## prepp

## Practice, Learn and Achieve Your Goal with Prepp

## SSC MTS Exam

## Previous Paper

## Simplifying <br> Government Exams

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## English

Instructions
For the following questions answer them individually
Question 1
Select the most appropriateoption to fill in the blank.
The students are in great $\qquad$ of theirteachers.

A praise

B awe

C respect

D gusto
Answer: B

## Question 2

Find the part of the given sentence that has an error in it. If there is no error, choose 'Noerror'.
The servant was beaten through his master with a stick. /No error

A No error

B with a stick

C through his master

D The servant was beaten
Answer: C

## Question 3

Select the most appropriateoption to substitute the underlined segment in the given sentence. If there is no need to substitute it, select No Improvement.
Many accidents at the factory are caused of workers who don't read warning signs.

A are caused because of

B is the cause of

C is caused by

D No Improvement
Answer: A

## Question 4

Select the most appropriate option to fill in the blank.
The origin of ice-cream dates back $\qquad$ nearly half-a-century.

A to

B at

C from
D into
Answer: A

## Question 5

In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.
Birds of the same feather

A People with a generous heart

B To get into trouble together
C To be in a totally helpless condition
D People with similarcharacter
Answer:

## Question 6

Select the most appropriate option to substitute the underlined segment in the given sentence. If there is no need to substitute it, select No Improvement.
For her, money is only the means to an end.

A the means for an end

B means to end

C No Improvement
D a means to the end
Answer: C

Question 7
Select the most appropriate antonym of the given word.
Gloomy

A Cloudy
B Bright
C Dull
D Greedy
Answer: B

## Question 8

Select the most appropriateoption to substitute the underlined segment in the given sentence. If there is no need to substitute it, select No Improvement.
The wound on her hand is no

A has now healing

B No Improvement

C is now healed

D is healing now
Answer: C

## Question 9

Select the most appropriate synonym of the given word.
Immense

A Insignificant

B Dull

C Minute

D Massive
Answer: D

Question 10
Find the part of the given sentence that has an error in it. If there is no error, choose 'Noerror'. Unless you prepare well, you will not get a first class. /No error

A No error

B a firstclass

C Unless you preparewell
D you will notget
Answer: A

Instructions
Choose the word that can substitute the given sentence.
Question 11
An internal or external framework of bones

A Spine

B Skull

C Skeleton

D Skin
Answer: C

## Question 12

An area of grassland where animals graze

A Forest
B Park

C Meadow
D Garden
Answer: C

## Instructions

For the following questions answer them individually
Question 13
Find the part of the given sentence that has an error in it. If there is noerror, choose 'Noerror'.
The child always goes for sleep with his teddy bear. /No error

A with his teddybear
B goes for sleep
C No error

D The childalways
Answer: B

Question 14
Choose the correctly spelt word.

A Exausted

B Intelligent
C Equaly
D Amigrate
Answer: B

Question 15
In the following question, out of the given four alternatives, select the alternative which best expresses the meaning of the Idiom/Phrase.
Cat's whiskers

A A very easymatter
B To be highly impressive
C To be very determined
D Difficult to understand
Answer: B

Select the most appropriateoption to fill in the blank.
1 $\qquad$ very busy lately.

A would be
$B$ have been

C will be

D should be
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:
Mr. Oliver was taking a shortcut I $\qquad$ the pine forest which was makingsad, 2. $\qquad$ sounds because of strong winds. He 3. $\qquad$ a lonely boy sitting on a rock. 4. $\qquad$ boy was weeping soundlessly. There seemed to be 5 . $\qquad$ terribly wrong with the boy.

Question 17
Select the most appropriate option for blank No. 1.

A through

B by

C along
D of
Answer: A

## Question 18

Select the most appropriate option for blank No. 2.

A awesome

B eerie

C banging
D aloud
Answer: B

## Question 19

Select the most appropriate option for blank No. 3.

A recorded
B
noticed

C
pointed

Answer: B

Question 20
Select the most appropriate option for blank No. 4.

A One
B Each

C A

D The
Answer: D

## Question 21

Select the most appropriate option for blank No. 5.

A anything
B nothing
C everything

D something
Answer: D

Instructions
For the following questions answer them individually
Question 22
Select the most appropriate synonym of the given word.
Former

A Inferior

B Superior

C Regular
D Previous
Answer: D

Question 23
Select the most appropriate antonym of the given word. Impartial

A Biased

B Judicious
C Involved

D Impractical
Answer: A

## Question 24

Choose the correctly spelt word.

