## 2017 SSC CGL 21 Aug Shift-2

## English

## Instructions

For the following questions answer them individually

## Question 1

In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

Economically, we (1)/ understand the world (2)/ round us in terms of scarcity. (3)/No Error (4)

A 1

B 2

C 3

D 4

## Answer: C

Explanation:
Economically, we (1)/ understand the world (2)/ AROUND us in terms of scarcity(3). Around should replace round. Hence, Option C is the answer.

## Question 2

In the following question, some part of the sentence may have errors. Find out which part of the sentence has an error and select the appropriate option. If a sentence is free from error, select 'No Error'.

The two children, (1)/ brother and sister, were onto (2)/ their way to school. (3)/No Error (4)

A 1

B 2
C 3
D 4
Answer: B

## Explanation:

Onto should be replace by on. Hence, B is the answer.

## Question 3

In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option.

Finding the comedy routine extremely funny, the family laughed $\qquad$ along with the rest of the crowd.

A lot

B hysterically
C crazy
D guffaw

Answer: B

## Explanation:

As the word 'along' is used in the sentence, it should be preceded by an adverd i.e. words ending in ly. Thus, Option B, hysterically is the answer.

## Question 4

In the following question, the sentence given with blank to be filled in with an appropriate word. Select the correct alternative out of the four and indicate it by selecting the appropriate option.

The detective's ability to $\qquad$ makes it easy for him to scare suspects into confessing.

A bluff

B stuff

C enough

D cough

## Answer: A

## Explanation:

The detective's ability to BLUFF makes it easy for him to scare suspects into confessing. Here, only ability to bluff makes a meaningful sentence. Thus, option A is correct.

## Question 5

In the following question, out of the four alternatives, select the word similar in meaning to the word given.

## Belligerent

A Antagonistic

B Co-operative
C Dandy

D Delightful
Answer: A

## Explanation:

Belligerent means hostile and antagonistic. Thus, A is the answer.

## Question 6

In the following question, out of the four alternatives, select the word similar in meaning to the word given.

Indiscreet

A Careless

B Accurate

C Attentive
D Choosy
Answer: A

## Explanation:

Indiscreet means unwise and irresponsible. Thus, option A Careless is the correct answer.

## Question 7

In the following question, out of the four alternatives, select the word opposite in meaning to the word given.

Incentive

A Impetus

B Stimulus
C Enticement

D Hindrance
Answer: D

## Explanation:

Hindrance is the opposite of Incentive. Thus, D is the answer.

## Question 8

In the following question, out of the four alternatives, select the word opposite in meaning to the word given.

## Benediction

A Criticism

B Invocation
C Beatitude

D Approbation

## Answer: A

## Explanation:

Benediction means utterance of a blessing, especially at the end of a religious service. Criticism is the opposite and the only negative word among the options. Thus, A is the answer.

## Question 9

In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

To go off the air

A To remove ventilator of a patient on his death bed

B To not eat food for a long period of time
C To stop broadcasting a radio or TV program
D To waste time on silly or trivial things.
Answer: C

## Explanation:

To go off the air means to to stop broadcasting a radio or TV program. Thus, C is the answer.

## Question 10

In the following question, out of the four alternatives, select the alternative which best expresses the meaning of the idiom/phrase.

To make a fuss about

A To be extremely delighted

B To work hard for eventual success

C To be very strict or have very high standards

D An excessive display of attention or activity
Answer: D

## Explanation:

To make a fuss about means to show an excessive display of attention or activity.

## Question 11

In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select "no improvement".

I should (has to be) with them tonight.

A has been

B have been

C been

D no improvement
Answer: B

## Explanation:

I should have been with them tonight is the right usage, Thus, B is the answer.

## Question 12

In the following question, out of the four alternatives, select the alternative which will improve the bracketed part of the sentence. In case no improvement is needed, select "no improvement".

He must not (to be left) like this.

A being left

B been left

C be left

D no improvement
Answer: C

## Explanation:

He must not be left like this is the right usage as must should be followed by be. Thus, C is the answer.

## Question 13

In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

## Free from disturbance

A Tranquil
B Agitated
C Chaotic
D Violent
Answer: A

## Explanation:

Tranquil means to be calm and free from disturbance. Thus, $A$ is the answer.

## Question 14

In the following question, out of the four alternatives, select the alternative which is the best substitute of the words/sentence.

An arrangement of flowers fastened in a ring used for laying on a grave

A Brier
B Prickle

C Wreath

D Splint
Answer: C

## Explanation:

Wreath is the arrangement of flowers fastened in a ring used for laying on a grave. Thus, C is the answer.

## Question 15

In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word.

A possesses
B posseses
C posesses

D poseses
Answer: A

## Explanation:

Possesses is the right usage. thus, A is the answer.
Question 16
In the following question, four words are given out of which one word is correctly spelt. Select the correctly spelt word.

