17}$

Answer: B

Explanation:

$8 \div [(8-3) \div \{(4 \div 4 of 8) + 4 - 4 \times 4 \div 8\} - 2]$
$8 \times 8 \div 4 - 8 \div 8 of 2 - 7$

$8 \div [(8-3) \div \{(4 \div 32) + 4 - 4 \times 4 \div 8\} - 2]$
$8 \times 8 \div 4 - 8 \div 16 - 7$

$8 \div [5 \div \{\frac{1}{8} + 4 - 4 \times \frac{1}{2}\} - 2]$
$8 \times 2 - \frac{1}{2} - 7$

$8 \div [5 \div \{\frac{1}{8} + 4 - 2\} - 2]$
$16 - \frac{1}{2} - 7$

$8 \div [5 \div \frac{17}{8} - 2]$
$\frac{17}{2}$

$8 \div [5 \times \frac{8}{17} - 2]$
$\frac{17}{2}$

$8 \div [\frac{40}{17} - 2]$
$\frac{17}{2}$

$8 \div \frac{6}{17}$
$\frac{17}{2}$

$8 \times \frac{17}{6}$
$\frac{17}{2}$

$= \frac{8}{3}$

1500 + Free Must Solved SSC Questions (With Solutions)

Instructions

The given table represents the production of different types of motorcycles (in thousands) over a period of six years. Study the table carefully and answer the question that follows.

Year → Motorcycles (type) ↓	2013	2014	2015	2016	2017	2018
A	95	84	85	89	80	98
B	98	87	89	88	96	92
C	104	89	95	92	100	110
D	103	100	102	95	104	120

Question 67

What is the percentage increase in the total production of all types of motorcycles from 2014 to 2018?

A $14\frac{3}{7}$

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

C $16\frac{2}{3}$

D $14\frac{2}{7}$

   Answer: C

Explanation:

Total production of all types of motorcycles in 2014 = 84 + 87 + 89 + 100 = 360

Total production of all types of motorcycles in 2018 = 98 + 92 + 110 + 120 = 420

Percentage increment = $\frac{420-360}{360} \times 100 = \frac{60}{360} \times 100 = 16\frac{2}{3}$

Question 68

By what percentage is the total production of type A motorcycles over six years, less than the total production of all types of motorcycles in 2013 and 2016?

A 32.2

B 32.8

C 31.6

D 30.5

   Answer: D

Explanation:

Total production of type A motorcycles over six years = 95 + 84 + 85 + 89 + 80 + 98 = 531

total production of all types of motorcycles in 2013 and 2016 = 95 + 98 + 104 + 103 + 89 + 88 + 92 + 95 = 764

Required percentage = $\frac{764-531}{764} \times 100 = \frac{233}{764} \times 100$ = 30.5%

Instructions

For the following questions answer them individually

Question 69

Two circles of radii 7 cm and 5 cm intersect each other at A and B, and the distance between their centres is 10 cm. The length (in cm) of the common chord AB is:
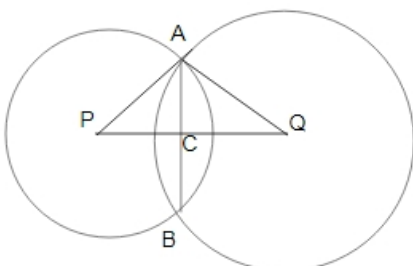
A $\frac{3\sqrt{66}}{5}$

B $\frac{4\sqrt{66}}{5}$

C $\frac{2\sqrt{74}}{5}$

D $\frac{3\sqrt{74}}{5}$

   Answer: B

Explanation:

AP = 5 cm

AQ = 7 cm

PQ = 10 cm

Let the CQ be x. So,

PC = 10 - x cm

△ ACQ is right angle triangle so,

$(AQ)^2 = (AC)^2 + (CQ)^2$

$(7)^2 = (AC)^2 + (x)^2$

$(AC)^2 = 49 - (x)^2$ ---(1)

△ APC is right angle triangle so,

$(AP)^2 = (AC)^2 + (PC)^2$

$(5)^2 = (AC)^2 + (10 - x)^2$

$(AC)^2 = 25 - (10 - x)^2$ ---(2)