A Genuine

B Geniune
C Ganuine

D Jenuine
Answer: A

Question 25
Select the most appropriateoption to fill in the blank.
Sarthak $\qquad$ everything that a leader should be.

A epitomizes
B adores
C worships

D clones
Answer: A

## )Reasoning

Instructions
For the following questions answer them individually
Question 26
Select the option that is related to the third term in the same way as the second term is related to the first term. Salary : Job :: Profit : ?

A Loss
B Business
C Huge
D Seller
Answer: B

Explanation:
Salary is given in job and Profits are made in business.

## Question 27

Five boys, G, K, P, Rand T, are sitting around a circular table facing towards the centre (not necessarily in the same order). R is third to the left of $K$. $P$ and $G$ are the immediate neighbours of $K . T$ is to the immediate left of $P$. Who is sitting second to the right of $P$ ?

A G

B K

C T
D R
Answer: A

Explanation:
Using the clauses, draw the diagram ,


K
So, the answer would be option a)G.
Question 28
Select the figure that will come next in the following series.


A


B



D


Answer: D

## Explanation:

There are many patterns withing this figure series.
I. Each figure within the block is moving in clockwise direction.
2. A is moving clockwise $45^{\circ}$ within each block.
3. 7 and $G$ are inverted in the series.
4. Alternatively, triangle and quadrilateral are present in this series.

Considering all these patterns, the answer would be option d.

## Question 29

Read the given statements 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 statements.
Statements:
I. No A is B.
II. All C are B.

Conclusions:
I. No C is A.
II. Some A areC.

A Only conclusion Ifollows.
B Both conclusions I and Il follow.
C None of the conclusions follows.

D Only conclusion IIfollows.
Answer: A

## Explanation:

The relation between $A, B$ and $C$ be represented by the following venn diagram.


So, the answer would be option a)Only conclusion I follows.

## Question 30

In a certain code language, 'MANGO' is written as '93425' and 'GREAT' is written as '28631'. What will be the code for 'GREEN' in that code language?

A 28664

B 28994

C 28661

D 28665
Answer: A

## Explanation:

Given that, In a certain code language, 'MANGO' is written as ' 93425 ' and 'GREAT' is written as ' 28631 '.
Therefore, $M=9, A=3, N=4, G=2, O=5 \& G=2, R=8, E=6, A=3, T=1$
From above values, we can say that code for 'GREEN' in code language will be '28664'
Question 31
Select the option that is related to the third term in the same way as the second term is related to the first term. Water : Drink :: Bread : ?

A Hard

B Eat

C Milk

D White
Answer: B

Explanation:
We drink water and eat bread.
So, the answer would be option b)eat.
Question 32
Select the correct mirror image of the given figure when the mirror is placed at line $A B$.

B


D


Answer: D

## Explanation:

In mirror image, left most edge will appear at the right most edge, and vice versa.


So, the answer would be option d).

## Question 33

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

| 7 | 7 | 1 | 48 |
| :---: | :---: | :---: | :---: |
| 11 | 5 | 1 | $?$ |
| 9 | 5 | 0 | 45 |

A 36
B 72

C 48
D 54
Answer: D

## Explanation:

By studying the given pattern, It is observed that,

$$
\begin{aligned}
& (7 \times 7)-1=48 \\
& (9 \times 5)-0=45
\end{aligned}
$$

Therefore, $(11 \times 5)-1=54$

## Question 34

Select the option that is related to the third number in the same way as the second number is related to the first number. 325 : 18 :: 226 : ?

A 14

B 17

C 15
D 16
Answer: C

Explanation:
The pattern is :
$x^{2}+1: x$
Following this ,
$18^{2}+1: 18$ => 326:18
Following the same logic ,
$15^{2}+1: 15$ => 226:15
So , the answer would be option c) 15 .
Question 35
Read the given statements 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 statements. Statements:
I. Some red are cars.
II. All yellow are cars.

Conclusions:
I. Some cars are red.
II. Some yellow arered.
III. Some cars are yellow.

A Both conclusions I and II follow.
B Both conclusions I and III follow.
C Both conclusions II and III follow.

D Only conclusion IIfollows.
Answer: B

## Explanation:

The relation between red, cars and yellow can be represented by the following venn diagram .

So, the answer would be option b)Both conclusions I and III follow.

Select the option in which the given figure is embedded.


A


B


C


D


Answer: D

Explanation:


So , the answer would be option d.