A murmuring
B murmurring
C murrmuring
D murrmurring
Answer: A

## Explanation:

Murmuring is the right usage. Thus, A is the answer

## Question 17

The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph.

There was no need to
X-set a watch, for we had nothing
Y-to fear from anybody or
Z-anything in that vast untenanted plain

A ZYX
B ZXY

C YZX

D XYZ
Answer: D

## Explanation:

There was no need to $(X)$ set a watch, for we had nothing $(Y)$ to fear from anybody or (Z)anything in that vast untenanted plain. Thus, $D$ is the answer.

## Question 18

The question below consists of a set of labelled sentences. Out of the four options given, select the most logical order of the sentences to form a coherent paragraph.

This idea, however startling it may at
X-first appear, is quite in accordance, as
Y-before stated, with the analogy of changes
Z-now going on in certain regions of the globe

A ZYX
B XYZ

C ZXY

D YZX
Answer: B

## Explanation:

This idea, however startling it may at (X)first appear, is quite in accordance, as (Y)before stated, with the analogy of changes (Z)now going on in certain regions of the globe. Thus, $B$ is the answer.

## Question 19

In the following question, a sentence has been given in Active/Passive voice. Out of the four alternatives suggested, select the one which best expresses the same sentence in Passive/Active voice.

He mailed his application for a new job.

A The application for a new job is mailed by him.
B The application for a new job was mailed by him.

C He is the mailer of the application for a new job.
D He was the mailer of the application for a new job.
Answer: B

## Explanation:

The sentence is in past tense. Was should be used in passive voice. Thus, the right usage is 'The application for a new job was mailed by him'.

## Question 20

In the following question, a sentence has been given in Direct/Indirect speech. Out of the four alternatives suggested, select the one which best expresses the same sentence in Indirect/Direct speech.
"Ooh! what a dirty child!" said my aunt.

A My aunt exclaimed disgustedly what a dirty child.
B My aunt exclaimed disgustedly that the child is very dirty.
C My aunt exclaimed disgustedly that the child was very dirty.

D My aunt exclaimed disgustedly what a dirty child it is.

## Answer: C

## Explanation:

My aunt exclaimed disgustedly that the child was very dirty. 'Was' should be used as the sentence is in past tense. Thus, option C is the answer.

## Instructions

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

Genetic variation is the cornerstone of evolution, without which there can be no natural selection, and so a low genetic diversity decreases the ability of a species to survive and reproduce, explains lead author Yoshan Moodley, Professor at the Department of Zoology, University of Venda in South Africa.

Two centuries ago, the black rhinoceros - which roamed much of sub Saharan Africa - had 64 different genetic lineages; but today only 20 of these lineages remain, says the paper. The species is now restricted to five countries, South Africa, Namibia, Kenya, Zimbabwe and Tanzania. Genetically unique populations that once existed in Nigeria, Cameroon, Chad, Eritrea, Ethiopia, Somalia, Mozambique, Malawi and Angola have disappeared. The origins of the 'genetic erosion' coincided with colonial rule in Africa and the popularity of big game hunting. From the second half of the 20th century, however, poaching for horns has dramatically depleted their population and genetic diversity, especially in Kenya and Tanzania.

## Question 21

What is important for evolution?

A Genetic variation
B Large population
C Mixing of species
D Survival of the fittest
Answer: A

## Explanation:

Genetic variation is the cornerstone of evolution. Thus, A is the answer.

## Question 22

Sub Sharan Africa has lost how many black rhino genetic lineages in 200 years?

A 64
B 20

C 44

D 30
Answer: C

## Explanation:

Two centuries ago, the black rhinoceros - which roamed much of sub Saharan Africa - had 64 different genetic lineages. Thus, C is the answer.

## Question 23

Genetically unique black rhinoceros has been lost in all of the following countries, except?

A Tanzania

B Nigeria

C Chad
D Malawi
Answer: A

## Explanation:

The species is now restricted to five countries, South Africa, Namibia, Kenya, Zimbabwe and Tanzania. Only, Tanzania is present in the options. Thus, A is the answer.

## Question 24

From the second half of the 20th century what has caused a dramatic fall in black rhinoceros population?

A poaching
B colonial rule
C big game hunting
D fall in genetic diversity

Answer: A

## Explanation:

From the second half of the 20th century, however, POACHING FOR HORNS has dramatically depleted their population and genetic diversity, especially in Kenya and Tanzania. Thus, A is the answer.

## Question 25

Genetic diversity is proportional to $\qquad$ .

A species population
B the ability of a species to survive and reproduce

C inbreeding

D extinction

## Answer: B

## Explanation:

"And so a low genetic diversity decreases the ability of a species to survive and reproduce". Thus B is the answer.

## Reasoning

## Instructions

For the following questions answer them individually

## Question 26

Select the related word from the given alternatives.
Pencil : Lead :: Pen : ?

