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English

Instructions

Choose the correctly spelt word.

Question 1

- A Hotiness
- B Haughtyness
- C Haughtiness
- D Hautiness

Answer: C

Question 2

- A Gramar
- B Gramer
- C Grammar
- D Grammer

Answer: C

Instructions

For the following questions answer them individually

Question 3

Select the most appropriate option to fill in the blank.

Her parents always _____ her in her studies.

- A encouraged
- B interested
- C impressed
- D expected

Answer: A

Question 4

Select the most appropriate antonym of the given word.

Fertile

- A Barren
- B Civilized
- C Sane
- D Tough

Answer: A

Question 5

Choose the most appropriate word that can substitute the given group of words.
One who pretends to be what he is not

- A Director
- B Hypocrite
- C Creator
- D Acrobat

Answer: B

Question 6

Select the most appropriate antonym of the given word.
Acute

- A Dark
- B Clever
- C Grave
- D Blunt

Answer: D

Question 7

Select the most appropriate synonym of the given word.
Deepen

- A Soothe
- B Neutralize
- C Relieve
- D Intensify

Answer: D

Question 8

Select the most appropriate meaning of the given idiom.
The ball is in (one's) court

- A To be responsible for further action
- B To pass the responsibility to another

C To be fearful of taking any action

D To risk everything in one venture

Answer: A

Question 9

Select the most appropriate option to fill in the blank.

The entry gates were closed _____ we could enter in.

A till

B before

C after

D until

Answer: B

Instructions

Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.

Question 10

I told t he tailor/to made a new/dress for me. /No error.

A dress for me

B I told the tailor

C No error

D to made a new

Answer: D

Question 11

The la dy/standing in the/corner is fat. /No error.

A corner is fat

B No error

C standing in the

D The lady

Answer: B

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 Improvement.

Question 12

Please tell the story in a nutshell.

- A at a nutshell
- B in the nutshell
- C in nutshells
- D No Improvement

Answer: D

Question 13

He did not like the novel, nor I did.

- A nor did I
- B No Improvement
- C nor I like it
- D nor did I likes it

Answer: A

Instructions

For the following questions answer them individually

Question 14

Choose the most appropriate word that can substitute the given group of words.

A place where nuns live and work

- A Convent
- B Dormitory
- C Hostel
- D Quarter

Answer: A

Question 15

Find the part of the given sentence that has an error in it. If there is no error, choose 'No error'.

It was not possible/for we/to understand her. /No error.

- A for we
- B to understand her
- C It was not possible
- D No error

Answer: A

Question 16

Select the most appropriate option to fill in the blank.

_____ you like some water?

- A Do
- B Would
- C Shall
- D Can

Answer: B

Question 17

Select the most appropriate synonym of the given word.

Courage

- A Meekness
- B Valour
- C Humility
- D Timidity

Answer: B

Question 18

Select the most appropriate option to fill in the blank.

We must start now _____ it will be too late.

- A until
- B unless
- C or
- D but

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:

Humanity can be (1) _____ as the quality of being human; the peculiar nature (2) _____ man, by which he is distinguished (3) _____ other beings. Being human (4) _____ not mean that an individual possesses humanity. One of the (5) _____ outstanding examples of extraordinary humanity in a human being has been portrayed beautifully by Mother Teresa.

Question 19

Select the most appropriate option for blank No. 1.

- A define

- B defining
- C defined
- D defines

Answer: C

Question 20

Select the most appropriate option for blank No. 2.

- A of
- B in
- C at
- D to

Answer: A

Question 21

Select the most appropriate option for blank No. 3.

- A along
- B for
- C by
- D from

Answer: D

Question 22

Select the most appropriate option for blank No. 4.

- A had
- B does
- C has
- D did

Answer: B

Question 23

Select the most appropriate option for blank No. 5.

- A more
- B many

C most

D much

Answer: C

Instructions

For the following questions answer them individually

Question 24

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.

The father with his children were expected to attend the function.

A are

B have

C No improvement

D was

Answer: D

Question 25

Select the most appropriate meaning of the given idiom.