## Question 37

Select the number that can replace the question mark (?) in the following series.
13, 17, 19, 23, 29, ?

A 41

B 43

C 37

D 31
Answer: D

## Explanation:

From the given series, It can be observed that they're all consecutive prime numbers.
So, next prime number in the series would be 31 after 29.

## Question 38

In a certain code language, 'CAP' is written as ' 20 ' and 'ROM' is written as ' 46 '. What will be the code for 'RUB' in that code language?

A 47

B 41

C 53

D 51
Answer: B

## Explanation:

The pattern is :
each letter 's position in alphabet list is added.
CAP -> $3+1+16=20$
Following this pattern,
$R U B->|8+2|+2=4 \mid$
So, the answer would be option b)4l.

Question 39
In a certain code language, 'RIMPY' is written as 'OFJMV'. What will be the code for 'CORPSE' in that code language?

A BNQORD

B ZLOMPB

C ZLONPB
D AMPNQC
Answer: B

## Explanation:

Given that In a certain code language, 'RIMPY' is written as 'OFJMV'
Here, In the Given word, each letter is replaced by a letter that's two positions behind in the alphabetical order. i.e.., R is replaced by O which has two letters between them backwards. they're $\mathrm{P} \& \mathrm{Q}$.

Similarly, For word "CORPSE" => C will be replaced by Z, O will be replaced by L, R will be replaced by O, P will be replaced by $M$ and so on.

Therefore, Option B is the correct answer.

Study the given pattern carefully and select the figure that will complete the pattern given in the question figure.


A


B


C


D


Answer: A

Explanation:
The answer would be option a.


Question 41
In a certain code language, 'COMFORTS' is written as 'FJPARMWN'. What will be the code for 'HINDWARE' in that code language?

A KDRYZVUZ

B LERZAWVA

C KDQYZVUZ

Explanation:
In the given code language where 'COMFORTS' is written as 'FJPARMWN', From left to right, letters in odd position (C,M,O,T) in 'COMFORTS' and ( $F, P, R, W$ ) in 'FJPARMWN' have two letters between them and letters in even position ( $O, F, R, S$ ) in 'COMFORTS' and (J,A,M,N) in 'FJPARMWN' have four letters between them backwards.

Following above logic, HINDWARE will be written as KDQYZVUZ. Therefore, Option $C$ is the right answer.

## Question 42

Identify the Venn diagram that best represents the relationship between the given classes.
Venus, Planet, Sun

A


B


C


D


Answer: B

## Explanation:

Venus is a planet, while sun is a star.
So, the answer would be option b.


## Question 43

Which two signs need to be interchanged to make the following equation correct?
$7-9 \times 3 \div 9+5=5$

B $\div$ and $\times$

C + and-

D + and $\div$
Answer: C

## Explanation:

$7-9 \times 3 \div 9+5$
Interchanging +and - , we get.
$7+9 \times 3 \div 9-5$
$=7+9 \times{ }_{3}-5$
$=7+3-5=5$
So, the answer would be option c)+and -
Question 44
Select the numbers that can replace the question marks (?) in the following series.
$36,49,51,39,53,54,42,57,57,45$, ?, ?

A 71, 60

B 60,63

C 60,61

D 61,60
Answer: D

## Explanation:

In the given series, $36,49,51,39,53,54,42,57,57,45$, ?, ?,
If we consider three consecutive numbers $36,49,5 \mathrm{I}$ as one set, $39,53,54$ as one set and so on..
first position numbers in each set i.e.., $36,39,42,45$, are increasing by a value of 3 .
second position numbers in each set i.e.., $49,53,57$, are increasing by a value of 4 . therefore, next number would be 61 .
third position numbers in each set i.e.., 5I, 54, 57 are increasing by a value of 3 . therefore, next number would be 60 .
Therefore, correct answer is 61,60

## Question 45

Select the option that is related to the third letter-pair in the same way as the second letterpair is related to the first letter-pair. RG: QE :: LB : ?

A KY

B KZ

C JZ
D JY
Answer: B

Explanation:

The pattern is :
$R G: Q E=>R G: Q(R-2) E(G-2)$
LB : KZ=> LB : (L -2)(B -2)
So , the answer would be option b)KZ
Question 46
Five phones, $H, M, R, T$ and $V$, are kept one above the other (not necessarily in the same order). The number of phones below $T$ is same as the number of phones above V. R is just above $\mathrm{H} . \mathrm{V}$ is at the bottom. There are two phones between M and V . Which of the following phones are above R?