A Ball

B Write

C Blue

D Ink
Answer: D

## Explanation:

The element used in a pencil to write is lead, similarly, an ink is used in a pen.
$=>$ Ans - (D)

## Question 27

Select the related letters from the given alternatives.
DGI: JMO :: RUW : ?

A XAC

B WYZ

C ACE
D ZAC
Answer: A

## Explanation:

It follows the sequence ' $n+6$ '
$\mathrm{D}+6=\mathrm{J} ; \mathrm{G}+6=\mathrm{M} ; \mathrm{I}+6=\mathrm{O}$;
Following the same sequence,
$R+6=X ; U+6=A ; W+6=C ;$
Hence Option A is correct

## Question 28

Select the related number from the given alternatives.
236: 472 :: 123: ?

A 246

B 426

C 642

D 247
Answer: A

## Explanation:

It follows the sequence ' $n * 2$ '
$236 * 2=472$;
Therefore, $123 * 2=246$;

## Question 29

Select the odd word from the given alternatives.

A Car

B Jeep
C Van
D Cycle
Answer: D

## Explanation:

All except a cycle are four wheeler vehicles, hence it is the odd one out.
$=>$ Ans - (D)

## Question 30

Select the odd letters from the given alternatives.

A WVU

B QPO
C GED

D LKJ
Answer: C

## Explanation:

Every Word follows the sequence ' n -1'

1) $\mathrm{W}-1=\mathrm{V} ; \mathrm{V}-1=\mathrm{U}$;
2) $\mathrm{Q}-1=\mathrm{P} ; \mathrm{P}-1=0$;
3) G-2 $=\mathrm{E} ; \mathrm{E}-1=\mathrm{D}$;
4) $\mathrm{L}-1=\mathrm{K} ; \mathrm{K}-1=\mathrm{J}$;

Option '3' does not follow the sequence. Hence Option ' 3 ' is correct.

## Question 31

Select the odd number from the given alternatives.

A 13
B 17

C 21

D 23
Answer: C

## Explanation:

Every number is a Prime number except '21'. Hence option C is correct
Question 32
A series is given, with one word missing. Choose the correct alternative from the given ones that will complete the series.

Laugh, Alter, Melts, Realm, Muesli, ?

A Missile

B Shall

C Alien

D Rifle
Answer: A

## Explanation:

Expression : Laugh, Alter, Melts, Realm, Muesli, ?
The position of the letter 'I' in each term is shifted one place to the right.
Eg : Laugh (1st place) , Alter (2nd place) , Melts (3rd place), Realm (4th place), Muesli (5th place)
Thus, in the next term, 'I' will be at 6th position, and among the options, next word $=$ Missi Ie
$=>$ Ans - (A)

## Question 33

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

E, H, L, O, S, ?

A U
B W

C V

D X
Answer: C

Explanation:
It follows the sequence $-\mathrm{n}+3, \mathrm{n}+4$
$\mathrm{E}+3=\mathrm{H} ; \mathrm{H}+4=\mathrm{L} ; \mathrm{L}+3=\mathrm{O} ; \mathrm{O}+4=\mathrm{S} ; \mathrm{S}+3=\mathrm{V}$;
Hence option C is correct
Question 34
A series is given, with one number missing. Choose the correct alternative from the given ones that will complete the series.

99, 90.7, 82.4, ? , 65.8, 57.5

A 73.3

B 74.8

C 75.2

D 74.1
Answer: D

## Explanation:

The pattern followed is that ' 8.3 ' is subtracted from all the numbers.
$99-8.3=90.7$
$90.7-8.3=82.4$
$82.4-8.3=74.1$
$74.1-8.3=65.8$
$65.8-8.3=57.5$
$=>$ Ans - (D)
Question 35
Akarsh's birthday is on Saturday 29th July. On what day of the week will be Ojas's Birthday in the same year if Ojas was born on 12th August?

A Wednesday

B Friday

C Saturday
D Sunday

Answer: C

## Explanation:

Akarsh birthday is on 29th july (saturday) and Ojas is on 12th August. The number of days Between these 2 dates is 14 days.
Divide 14 with 7 and find the remainder,
14 \% $7=0$ (Remainder)
0-Saturday 1-Sunday 2-Monday....
12th August in the same year would be on Saturday
Hence option C is correct

## Question 36

The weights of 4 boxes are 30, 70, 60 and 20 kilograms. Which of the following cannot be the total weight, in kilograms, of any combination of these boxes and in a combination a box can be used only once?

A 180

B 190
C 120

D 150
Answer: B

## Explanation:

1) $30+70+60+20=180$
2) $30+70+20=120$
3) $70+60+20=150$

Hence every other number can be formed using 30,70,60,20 except 190. Option 'B' is correct

## Question 37

From the given words, select the word which cannot be formed using the letters of the given word. JOSTLING

A INLET

B GLINT

C INGOT

D JINGO

## Answer: A

## Explanation:

Every word can be formed except 'INLET'. There is no 'E' in JOSTLING.
Hence option ' A ' is correct.