From eq(1) and (2),

$49 - (x)^2 = 25 - (10 - x)^2$

$24 - (x)^2 = -(10 - x)^2$

$(x)^2 = 24 + 100 + x^2 - 20x$

20x = 124

x = 124/20 = 6.2 cm

From eq(1),

$(AC)^2 = 49 - (6.2)^2$

$(AC)^2 = 49 - 38.44$

$(AC)^2 = 10.56 = 1056/100 = 264/25$

$AC = \frac{2\sqrt{66}}{5}$

The common chord AB = $2 \times \frac{2\sqrt{66}}{5} = \frac{4\sqrt{66}}{5}$

General Science Notes for SSC CGL

Question 70

If the selling price of an article is 8% more than the cost price and the discount offered is 10% on the marked price of the article, then what is the ratio of the cost price to the marked price?

A 5 : 6

B 8 : 9

C 3 : 4

D 4 : 5

   Answer: A

Explanation:

Profit = 8%

Let the cost price be Rs.100.

Selling price = 108

Discount on marked price = 10% so,

selling price = 100 - 10 = 90%

90% = 108

Marked price(100%) = $\frac{108}{90} \times$ = Rs.120

Ratio of the cost price to the marked price = 100 : 120 = 5 : 6

Question 71

The given table represents the production of different types of motorcycles (in thousands) over a period of six years. Study the table carefully and answer the question that follows.

Year → Motorcycles (type) ↓	2013	2014	2015	2016	2017	2018
A	95	84	85	89	80	98
B	98	87	89	88	96	92
C	104	89	95	92	100	110
D	103	100	102	95	104	120

What is the ratio of the total number of motorcycles of type B produced in 2016 and 2018 to the total number of motorcycles of type D produced in 2013, 2015 and 2016?

A 1 : 2

B 3 : 4

C 3 : 5

D 2 : 3

Answer: C

Explanation:

Total number of motorcycles of type B produced in 2016 and 2018 = 88 + 92 = 180

Total number of motorcycles of type D produced in 2013, 2015 and 2016 = 103 + 102 + 95 = 300

Ratio of the total number of motorcycles of type B produced in 2016 and 2018 to the total number of motorcycles of type D produced in 2013, 2015 and 2016 = 180 : 300 = 3:5

Question 72

A sum of ₹8,000 invested at 10% p.a. amounts to ₹9,261 in a certain time, interest compounded half-yearly. What will be the compoundinterest (in ₹) on the same sum for the same time at doublethe earlier rate of interest, when interest is compounded annually?

A ₹2,520

B ₹2,480

C ₹2,560

D ₹2,500

Answer: C

Explanation:

for half yearly,

rate(r) = 10/2 = 5

p = 8000

Amount = 9261

Amount = $p(1 + \frac{r}{100})^t$

$9261 = 8000(1 + \frac{5}{100})^t$

$\frac{9261}{8000} = (\frac{105}{100})^t$

$(\frac{21}{20})^3 = (\frac{21}{20})^t$

t = 3 years

Time = 3/2 years

Now,

r1 = 2r = 2 $\times$ 10 = 20

Compound interest = $p(1 + \frac{r}{100})^t - p$

= $8000(1 + \frac{20}{100})^3/2 - 8000$

= $8000 \times \frac{6}{5} \times \sqrt{\frac{6}{5}} - 8000$

= 10560 - 8000 = Rs.2560

Free SSC Study Material (18,000 Solved Questions)

Question 73

A sells an article to B at a loss of 20%, B sells it to C at a profit of 12.5% and sells it to D at a loss of 8%. If D buys it for ₹248.40, then what is the difference between the loss incurred by A and C?

A ₹36.80

B ₹38.40

C ₹42.60

D ₹39.20

   Answer: B

Explanation:
Cost price for D = 248.40

Loss for C = 8%

Cost price for C = 248.40 $\times \frac{100}{92}$ = 270

Loss of C = 270- 248.4 = 21.6

Selling price for B = Rs. 270

Profit = 12.5%

Cost price for B = 270 $\times \frac{100}{112.5}$ = 240

Selling price for A = Rs.240

Loss = 20%

Cost price for A = 240 $\times \frac{100}{80}$ = 300

Loss for A = 300 - 240 = 60

Difference between the loss incurred by A and C = 60 - 21.6 = Rs. 38.4

Question 74

If $7\cos^2\theta + 3\sin^2\theta = 6, 0° < \theta < 90°$, then the value of $\frac{\cot^2 2\theta + \sec^2 2\theta}{\tan^2 2\theta - \sin^2 2\theta}$ is:

A $\frac{52}{27}$

B $\frac{26}{15}$

C $\frac{28}{27}$

D $\frac{49}{45}$

Answer: A

Explanation:

$7\cos^2\theta + 3\sin^2\theta = 6$

$7(1 - \sin^2\theta) + 3\sin^2\theta = 6$

$7 - 7\sin^2\theta + 3\sin^2\theta = 6$

$4\sin^2\theta = 1$

$\sin\theta = 1/2$

$(For\ 0° < \theta < 90°,)$

$\theta = 30°$

$\frac{\cot^2 2\theta + \sec^2 2\theta}{\tan^2 2\theta - \sin^2 2\theta}$

$\frac{\cot^2 2\times 30° + \sec^2 2\times 30°}{\tan^2 2\times 30° - \sin^2 2\times 30°}$

$\frac{\cot^2 60° + \sec^2 60°}{\tan^2 60° - \sin^2 60°}$

$\frac{(\frac{1}{\sqrt{3}})^2 + 2^2}{(\sqrt{3})^2 - (\frac{\sqrt{3}}{2})^2}$

$\frac{\frac{1}{3} + 4}{3 - \frac{3}{4}}$

$\frac{\frac{13}{3}}{\frac{9}{4}}$ = 52/27

Question 75

The value of $\frac{(\cos 9° + \sin 81°)(\sec 9° + \csc 81°)}{2\sin^2 63° + 1 + 2\sin^2 27°}$ **is:**

A $\frac{1}{2}$

B $\frac{4}{3}$

C 2

D 1

Answer: B

Explanation:

$\frac{(\cos 9° + \sin 81°)(\sec 9° + \csc 81°)}{2\sin^2 63° + 1 + 2\sin^2 27°}$

$= \frac{(\cos(90-81) + \sin 81°)(\sec(90-81) + \csc 81°)}{2\sin^2 63° + 1 + 2\sin^2(90-63)}$

$= \frac{(\sin 81° + \sin 81°)(\csc 81° + \csc 81°)}{2\sin^2 63° + 1 + 2\cos^2 63°}$

$= \frac{(2\sin 81°)(2\csc 81°)}{2 + 1}$ = $\frac{4}{3}$

English Comprehension

Instructions

For the following questions answer them individually

Question 76

Select the most appropriate option to fill in the blank.
Being a millionaire, he is leading a _____ life.

A   expensive

B   conducive

C   destitute

D   luxurious

   Answer: D

Question 77

Select the most appropriate ANTONYM of the given word.
Sparse

A   Costly

B   Tranquil

C   Scanty

D   Abundant

   Answer: D

Question 78

Select the correct passive form of the given sentence.
Did the problems you had to face discourage you?

A   Are you being discouraged by the problems you had to face?

B   Have you been discouraged by the problems you have to face?

C   Are you discouraged by the problems you had to face?

D   Were you discouraged by the problems you had to face?

   Answer: D

Question 79

Select the word which means the same as the group of words given.
One who is preoccupied with his own interests

A   Egoist

B Pessimist

C Atheist

D Optimist

   Answer: A

Daily Free SSC Practice Set

Question 80

Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.
A. Upon returning from his travels, he was forced to live in a house where his large family lived.
B. Vaikom Muhammad Basheer was a Malayalam fiction writer from Vaikom in Kerala.
C. The household was always noisy and full of chaos, no place for a writer surely!
D. Apart from family members, myriads of domestic animals also treated the house as their own.

A BCAD

B BCDA

C BADC

D BDCA

   Answer: C

Question 81

Select the INCORRECTLY spelt word.

A Ignorance

B Influence

C Itinerent

D Impeach

   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:

Milton Hershey returned to the village where he had been born, in the heart of dairy country. He opened his chocolate manufacturing plant (1)_____ 1905. With access to all the fresh milk he (2)_____, he began producing the finest milk chocolate. The plant (3)_____ opened in a small Pennsylvania village is today the (4)_____ chocolate factory in the world. The confections created here are (5)_____ around the world.

Question 82

Select the most appropriate option to fill in blank 1.