A M and T

B H and T

C M and V

D M andH
Answer: A

Explanation:
Using the clauses, V is at the bottom. There are two phones between M and V .
v $\qquad$ M
$R$ is just above $H$.
VHRMT
So, the answer would be option a)M and $T$
Question 47
Six tables labelled C, D, L, N, P and X are placed in a row facing towards the south (not necessarily in the same order). D is placed second to the left of $L$. $X$ is placed second to the right of $P$. $N$ is placed third to the left of $D$. How many tables are placed between $C$ and $X$ ?

A 3

B I

C 2
D 4
Answer: C

Explanation:


Given, $N$ is placed third to the left of $D$ and $D$ is placed second to the left of $L$. So, we will have $L$ who will be sitting at the extreme right corner when facing south and N sitting at the extreme left corner.

Then we have $X$ is placed second to the right of $P$.
The only possibility that we have is $P$ is sitting to the immediate left of $D$. So, we will have $X$ and $P$ as the neighbours of $D$.
The final arrangement is as shown above.
Here two tables are there in between $C$ and $X$ - they are $P$ and $D$.

## Question 48

Select the letter-cluster that can replace the question mark (?) in the following series. MRT, TYA, AFH, HMO, ?

A PUV

B PUU

C OTV

D OTU
Answer: C

## Question 49

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



C

D


Answer: A

## Question 50

Which two numbers need to be interchanged to make the following equation correct?
$3+4-6 \div 2=7$

A 6 and 2

B 3 and 6

C 2 and 3

D 6 and 4
Answer: D

Explanation:
If we interchange 6 and 4 then-
$3+6-4 \div 2$
$=3+6-2$
$=7$

## Quant

Instructions
For the following questions answer them individually

## Question 51

Marked price and cost price of an article are in ratio 5:4. If the profit earned by selling the article is $12.5 \%$, then what is the discount percentage?

A 12.5

B 15

C 8
D 10
Answer: D

Explanation:
M.p:c.p $=5: 4$

Profit \%= $12.5 \%$
let cost price $=100$
Profit of Ist article $=100100$

$$
=12.5
$$

Here
profit $=12.5$
c. $p=100$
S.p $=100+12.5$
$=112.5$
Given that c.p $=4 x$
Assumed c.p $=100$
$4 x=100$
100
$x=4$

$$
=25
$$

so $m . p=5 \times 25=125$
Discount $=$ markedprice - sellingprice

$$
=125-112.5=12.5
$$

discount
Discount percentage $=$ markedprice $\times 100$

$$
\begin{aligned}
& 12.5 \\
= & 125 \times 100 \\
= & 10
\end{aligned}
$$

## Question 52

The length, breadth and height of a cuboid are $5 \mathrm{~cm}, 2 \mathrm{~cm}$ and 4 cm respectively. What is the total surface area of the cuboid?

A $84 \mathrm{~cm}^{2}$

B $152 \mathrm{~cm}^{2}$

C $38 \mathrm{~cm}^{2}$

D $76 \mathrm{~cm}^{2}$
Answer: D

Explanation:
TSA $=2$ (length $\times$ width + width $\times$ height + height length $)$
TSA $=2(5 \times 2+2 \times 4+4 \times 5)$
$=2(10+8+20)$
$=2(38)$
$=76 \mathrm{~cm}^{2}$

Question 53
A train leaves $P$ at 9 am with speed of $30 \mathrm{~km} / \mathrm{h}$. Another train leaves $Q$ at 11 am with speed of $45 \mathrm{~km} / \mathrm{h}$. The trains are travelling towards each other on parallel tracks. Distance between P and Q is 300 km . When they meet, whatis the ratio of the distances covered by them?

A 8 : 5

B $13: 12$

C $17: 14$

D 11:9
Answer: B

## Question 54

70 sticks each of unit length are combined to form a right angle triangle without breaking any stick. What is the area (in square units) of the triangle?

A 210
B 180

C 240

D 350
Answer: A

## Explanation:

right angle triangle follows the pythogores theorem
lets consider the side be 20,21,29 which is equal to 70

$$
\begin{aligned}
& \text { hypotenuse }^{2}=\text { length }^{2}+\text { base }^{2} \\
& 29^{2}=20^{2}+21^{2} \\
& 84 \mathrm{I}=400+44 \mathrm{I}
\end{aligned}
$$

so the area of triangle $=\stackrel{1}{=} \times$ base $\times$ height

$$
\begin{aligned}
& =2^{1} \times 20 \times 21 \\
& =210 \mathrm{~cm}^{2}
\end{aligned}
$$

## Question 55

$A, B$ and $C$, working alone can do a piece of work in 15, 30 and 75 days respectively. They work together and get $₹ 1615$ for completing the work. Whatis the difference in shares of A and C ?