## Question 38

If PROJECT is coded as KILQVXG, then how will EGO be coded as?

A VPU
B MJN
c VTL
D SGD
Answer: C

## Explanation:

The decoded alphabets are in revese order sequence to the codded alphabets.
ABCDEFGHIJKLM
ZYXWVUTSRQPON
It follows the sequence $\mathrm{A}-\mathrm{Z}, \mathrm{B}-\mathrm{Y}, \mathrm{C}-\mathrm{X} . .$.
EGO is decoded as VTL.
Hence option C is correct.

## Question 39

In a certain code language, '+' represents ' $x$ ', '-' represents ' + ', ' $x$ ' represents ' $\div$ ' and ' $\div$ ' represents '-'. What is the answer to the following question?
75-5 + $\mathbf{2 5 \div 1 2 5 = ?}$

A 5
B 10
C 3
D 75
Answer: D

## Explanation:

Equation can be written as,
$75+5 \times 25-125$
From BODMAS Rule,
$75+125-125=75$.
Hence Option D is Correct.

## Question 40

If $15 @ 7=44$; $5 @ 4=18$; $6 @ 17=46$; then what is the value of $17 @ 4=$ ?

A 36
B 42
C 40

D 49
Answer: B

## Explanation:

It follows the sequence $-(n 1+n 2) \times 2$
$(15+7) \times 2=44 ;$
$(5+4) \times 2=18 ;$
$(6+17) \times 2=46 ;$
For 17@4
$(17+4) \times 2=42 ;$
Hence Option ' B ' is correct.

## Question 41

Select the missing number from the given responses ?

| 116 | 94 | 135 |
| :---: | :---: | :---: |
| 21 | $?$ | 87 |
| 95 | 47 | 48 |

A 48
B 47

C 144
D 94
Answer: B

## Explanation:

In each column, the number in the first cell is obtained by adding the other two.
$\mathrm{Eg}: 21+95=116$
and $87+48=135$
Similarly, $47+x=94$
$=>x=94-47=47$
$=>$ Ans $-(B)$

## Question 42

A car travels 17 km South, then turns East and travels 11 km, then turns North and travels 9 km, then turns to its left and travels 11 km. Where is the car now with reference to its starting position?

A 8 km North
B 8 km South
C 26 km South
D 26 km North

## Answer: B

## Explanation:

From the reference point it is at a distance of 8 kms (17-9Kms) towards south.


## Question 43

In the question two statements are given, followed by two conclusions, I and II. You have to consider the statements to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

Statement 1 : No shirts are t-shirts.
Statement 2 : All t-shirts are cotton.
Conclusion I: Some shirts are cotton.
Conclusion II : No t-shirts are shirts.

A Only conclusion I follows

B Only conclusion II follows
C Both I and II follow
D Neither I nor II follows
Answer: B

## Explanation:

From the diagram, Only conclusion II follows.


Question 44
Which of the following cube in the answer figure cannot be made based on the unfolded cube in the question figure?


A


B


C


D None of these
Answer: A

## Explanation:

When we fold the given figure, the side with a 'square' sign will become the base of the cube and the side with ' 5 dots' sign will become top, and thus they will face each other. Similarly, the sides which will face each other will be :


It should be \# in place concentric on top surface.
$=>$ Ans - (A)

## Question 45

In the following figure, square represents Artists, triangle represents Military officers, circle represents collectors and rectangle represents Fathers. Which set of letters represents collectors who are either military officers or fathers?


A F,C
B $\mathrm{D}, \mathrm{E}$

C $\mathrm{A}, \mathrm{B}, \mathrm{G}$

D H,E,D
Answer: C

## Explanation:

We need Collectors who are Military + Collectors who are Fathers
So Pick the letters Which are in both circle and Triangle + Circle and Rectangle.
$A, B, G$ Satisfies the condition.

## Question 46

Which answer figure will complete the pattern in the question figure


A


B


C


D


Answer: C

## Explanation:

When we complete the above figure, we get :


Now, the third figure resembles the above missing part in blue colour.
$=>$ Ans - (C)
Question 47
From the given answer select in one in which the question figure is hidden / embedded


A


B


C


D


Answer: C

## Explanation:

The question figure is embedded in the following figure :

$=>$ Ans - (C)

## Question 48

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


A


B


C


D


Answer: B

## Question 49

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


A


B


C


D


Answer: B

## Explanation:

A vertical mirror is placed, so the object at the left will appear at the right and vice-versa. So, the triangle originally pointing at bottom right will now point bottom left in the mirror image.