Bend over backwards

A To express sudden shock

B To exert a lot of effort towards some end

C To end all activities

D To confess to a crime

Answer: B

Reasoning

Instructions

For the following questions answer them individually

Question 26

Five articles, bat, ball, fan, table and chair, are kept one above the other (not necessarily in the same order). The bat is four places above the fan. The table is between the ball and the chair. The chair is three places below the bat. Which article is at the second position from the top?

A Fan

B Table

C Ball

D Chair

Answer: C

Explanation:

The bat is four places above the fan, => Bat is at the top and fan at the bottom.

The table is between the ball and the chair. The chair is three places below the bat, => Table is at the middle and chair is just above fan.

Bat
Ball
Table
Chair
Fan

=> **Ball** is at the second position from the top.

=> Ans - (C)

Question 27

Five teachers, H, K, P, R and T, are sitting around a circular table facing towards the centre (not necessarily in the same order). T is between H and R. P is second to the right of R. H is to the immediate left of T. Who is sitting to the immediate left of K?

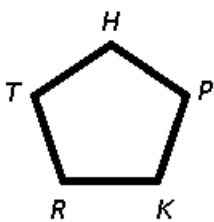
- A T
- B H
- C P
- D R

Answer: D

Explanation:

T is between H and R. H is to the immediate left of T, => R is to the immediate right of T.

P is second to the right of R, => K is sitting between P and R.



=> R is sitting to the immediate left of K.

=> Ans - (D)

Question 28

In a certain code language, 'RIGIDS' is written as 'TFIFFP'. What will be the code for 'CORNET' in that code language?

- A GNVNIS
- B FMULHR
- C ELTKRQ
- D ELTKGQ

Answer: D

Explanation:

'RIGIDS' is written as 'TFIFFP'

The pattern followed is :

R	I	G	I	D	S
(+2)	(-3)	(+2)	(-3)	(+2)	(-3)
T	F	I	F	F	P

Similarly, for CORNET :

C	O	R	N	E	T
(+2)	(-3)	(+2)	(-3)	(+2)	(-3)
E	L	T	K	G	Q

=> Ans - (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 D.
- III. Some C are B.

Conclusions:

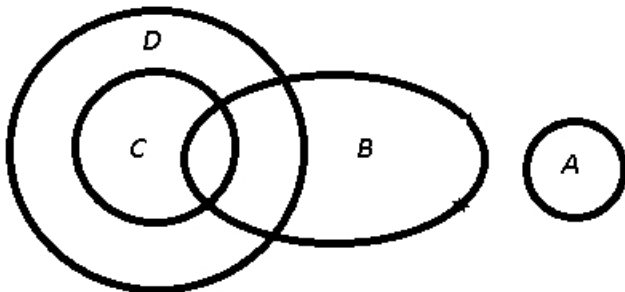
- I. Some D are B.
- II. Some B are C.
- III. All C are B.

- A Both conclusions I and II follow.
- B Both conclusions I and III follow.
- C Only conclusion III follows.
- D Only conclusion II follows.

Answer: A

Explanation:

The venn diagram for above statements is :



Conclusions:

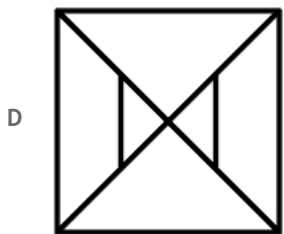
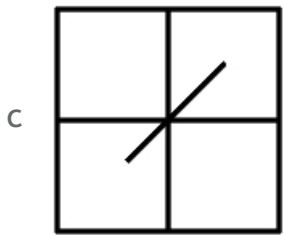
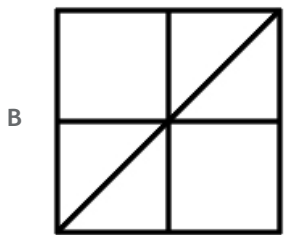
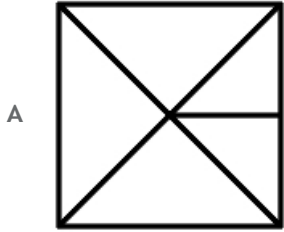
- I. Some D are B = true
- II. Some B are C = true
- III. All C are B = false

Thus, only conclusions I and II follow.