A ₹ 760

B ₹ 620

C ₹ 680
D ₹ 540
Answer: A

Explanation:
$A=15$ days
$B=30$ days
$C=75$ days
Total work $=\operatorname{lcm}(15,30,75)$

$$
=150
$$

A's efficency $=10$
B's efficency $=5$
C's efficency=2
Shares ratio = efficency ratio
Difference in shares Of A and C=8

$$
=\begin{gathered}
\text { differenceinshare } \\
\text { totalshares }
\end{gathered} \times 1615
$$

8
$17 \times 1615$
$=$ Rs 760

## Question 56

What is the value of $90 \times 3 \div 9+4 \div 2 \times 3$ of $4 \times 8 \div(18 \times 2-4) ?$

A 48
B 40
C 36
D 42
Answer: C

## Explanation:

$$
\begin{aligned}
& 90 \times 3 \div 9+4 \div 2 \times 3 \text { of } 4 \times 8 \div(18 \times 2-4) \\
& 30+4 \div 2 \times 12 \times 8 \div 32 \\
& 30+2 \times 12 \times 8 \div 32 \\
& 30+2 \times 12 \div 4 \\
& 30+2 \times 3
\end{aligned}
$$

$$
=36
$$

## Question 57

The ratio of milk and water in a mixture is $4: 3$. If we add 2 litres of water, the ratio of milk and water becomes $8: 7$. What is the quantity of the final mixture?

A 18 litres

B 30 litres

C 24 litres

D 28 litres
Answer: B

Explanation:
Initially mixture is $4: 3$
After adding 2 lit water it becomes 8:7.....(I)
It means quantity of milk is remain unchanged and water is changed in mixture
$4: 3 \times 2$ (to equal the milk quantity )
$=8: 6$
Now milk ratio is same and water is changed after adding water
so difference in the ratio (8:7)-(8:6) $=0: 1$
Iunit -> 2 lit
Given that final mix. Ratio $=8: 7$
Milk $=8 \times 2=16$ litre
Water $=7 \times 2=14$ litre
Total $=16+14=30$ litre

## Question 58

What is the largest two digit number which when divided by 6 and 5 leaves remainder 1 in each case?

A 61

B 93

C 91

D 97
Answer: C

Explanation:
The LCM of 6,5 is 30
91 is divisible by 30 and leaves remainder I
Question 59
The average age of 12 boys is 15 years and the average age of 18 girls is 12 years. What is the combined average age of the boys and girls, taken together?

A 15.4
B $\quad 13.2$
C 16.6

D 14.8
Answer: B

Explanation:
Avg $\mathrm{I}=\begin{gathered}\text { sumofno } \\ \text { no.Ofterm }\end{gathered}$
15
sumofno.
Sum of no. $=180$
sumofno

Avg2 $=$ no.Ofterm
$12=\begin{gathered}\text { sumofno } \\ 18\end{gathered}$
Sum of no. $=216$
Combined avg $=$
180+216
no.Ofterm

$$
\begin{aligned}
\text { Combined avg } & =306 \\
= & 13.2
\end{aligned}
$$

Question 60
The Table given below presents the marks obtained by three students in five examinations.

The marks obtained by S 1 in Exam E5 is how much percentage (correct up to two places of decimal) more than that obtained by S2 in Exam E3?

A 9.75
B 8.75

C 9.26

D 10.24
Answer: B

Explanation:
The marks obtained by SI in Exam E5 $=87$
The marks obtained by S2 in Exam E3 $=80$
so,
Eら-E 3
$=E 3$

$$
87-80
$$

$=\begin{array}{r}87-80 \\ \\ \hline\end{array}$

Question 61
Given below is the data of the ages of various children.

What is the difference between the mean and mode of the ages?

A 1.5

B I

C 2.5
D 2
Answer: A

## Question 62

The Table given below presents the marks obtained by three students in five examinations.

What is the average of marks obtained by S3 per exam?

A 84.6

B 88.6

C 82.6

D 86.6
Answer: B

Explanation:
the average of marks obtained by S3 per exam
$85+82+99+93+84$
$\operatorname{avg}=5 \quad 5=88.6$
Question 63
An article is sold at $14{ }^{2} \%$ profit. What is the ratio of the selling price to the cost price?