Also, the circle in the top left corner will appear at top right, thus second option is the mirror image of the question figure.
$=>$ Ans - (B)

## Question 50

A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as shown in the given two matrices. The columns and rows of Matrix-I are numbered from 0 to 4 and that of Matrix-II are numbered from 5 to 9 . A letter from these matrices can be represented first by its row and next by its column, for example ' $K$ ' can be represented by 41,34 etc and ' $Z$ ' can be represented by 75, 86 etc. Similarly, you have to identify the set for the word 'PAWN'.

| Matrix - I |  |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  0 1 2 3 4 <br> 0 L E D E A <br> 1 H J C M J <br> 2 B L I A I <br> 3 L E B H K <br> 4 F K G D J |  |  |  |  |  |  |


|  | Matrix - II |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 5 | 6 | 7 | 8 | 9 |
| 5 | R | Z | Q | R | N |
| 6 | Y | U | Y | T | O |
| 7 | Z | R | W | T | S |
| 8 | X | Z | O | S | Z |
| 9 | U | O | Y | O | P |

A $44,10,87,55$
B $99,23,77,59$
C $03,40,86,65$
D 31,31,59,66
Answer: B

## Explanation:

$P$ is coded as 99; $A$ is coded as 04,23 ; $W$ is coded as 77 ; $N$ is coded as 59;
Code for P-99 is in only Option B.

## General Awareness

## Instructions

For the following questions answer them individually

## Question 51

Who is the present RBI Governor ?

A Urjith patel
B Shaktikanta Das
C Raghuram Rajan
D Viral Acharaya
Answer: B

## Question 52

Goods for which demand move in the opposite direction of the income of the consumer are called?

A Inferior goods

B Normal goods
C Complementary goods

D Substitute goods
Answer: A

## Question 53

"Population control and family planning" is listed in the $\qquad$ list given in the Seventh Schedule in the Constitution of India.

A Union

B State

C Global

D Concurrent
Answer: D

## Question 54

$\qquad$ is issued when the court finds that a particular office holder is not doing legal duty and thereby is infringing on the right of an individual.

A Habeas Corpus
B Mandamus
C Prohibition

D Quo Warranto
Answer: B

## Question 55

According to the categories of land mentioned in the Chola inscriptions $\qquad$ was known as the land donated to Jaina institutions?

A Vellanvagai
B Brahmadeya
C Shalabhoga
D Pallichchhandam
Answer: D

## Question 56

Prince Khurram was the name of the future Emperor $\qquad$ .

A Shah Jahan
B
Jahangir

C Babur
D Akbar
Answer: A

## Question 57

$\qquad$ are defined as the mass movement of rock, debris or earth down a slope.

A Earthquake

B Cyclone

C Flood

D Landslide
Answer: D

## Question 58

The material carried by the glacier such as rocks big and small, sand and silt gets deposited, which are called glacial $\qquad$ .

A moraines

B deltas

C plateaus

D grooves
Answer: A

## Question 59

Based on the common features like presence of notochord and dorsal hollow neural system, animals like fishes, amphibians, reptiles, birds along with mammals are included in which Phylum?

A Mammalia

B Chordata

C Primata

D Insecta

## Answer: B

## Question 60

The members of phaeophyceae are commonly called $\qquad$ algae.

A Green

B Brown

C Red

D Yellow
Answer: B

## Question 61

Asterias (Star fish), Echinus (Sea urchin), Antedon (Sea Lily) are all examples of which Phylum?

A Echinodermata
B Annelida

C Platyhelminthes
D Arthropoda
Answer: A

## Question 62

During uniform motion of an object along a straight line, the $\qquad$ remains constant with time.

A Time

B Velocity
C Acceleration

D Distance
Answer: B

## Question 63

The impression of an image persists on the retina for about $\qquad$ of a second.

A 1/10th

B 1/8th

C $1 / 16$ th
D $1 / 5$ th
Answer: C

## Question 64

In Microsoft Word, $\qquad$ allows us to move selected paragraphs to the left.

A Decrease Indent
B Increase Indent

C Double Indent
D Single Indent

Answer: A

Question 65
Acetic Acid is another name for which of the following?

A Vinegar
B Baking Soda
C Copper Sulphate
D Magnesium Oxide
Answer: A

## Question 66

The reaction of Copper Sulphate and Iron produces Iron Sulphate and $\qquad$ .

A Vinegar
B Ash

C Baking Soda
D Copper
Answer: D

## Question 67

A few organisms can tolerate and thrive in a narrow range of temperatures. Such organisms are called
$\qquad$ -

A Osmotic

B Eurythermal
C Stenothermal
D Hydrothermal
Answer: C

## Question 68

$\qquad$ scheme was launched by the Central Government in the state of Bihar to provide clean water of the Ganges to domestic areas via postal services.

A Gangajal Delivery Scheme
B Mission Bhagiratha In Telangana
C National Apprenticeship Promotion

D Railway Travel Insurance
Answer: A

## Question 69

Who discovered Electron?

A Enrico Fermi

B Robert Noyce

C J.J.Thomson

D James Dyson
Answer: C

## Question 70

Which country won the 2016 Men's Kabaddi World Cup?