=> Ans - (A)

Question 30

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



Answer: D

Explanation:

The question figure is embedded in following figure and is represented by red colour.



=> Ans - (D)

Question 31

In a certain code language, 'ROK' is written as '44' and 'MIG' is written as '29'. What will be the code for 'TAL' in that code language?

A 33

- B 34
- C 41
- D 43

Answer: A

Explanation:

We can get the number by adding the numerical value of the alphabets, when arranged chronologically. A=1, B=2, C=3 and so on.

$$\text{ROK} \equiv 18 + 15 + 11 = 44$$

$$\text{MIG} \equiv 13 + 9 + 7 = 29$$

$$\text{TAL} \equiv 20 + 1 + 12 = 33$$

=> Ans - (A)

Question 32

Which two signs need to be interchanged to make the following equation correct?

$$73 - 13 \times 42 \div 14 + 56 = 56$$

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

Answer: A

Explanation:

$$\text{Expression : } 73 - 13 \times 42 \div 14 + 56 = 56$$

$$\text{L.H.S.} \equiv 73 + 13 \times 42 \div 14 - 56$$

$$= 73 + (13 \times 3) - 56 = 56 = \text{R.H.S.}$$

=> Ans - (A)

Question 33

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

$$35 : 64 :: 29 : ?$$

- A 63
- B 49
- C 121
- D 99

Answer: C

Explanation:

$$\text{Expression} = 35 : 64 :: 29 : ?$$

The pattern followed is that the number on the right is equal to square of sum of digits of the left number.

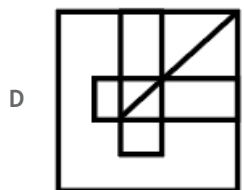
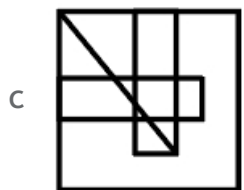
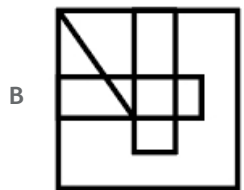
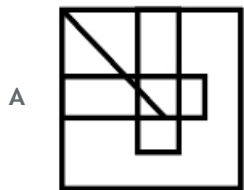
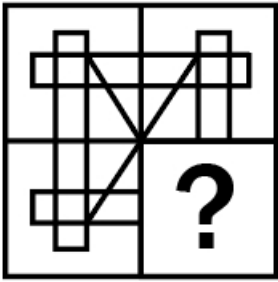
$$\text{Eg :- } (3 + 5)^2 = (8)^2 = 64$$

Similarly, $(2 + 9)^2 = (11)^2 = 121$

=> Ans - (C)

Question 34

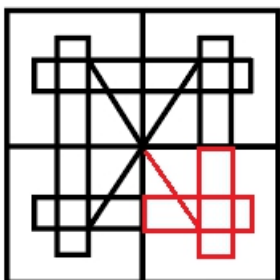
Study the given pattern carefully and select the figure that will complete the pattern given in the question figure.



Answer: B

Explanation:

If we complete the above figure, then the missing pattern is represented by the red colour.



=> Ans - (B)

Question 35

In a certain code language, 'PING' is written as '4' and 'METAL' is written as '5'. What will be the code for 'STEADYS' in that code language?

A 8

B 7

C 5

D 6

Answer: B

Explanation:

'PING' is written as '4' and 'METAL' is written as '5'

The number represent the number of alphabets in the word.

Similarly, 'STEADYS' has 7 letters.

=> Ans - (B)

Question 36

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 rat.

II. Some rat are wild.

Conclusions:

I. Some wild are rat.

II. All wild are rat.

III. Some red are wild.

A None of the conclusions follows.

B Only conclusion I follows.

C Only conclusion III follows.

D Only conclusion II follows.

Answer: B

Explanation:

The venn diagram for above statements is :

Conclusions:

I. Some wild are rat = true

II. All wild are rat = false

III. Some red are wild = false

Thus, only conclusion I follows.

=> Ans - (B)

Question 37

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

16, 20, 29, 45, 70, ?