A 7:5
B 8:7

C 8:5

D 7:6
Answer: B

## Explanation:

```
Let cost price \(=100\)
profit \(\%=14{ }_{7}^{2} \%=147 \times 100100\)
- \({ }^{2}{ }^{2}\)
profit \(=147\)
```

Selling price $=$ profit+ cost price

$$
\begin{aligned}
& =\begin{array}{c}
100 \\
= \\
800 \\
= \\
=
\end{array} \quad 100 \\
&
\end{aligned}
$$

the ratio of the selling price to the cost price
${ }_{7}^{800}$
$=100$
$=8: 7$

## Question 64

An article is sold for ₹ 6500 so as to earn a profit of $4 \%$. A second article whose cost price is ₹ 3750 , is sold at a loss of $4 \%$. What is the overall gain or loss percent in the whole transaction?

A Gain 4\%

B Loss I\%

C Loss 4\%

D Gain I\%
Answer: D

Explanation:
selling price $=6500$
Let cost price be 100 .
So.
Profit of Ist article $=\stackrel{4}{100} 100$
$=4$
S.p = c .p + profit
$6500=100+4$

$$
=104
$$

$1=62.5$
So.
$100=6250$
So profit $=s . p-c . p$

$$
=6500-6250
$$

$$
=250
$$

In 2nd articleC
consider selling price 100
Loss of 2 nd article $=100100$

$$
=4
$$

So .
S. $\mathrm{p}+$ loss $=\mathrm{c} . \mathrm{p}$
$100+4=104$
Which is equal to 3750

$$
\begin{aligned}
104 & =3750 \\
& =36
\end{aligned}
$$

Here
$100 s p=100 \times 36=3600$
So total c. $p=3750+6250$

$$
=10,000
$$

total s. $p=3600+6500$

$$
=10,100
$$

$$
=\begin{gathered}
10100-10000 \\
10000
\end{gathered} \times 100
$$

100
$=10000 \times 100$
$=1 \%$
Gain $=1 \%$
Question 65
The diameter of a right circular cylinder is decreased to one third of its initial value. If the volume of the cylinder remains the same, then the height becomes how many times of the initial height?

A I

B 9

C 6

D 3
Answer: B

## Explanation:

Let for the initial cylinder
Height $=\mathrm{HI}$
Volume $=\mathrm{VI}$
Diameter $=$ D I
Volume of the cylinder $=\pi \times R^{2} \times H$
Let for the final cylinder
Height $=\mathrm{H} 2$

Volume $=\mathrm{V} 2$
Diameter =D2
ATQ
D2 $={ }_{3}^{1} \times D 1$
$\mathrm{VI}=\mathrm{V} 2=\mathrm{V}$
We kngy that, $\mathrm{D}=2 \mathrm{R}$
$\pi \times\binom{ 2}{2} \times H 1=\pi \times\binom{ D 1}{6}^{2} \times H 2$
$\pi \times D 1 \times H 1=\pi \times\left(3^{D 1}\right)^{2} \times H 2$
$\mathrm{H} 2=9 \times H 1$
Question 66
The Table given below presents the marks obtained by three students in five examinations.

What is the sum of marks obtained by S1 in Exam E4, S2 in Exam E1, S3 in Exam E3 and E5?

A 346
B 326

C 366

D 306
Answer: A

## Explanation:

the sum of marks obtained by SI in Exam E4, S2 in Exam EI, S3 in Exam E3 and E5
SI in Exam E4, = 96
S2 in Exam EI $=84$
, S3 in Exam E3 $=82$
, S3 in Exam E5 $=84$
sum $=84+82+84+96=346$

Question 67
If $A=40 \div 8+5 \times 2-4+4+5$ of 3 and $B=24 \div 4(4+2)+19$ of 2 , then what is the value of $A-B$ ?
A. 11

B 11

C 9

D -9
Answer: D

Explanation:
Firstly solve bracket then apply bodmass
$A=40 \div 8+5 \times 2-4+4+5 o f 3$
$B=24 \div 4(4+2)+19$ of 2
$A=5+5 \times 2-4+4+15$
$A=5+10-4+4+15$
$A=30$
$B=24 \div 4(6)+19$ of 2
$B=1+38$
$=39$
$A-B=30-39=-9$

## Question 68

In a bag, the ratio of the number of 2 rupee, 1 rupee and 50 paise coins is $3: 4: 5$. If the total amount in the bag is ₹ 250 , then how many 1 rupee coins are there?