A India

B Thailand

C Pakistan

D Iran
Answer: A

## Question 71

Mattancherry Palace is located in?

A West Bengal
B Kerala

C Rajasthan

D Karnataka
Answer: B

## Question 72

Which award is given by the Government of India to recognize outstanding achievement in National sports?

A Ashok Chakra
B Dada Saheb Phalke Awards

C Arjuna Award

D Padma Shri
Answer: C

## Question 73

Which of the statements given below are not correct?

1. The author of the novel 'A Visit from the Goon Squad' is Edward $P$ Jones.
2. The author of the novel 'The Corrections' is Jonathan Franzen.
3. The author of the novel 'The Known World' is Jennifer Egan.

A 1 and 2

B 2 and 3

C 1 and 3

D 1, 2 and 3
Answer: C

Question 74
In April 2017, the G20 Digital Ministerial Meeting on Digital Economy was held in which country?

A Italy
B Germany

C France

D USA
Answer: B

## Question 75

Which is the only train which runs between Kolkata and Dhaka?

A Dosti Express
B Maitree Express

C Bangla Express

D Padma Express
Answer: B

## Mathematics

## Instructions

For the following questions answer them individually
Question 76
Select the correct option:
Convert decimal 99 to binary.

A 1100101

B 1101001

C 11100011
D 1100011
Answer: D

## Explanation:

| 2 | 99 |
| :---: | :---: |
| 2 | 49-1 |
| 2 | 24-1 |
| 2 | 12-0 |
| 2 | 6-0 |
| 2 | 3-0 |
|  | 1-1 |

from the diagram $(99)_{10}=(1100011)_{2}$ so the answer is option $D$.

Question 77
Anil is twice as good as workman as Bimal and together they finish a piece of work in 9 days. In how many days will Anil alone finish the work?

A 12.5

B 11.5

C 10.5

D 13.5

## Answer: D

## Explanation:

efficiency of $A=2 *$ efficiency of $B$.
In 1 day they can complete 3units of work
In 9 days they can complete 27 units of work
To complete 27 units of work, A took 27/2 days $=13.5$ days .
so the answer is option D.
Question 78
What is the area (in sq cm ) of a circle whose circumference is $\mathbf{2 2} \mathbf{~ c m}$ ?

A 77

B 38.5

C 44

D 88
Answer: B

Explanation:
$2 \pi r=22$
$2 \times{ }_{7}^{22} \times r=22$
$r=3.5 \mathrm{~cm}$
Area $=\pi r^{2}={ }_{7}^{22} \times 3.5 \times 3.5=38.5 \mathrm{~cm}^{2}$
so the answer is option $B$.
Question 79
The cost price of an article is $x$. It is marked up by $150 \%$. It is sold at Rs 600 after giving 40\% discount. What is $x$ (in Rs)?

A 400

B 666
C 300

D 444

## Answer: A

## Explanation:

It is marked up by $150 \%$ and $40 \%$ discount is allowed
$S P={ }_{100}^{100-40} \times{ }_{100}^{100+150} \times C P$
$\Rightarrow 600=\stackrel{60}{100} \times{ }_{100}^{250} \times C P$
$\Rightarrow C P=400$
so the answer is option A.

## Question 80

A bag has Rs.51.25 in the form of 2-rupee, 50 -paise and 25 -paise coins in the ratio of $3: 5: 7$. What is the total number of 50 -paise coins?

A 15

B 35
C 25

D 5
Answer: C

## Explanation:

Let $2 /-$ coins $=3 x$
50paise coins $=5 x$
25paise coins $=7 x$
toal amount $=51.25$
$(3 x)(2)+(5 x)(0.5)+(7 x)(0.25)=51.25$
$10.25 x=51.25$
$x=5$
No.of 50paise coins $=5 x=5(5)=25$
so the answer is option C.

## Question 81

In the first 40 overs of a 50 over innings, the run rate was 4.8 runs/over. What is the required run rate in the remaining 10 overs to reach the target of 241 runs?

A 6.7

B 6.5

C 6.3

D 4.9
Answer: D

## Explanation:

Runs After 40 overs $=40 * 4.8=192$
required runs $=241-192=49$
remaining overs $=50-40=10$
required run rate $=49 / 10=4.9$
so the answer is option D.

## Question 82

A milkman buys milk at Rs $\mathbf{2 5}$ per litre and adds $\mathbf{1 / 4}$ of water to it and sells the mixture at Rs $\mathbf{2 6}$ per litre. His gain (in \%) is?

A 25

B 20

C 30
D 15
Answer: C

## Explanation:

Let he buy 4 litres
$C P=4 * 25=100$
he add $1 / 4$ th quantity $=1$ litre of water
now total quantity $=5$ litres
he sold at 26 per litre
$\mathrm{SP}=5 * 26=130$
gain $=30$
\%gain $={ }_{100}^{30} \times 100=30 \%$
so the answer is option C.