A 106

B 116

C 96

D 126

Answer: A

Explanation:

The pattern followed is :

$$16 + (2)^2 = 20$$

$$20 + (3)^2 = 29$$

$$29 + (4)^2 = 45$$

$$45 + (5)^2 = 70$$

$$70 + (6)^2 = 106$$

=> Ans - (A)

Question 38

Six laptops, N, Q, P, L, R and A, are placed in a row facing towards the north (not necessarily in the same order). N is placed to the immediate left of A. R is placed second to the left of Q. P is placed second to the right of A. P is placed to the immediate right of R. L is placed to the left of N. Which laptop is placed to the immediate right of L?

A N

B Q

C P

D A

Answer: A

Explanation:

N is placed to the immediate left of A. P is placed second to the right of A, => Order is : N A _ P

P is placed to the immediate right of R. R is placed second to the left of Q, => N A R P Q

Now, 2 cases are possible :

Also, L is placed to the left of N, thus second case is not possible. Hence, final arrangement is :

=> Laptop N is placed to the immediate right of L.

=> Ans - (A)

Question 39

If the two signs, '+' and '÷' are interchanged, which of the following equations will be correct?

A $16 \div 9 + 4 \times 8 = 34$

B $16 \div 21 + 13 \times 26 = 56$

C $11 + 13 \times 4 \div 2 = 37$

D $13 \times 9 + 16 \div 2 = 125$

Answer: A

Explanation:

If we exchange '+' and '÷'

(A): $16 \div 9 + 4 \times 8 = 34$

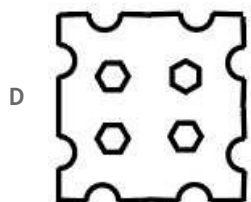
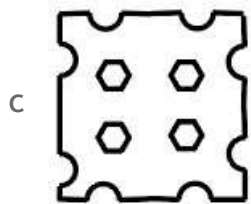
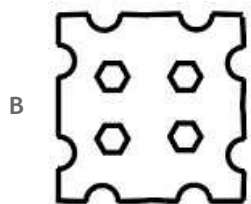
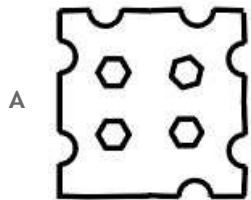
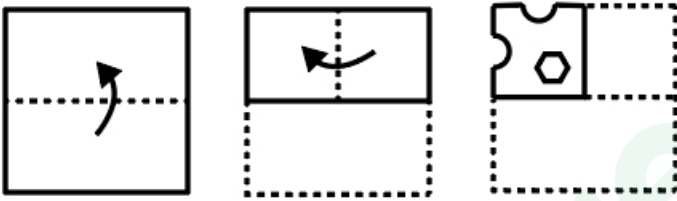
L.H.S. $\equiv 16 + 9 \div 4 \times 8$

$= 16 + (9 \times 2) = 34 = \text{R.H.S.}$

=> Ans - (A)

Question 40

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



Answer: B

Question 41

Select the number that can replace the question mark (?) in the following series.
31, 44, 58, 73, 89, ?

- A 105
- B 106
- C 115
- D 116

Answer: B

Explanation:

The pattern followed is :

$$31 + 13 = 44$$

$$44 + 14 = 58$$

$$58 + 15 = 73$$

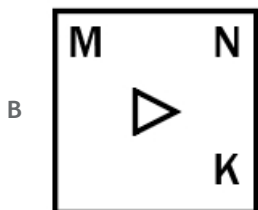
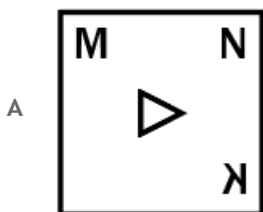
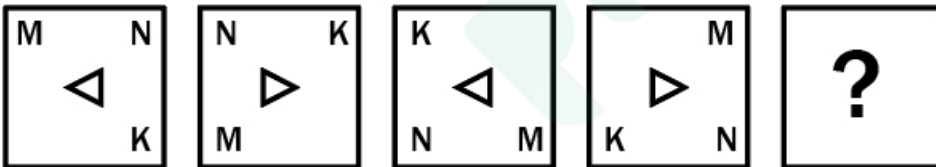
$$73 + 16 = 89$$