A 70

B 100

C 60
D 80
Answer: D

Explanation:

2 Rs
I Rs
50 paise $=0.5$ Rs
Given that
$2 \times 3 x+1 \times 4 x+0.5 \times 5 x=250$
$12.5 \mathrm{x}=250$
$X=20$
So 2 Rupee coins $=4 \times 20$

$$
=80
$$

Question 69
A sum invested at compound interest (compounded annual) amounts to ₹ 750 at the end of first year and ₹ 900 at the end of second year. What is the sum?

A ₹ 700

B ₹ 625

C ₹ 600

D $₹ 650$
Answer: B

## Explanation:

difference in the sum of second year and first year $900-750$ is 150
So interest $=$
150
$750 \times 100$
$=20$
Consider 100 as the initial amount .
$=100+20=120$
$120=$ amount after first year which is equal to 750
Now

$$
\begin{aligned}
750 & =120 \\
= & 6.25 \\
100 & =6.25 \\
& =100 \\
& =625
\end{aligned}
$$

## Question 70

What is the average of all the natural numbers from 49 to $125 ?$

A 85
B 87

C 88

D 86
Answer: B

## Explanation:

let no. of terms be $n$

```
Sum of no. \(=2 \times(\) firstterm + lastterm \()\)
                \({ }_{2}^{n} \times(49+125)\)
```

            sumofno
    Avg $=$ no.Ofterm
${ }_{2}^{n} \times(49+125$
$n$
49+125
$=2$
49+125
$=2$
$=87$

Question 71
If $A: B$ is $2: 3$ and $B-A=28$, then what is the value of $B+A$ ?

A 120

C 130

D 140
Answer: D

Explanation:
$A: B=2 x: 3 x$
$3 x-2 x=28$
$X=28$
$B+A=5 x$
$=5 \times 28$
$=140$
Question 72
The simple interest on a principal for 6 months at an interest rate of $10 \%$ per annum is ₹ 100 . What is the principal?

A ₹ 1000

B ₹2000

C ₹ 1500

D ₹ 2500
Answer: B

Explanation:
amount $=100$
Time $=6 \div 12$
amount $=\begin{gathered}P \times R \times T \\ 100\end{gathered}$

$$
\begin{aligned}
100 & =\begin{array}{c}
P \times 10 \times 6 \div 12 \\
100
\end{array} \\
& =\text { Rs } 2000
\end{aligned}
$$

## Question 73

An inlet pipe $A$ originating from a river can fill a reservoir in 30 days. And an outlet pipe $B$, which is capable of emptying the completely filled reservoir in 50 days, drains out the waterfrom the reservoir to anirrigation canal. Thepipes are opened onalternate days starting with A. On which day from the beginningwill the reservoir get completely filled forthe first time?

A $75^{\text {th }}$
B $147^{\text {th }}$

C $150^{\text {th }}$

D $74^{\text {th }}$
Answer: B

Explanation:
$A=30$ days
$B=50$ days
Total work $=\operatorname{Icm}(30,50)=150$ days
A's effiency $=150 \div 30=5$
B's effiency $=150 \div 50=3$
Work $=$ efficency $\times$ day
Starting with A and followed by Virat
$5-3+5-3 \ldots \ldots \ldots=150$
Consider 5-3 as a I unit
$2 \mathrm{n}=150$
$\mathrm{n}=75$
$=75 \times 2$
$=150$
Both take 150 days to fill the tank
but A filled the tank on $147^{\wedge}$ th day
Question 74
Alok starts walking from $P$ with speed of $6 \mathrm{~km} / \mathrm{h}$ towards $Q$. Raman starts at same time from $P$ towards $Q$ with speed of $9 \mathrm{~km} / \mathrm{h}$. Raman reaches $Q$, turns back and starts walking towards $P$. He meets Alok at R. If PQ is 15 km , then what is PR ?

A 20 km

B $\quad 12 \mathrm{~km}$

C $\quad 15 \mathrm{~km}$

D $\quad 18 \mathrm{~km}$
Answer: B

## Question 75

A number is first increased by $1 \frac{2}{6} 3 \%$ and then decreased by $15 \%$ to get 238 . What is $37.5 \%$ of that number?