## Question 83

When a number is increased by 120, it becomes $130 \%$ of itself. What is the number?

A 400

B 520
C 460

D 580
Answer: A

## Explanation:

$X+120=1.3 X$
$0.3 X=120$
$X=400$
so the answer is option A.

## Question 84

Two cyclists $P$ and $Q$ cycle at $20 \mathrm{~km} / \mathrm{hr}$ and $25 \mathrm{~km} / \mathrm{hr}$ towards each other. What was the distance (in kms) between them when they started if they met after 56 minutes?

A 36
B 39

C 42

D 45

## Answer: C

## Explanation:

Distance $\mathrm{b} / \mathrm{w}$ them $=$ distance travelled by $\mathrm{P}+$ distance travelled by $\mathrm{Q}=20 \times{ }_{60}^{56}+25 \times{ }_{60}^{56}=45 \times{ }_{60}^{56}=42$
So the answer is option C.

## Question 85

The amount received at $10 \%$ per annum Compound interest after 3 yrs is Rs 5324. What was the principal (in Rs)?

A 4100
B 4200
C 4000
D 4300

## Answer: C

## Explanation:

Total time $=P \times\left(1+\begin{array}{c}R \\ 100\end{array}\right)^{n}$
$\Rightarrow 5324=P \times(1+\stackrel{10}{100})^{3}$
$\Rightarrow 5324=P \times(1+\stackrel{1}{10})^{3}$
$\Rightarrow 5324=P \times\left({ }_{10}^{11}\right)^{3}$
$\Rightarrow 5324=P \times{ }_{10}^{11} \times{ }_{10}^{11} \times{ }_{10}^{11}$
$\Rightarrow P=4000$

## Question 86

If $14 / 3+(1 / 2)(x-7 / 3)=-2 x / 3$, then the value of $x$ is?

A -3

B 3

C 6

D -6
Answer: A

## Explanation:

$14 / 3+(1 / 2)(x-7 / 3)=-2 x / 3$
$\Rightarrow 14 / 3+x / 2-7 / 6=-2 x / 3$
$\Rightarrow 21 / 6=-7 x / 6$
$\Rightarrow x=-3$
So the answer is option A.

## Question 87

If $\mathbf{a}+\mathbf{b}=10$ and $\mathbf{a b}=\mathbf{2 4}$, then what is the value of $a^{3}+b^{3}$ ?

A 280

B 152

C 140

D 72

## Answer: A

## Explanation:

$a^{3}+b^{3}=(a+b)^{3}-3(a b)(a+b)=10^{3}-3(24)(10)=1000-720=280$
so the answer is option A.

## Question 88

The sum of a fraction and 3 times its reciprocal is 19/4. What is the fraction?

A $3 / 4$

B $4 / 3$
C $5 / 4$

D $4 / 5$
Answer: A

## Explanation:

Let that fraction be ${ }_{x}^{1}$
${ }^{1} x+3 x=\begin{gathered}19 \\ 4\end{gathered}$
$\Rightarrow\left(1+3 x^{2}\right)={ }_{4}^{19} \times x$
$\Rightarrow 12 x^{2}-19 x+4=0$
$\Rightarrow\left(x-{ }_{12}^{16}\right)\left(x-{ }_{12}^{3}\right)=0$
$\Rightarrow\left(x-{ }_{3}^{4}\right)\left(x-{ }_{4}^{4}\right)=0$
$\Rightarrow x=4 / 3$ or $1 / 4$
$\Rightarrow$ fraction $={ }_{x}^{1}=3 / 4(o r) 4$
so the answer is option $A$.

## Question 89

The 3rd and 6th term of an arithmetic progression are 13 and -5 respectively. What is the 11th term?

A -29

B -41

C -47

D -35
Answer: D

## Explanation:

$T_{3}=\mathrm{a}+2 \mathrm{~d}=13------(1)$
$T_{6}=\mathrm{a}+5 \mathrm{~d}=-5------(2)$
on solving (1) AND (2)
$d=-6 \& a=25$
$T_{11}=\mathrm{a}+10 \mathrm{~d}=25+10(-6)=-35$
so the answer is option D.

## Question 90

What is the reflection of the point $(6,-1)$ in the line $y=2$ ?

A $(-2,-1)$

B $(-6,5)$
C $(6,5)$

D $(-2,1)$
Answer: C

## Explanation:



From the diagram, the reflection of the point $(6,-1)$ in the line $y=2$ is $(6,5)$
so the answer is option C.
Question 91
Point $P(8,5)$ is the midpoint of segment $A B$. Co-ordinates of $A$ are $(5, y)$ and $B$ are $(x,-3)$. What is the value of $x$ ?

A -11

B 11

C 7

D $\quad-7$
Answer: B

## Explanation:

Mid-point $=\left(\begin{array}{c}x_{1}+x_{2} \\ 2\end{array},{ }_{2}^{y_{1}+y_{2}}\right) \Rightarrow{ }_{2}^{5+x}=8 \Rightarrow x=16-5=9$
so the answer is option B.