A to

B at

C in

D on

Answer: C

Question 83

Select the most appropriate option to fill in blank 2.

A considered

B kneaded

C distributed

D needed

Answer: D

Question 84

Select the most appropriate option to fill in blank 3.

A that

B when

C who

D what

Answer: A

Question 85

Select the most appropriate option to fill in blank 4.

A large

B most largest

C largest

D larger

Answer: C

Question 86

Select the most appropriate option to fill in blank 5.

A choices

B favourites

C collections

D selections

   Answer: B

Instructions

For the following questions answer them individually

Question 87

Select the most appropriate option to fill in the blank.
Children under five years are _____ from passport biometrics.

A acquitted

B exempted

C escaped

D allowed

   Answer: B

Question 88

Select the word which means the same as the group of words given.
A geometrical figure with eight sides

A Octagon

B Pentagon

C Hexagon

D Heptagon

   Answer: A

Free SSC Study Material (18,000 Solved Questions)

Question 89

Select the most appropriate meaning of the given idiom.
Bring to light

A Reveal clearly

B Cheer someone

C Praise in public

D Brighten up

   Answer: A

Question 90

Select the most appropriate synonym of the given word.
Fury

A Sin

B Risk

C Anger

D Crime

Answer: C

Question 91

Select the most appropriate meaning of the given idiom.
Hold water

A To be fickle

B To be busy

C To be valid

D To be deep

Answer: C

Latest Job Updates on Telegram - Join here

Instructions

Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select 'No substitution'.

Question 92

Your advice will benefit to me.

A benefit from me

B benefit me

C No substitution

D benefit for me

Answer: B

Question 93

Where you left your bag yesterday?

A No substitution

B Where did you left

C Where were you leaving

D Where did you leave

Answer: D

Instructions
For the following questions answer them individually

Question 94

Select the most appropriate ANTONYM of the given word.
Friendship

A   Enmity

B   Amity

C   Slavery

D   Arrogance
  Answer: A

Join SSC Daily Quiz Telegram Group

Question 95

Select the correct indirect form of the given sentence.
The lawyer said to me, "There is no proof of your involvement in this case."

A   The lawyer told that there is no proof of my involvement in that case.

B   The lawyer told me that there was no proof of my involvement in that case.

C   The lawyer told me that there is no proof of your involvement in this case.

D   The lawyer said me that there was no proof of my involvement in this case.

  Answer: B

Instructions

In the sentence identify the segment which contains the grammatical error.

Question 96

I am believing you have submitted all the necessary documents.

A   I am believing

B   necessary documents

C   you have submitted

D   all the

  Answer: A

Question 97

No sooner did we receive your message when we heaved a sigh of relief.

A   did we receive

B   a sigh of relief

C   your message

D   when we heaved

  Answer: D

Instructions

For the following questions answer them individually

Question 98

Given below are four jumbled sentences. Out of the given options pick the one that gives their correct order.
A. Even the most ill-equipped laboratory would have been better than their shed.
B. Thus, they did not allow any difficulties to come in their way.
C. But their mind was set upon the discovery of radium.
D. The Curies had to work in extreme poverty.

A DACB

B ABCD

C ADBC

D DBCA

Answer: A

Question 99

Select the most appropriate synonym of the given word.
Solitary

A Singular

B Stubborn

C Splendid

D Sensible

Answer: A

Question 100

Select the INCORRECTLY spelt word.

A Diliver

B Denial

C Decision

D Deter

Answer: A

125 SSC CGL Mocks for just Rs. 199

SSC CGL Free Mock Test

125 SSC CGL Mocks for just Rs. 199

SSC CGL Previous Papers (DOWNLOAD PDF)

25 SSC CHSL Mocks for just Rs. 149

SSC CGL Tier-2 Previous Papers PDF

SSC CGL Important Questions PDF

1500 + Free Must Solved SSC Questions (With Solutions)

General Science Notes for SSC CGL

Free SSC Study Material (18,000 Solved Questions)

SSC Exam Free Videos (Youtube)

SSC Free Preparation App

Daily Free SSC Practice Set

SSC CGL Free Online Coaching

SSC CHSL Previous Question papers (download pdf)

Free SSC Study Material (18,000 Solved Questions)

Latest Job Updates on Telegram - Join here

Join SSC Daily Quiz Telegram Group