A 150

B 75

C 120
D 90
Answer: D

Explanation:
Consider number $=100$
First increased by $163 \%={ }^{2} \%$
$100+(100 \times 6)$
$=100+16.66$
$=116.66$
Now decreased by I5\%
$=116.66-(116.66 \times 15 \%)$
$=99.4$
99.4 parts -> 238 (Given)

I->2.4
So, 100 (number assumed) $=240$
So, the number $=240$
We have to find 37.5 \% of that number
37.5
$=240 \times 100$
$=240 \times{ }_{8}^{3}$
$=90$

## General knowledge

Instructions
For the following questions answer them individually
Question 76
When was the Indian National Flag adopted?

A 12 July, 1947
B 12 August, 1947
C 22 August, 1947
D 22 July, 1947
Answer: D

Question 77
Which of the following river falls in Arabian Sea?

A Indus

B Godavari
C Brahmaputra
D Krishna
Answer: A

Question 78
Which of the following cricketer was awarded Rajiv Gandhi Khel Ratna 2018 ?

A YuvrajSingh
B Virat Kohli

C M.S. Dhoni

D Rohit Sharma
Answer: B

## Question 79

Which of the following is a traditional painting of Odisha?

A Warli

B Pattachitra
C Sanjhi

D Madhubani
Answer: B

Question 80
Who among the following was NOT a Governor of Reserve Bank of India (RBI)?

A Manmohan Singh
B Sunil Arora

C Urjit Patel
D Raghuram Rajan
Answer: B

Question 81
Which of the following is an ancient book written by Banabhatta?

A Kadambari
B Mrichchhakatika

C Meghadutam
D Gitagovinda
Answer: A

Question 82
What is Parsi New year known as?

A Ugadi

B Navroz

C Pateti
D Puthandu
Answer: B

Question 83
The book 'War and Peace' is written by:

A Leo Tolstoy
B Dalai Lama
C Maroof Raza

D H.G. Wells
Answer: A

Question 84
How many digits are there on a debit card?

A 15
B 16

C 14

D 17
Answer: B

Question 85
To which of the following event Lord Curzon is related?

A Partition of Bengal
B Setting up of Durand Commission
C Bhutan War

D Introduction to system of Budget
Answer: A

## Question 86

The term 'time trial' is associated with which of the following sport?

A Cycling
B Hockey

C Shooting

D Swimming
Answer: A

## Question 87

Who is the 17 th Lok Sabha Speaker?

A Meira Kumar

B Somnath Chatterjee

C Om Birla

D Sumitra Mahajan
Answer: C

## Question 88

How many Schedules are there in the Indian Constitution?

A 14

B 12

C II

D 13
Answer: B

Question 89
According to the Census 2011, what is the population density of India?

A 372 per sq. km

B 382 per sq. km

C 352 per sq. km

D 362 per sq. km
Answer: B

Question 90
Who discovered electron?

A J.J. Thomson
B James Chadwick
C E. Rutherford

D
E. Goldstein

Answer: A

## Question 91

Which of the following ministers is named in the '100 Most Influential in UK-India Relations: Celebrating Women' list?

A Smriti Irani
B Nirmala Sitharaman
C Sushma Swaraj
D Maneka Gandhi
Answer: B

Question 92
Which of the following Dynasty was founded by Qutb ud-din Aibak?

A Chera Dynasty
B Nanda Dynasty
C Shunga Dynasty
D Slave Dynasty
Answer: D

Question 93
Under which article of Indian Constitution Hindi is declared as the official language?

A Article 273
B Article 343

C Article 360
D Article 370
Answer: B

Question 94
Who was the fifth guru in Sikhism?

A Guru Angad
B Guru Ram Das
C Guru Arjan Dev
D Guru Har Rai
Answer: C

## Question 95

Which of the following quantities have its SI unit named after Blaise Pascal?

A Energy
B Pressure

C Work

D Power
Answer: B

## Question 96

Who among the following presented the Union budget of India for maximum times?

A RK Shanmukham Chetty
B Pranab Mukherjee
C Morarji Desai
D P. Chidambaram
Answer: C

## Question 97

Which of the following cell organelle contains DNA apart from nucleus?

A Cytoplasm
B Golgi Apparatus
C Mitochondria
D Ribosome
Answer: C

Question 98
In which of the following states Marshy/ Peaty soil is NOT predominantly found?

A Kerala
B Madhya Pradesh
C Odisha
D West Bengal
Answer: B

## Question 99

Which of the following element found in water is responsible for cancer?

A Arsenic

B Iron

C Chlorine

D Fluorine
Answer: A

Question 100
Which of the following disease is caused by severe deficiency of proteins?

A Kwashiorkor

B Anaemia

C Osteoporosis
D Goiter
Answer: A

## prepp

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