Question 92
What is the equation of a line of slope $1 / 3$ and $y$-intercept 5?

A $x-3 y=-15$

B $\quad x-3 y=15$
C $x+3 y=-15$
D $x+3 y=15$
Answer: A

Explanation:
$y=m x+c$
$y=x / 3+5$
$3 y=x+15$
$x-3 y=-15$
so the answer is option $A$.
Question 93
$\triangle A B C$ is right angled at $B . B D$ is an altitude. $A D=3 \mathrm{~cm}$ and $D C=9 \mathrm{~cm}$. What is the value of $A B$ (in cm )?

A 6
B 5
C 4.5

D 5.5
Answer: A

## Explanation:

(diagram)
$\triangle A B C$ and $\triangle A D B$ are similar
$A C / A B=A B / A D$
$12 / x=x / 3$
$36=X^{2}$
$X=6$
So the answer is option A.

## Question 94

What is the value of $\operatorname{Cot} 60^{\circ}-\operatorname{Sec} 45^{\circ}$ ?

A $(\sqrt{ } 2-\sqrt{ } 3) / \sqrt{ } 6$
B $\quad(\sqrt{ } 3-3 \sqrt{ } 2) / 3$
C $(1-2 \sqrt{ } 2) / 2$

D $(1-\sqrt{ } 3) / 2$
Answer: B

## Explanation:

$\operatorname{Cot} 60^{\circ}-\operatorname{Sec} 45^{\circ}=\stackrel{1}{\sqrt{3}}-\sqrt{2}=\stackrel{1-\sqrt{6}}{\sqrt{3}} \times \sqrt{\sqrt{3}}={ }_{3}^{\sqrt{3}-3 \sqrt{2}}$
so the answer is option B.

## Question 95

$\triangle A B C$ is right angled at $B$. If $m \angle A=30^{\circ}$, what is the length of $A B$ (in cm ), if $A C=10 \mathrm{~cm}$ ?

A 5

B $5 \sqrt{ } 3$

C $10 \sqrt{ } 3$

D 10
Answer: B

## Explanation:


from the diagram,
$\sin \mathrm{C}={ }_{A C}^{A B}$
$\sin 60={ }_{10}^{A B}$
$\stackrel{\sqrt{3}}{2}={ }_{10}{ }^{A B}$
$A B=5 \sqrt{3}$
So the answer is option B.
Question 96
If $\operatorname{Cot} \theta=24 / 7$, then $\operatorname{Sin} \theta=$ ?

A $24 / 25$

B $8 / 25$

C $7 / 25$
D $9 / 25$
Answer: C

## Explanation:


from the diagram, $\operatorname{Sin} \theta=o p p / h y p=7 / 25$
So the answer is option C.

## Instructions

The pie chart shows the share of tiger population six Wild life sanctuaries ( $A, B, C, E, E, F$ ) of a country. Study the diagram and answer the following questions.


## Question 97

Which wild life sanctuary has more tigers than $D$ but less than $F$ ?

A C

B A

C E

D B
Answer: D

## Explanation:

D has 10 tigers
F has 13 tigers
so, only B with 11 tigers, has more tigers than D but less than $F$
So the answer is option D.

## Question 98

What will be the total number of tigers left in the six sanctuaries, if 3 tigers are killed by poachers in sanctuary $E$ and 9 tigers are added to sanctuary $A$ ?

A 93

B 96

C 99

D 95
Answer: B

## Explanation:

Total tigers $=29+11+5+10+22+13=90$
if 3 tigers are killed by poachers in sanctuary $E$ and 9 tigers are added to sanctuary $A$, then remaining tigers $=90-$ $3+9=96$

So the answer is option B.

## Question 99

What is the ratio of tigers in sanctuaries $E$ and $F$ to that of tigers in sanctuaries $D$ and $C$ ?

A 3:7

B 7:3

C 5:2

D 2:5

## Answer: B

## Explanation:

Tigers in E and $\mathrm{F}=22+13=35$
Tigers in D and $\mathrm{C}=10+5=15$
Ratio $=35: 15=7: 3$
So the answer is option B.

## Question 100

If the total tiger population in these six sanctuaries had grown by $\mathbf{2 0 \%}$ and $\mathbf{2 5 \%}$ in the previous two decades, then what was the total tiger population in these six sanctuaries before $\mathbf{2 0}$ years?

A 135
B 150

C 60

D 45
Answer: C

## Explanation:

Let $X$ be the no.of tigers before $20 y r s$,
then there is increase of $20 \%$ \& $25 \%$ over last two decades
$\Rightarrow\binom{100+20}{100}\binom{100+25}{100}(X)=90$
$\Rightarrow\binom{120}{100}\left({ }_{100}^{125}\right)(X)=90$
$\Rightarrow X=60$
So the answer is option C.