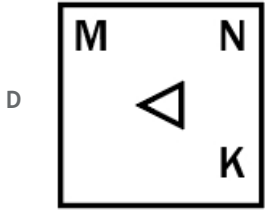
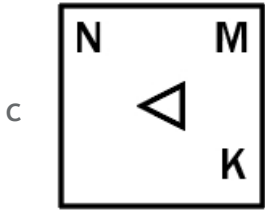
$$89 + 17 = 106$$

=> Ans - (B)

Question 42

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





Answer: D

Explanation:

By following the pattern of the middle triangle, we can conclude that in the missing figure, it will point on the left, hence first two options are eliminated.

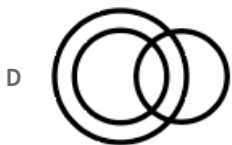
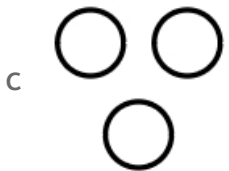
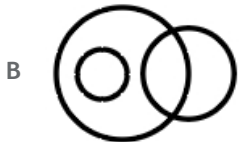
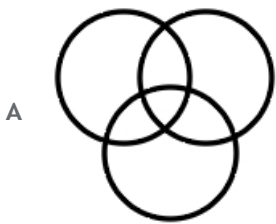
Also, the letters are moving in anti clockwise direction at the corners, thus N will be at top right in the answer figure, with M and K at the adjacent corners.

=> Ans - (D)

Question 43

Identify the Venn diagram that best represents the relationship between the given classes.

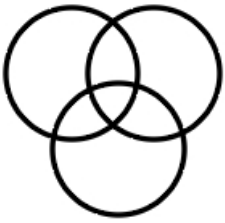
Painter, Lawyer, Singer



Answer: A

Explanation:

A painter can be a lawyer or a singer, similarly a lawyer can be a painter or a singer or vice-versa, hence the venn diagram that best describes above relationship is :



=> Ans - (A)

Question 44

Select the letter-pair that can replace the question mark (?) in the following series.
AR, CU, EX, GA, ?

A JE

B ID

C IF

D KF

Answer: B

Explanation:

Expression : AR, CU, EX, GA, ?

The pattern followed in each letter of the terms is :

1st letter : A (+2) = C (+2) = E (+2) = G (+2) = I

2nd letter : R (+3) = U (+3) = X (+3) = A (+3) = D

Thus, missing term = ID

=> Ans - (B)

Question 45

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

A Four : Rectangle

B Triangle : Three

C Square : Four

D Six : Septagon

Answer: A

Explanation:

In the given pair, the first word is the number of sides in the second polygon, similarly only first option, i.e. **Four : Rectangle** follows same pattern.

=> Ans - (A)

Question 46

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

7 6 3 48
4 9 8 63
2 5 7 ?

A 28

B 42

C 52

D 56

Answer: B

Explanation:

In each row, the number at the end is equal to thrice the sum of remaining numbers.

Eg:- $3 \times (7 + 6 + 3) = 3 \times 16 = 48$

and $3 \times (4 + 9 + 8) = 3 \times 21 = 63$

Similarly, $3 \times (2 + 5 + 7) = 3 \times 14 = 42$

=> Ans - (B)

Question 47

In a certain code language, 'GROUND' is written as 'BMJPIY'. What will be the code for 'FREAK' in that code language?

A BOAYH

B AMYVF

C BNAWG

D AMZVF

Answer: D

Explanation:

'GROUND' is written as 'BMJPIY'

The pattern followed is :

G	R	O	U	N	D
(-5)	(-5)	(-5)	(-5)	(-5)	(-5)
B	M	J	P	I	Y

Similarly, for FREAK :

F	R	E	A	K
(-5)	(-5)	(-5)	(-5)	(-5)
A	M	Z	V	F

=> Ans - (D)

Question 48

Select the option that is related to the third term in the same way as the second term is related to the first term.
Colour : Red :: Profession : ?

- A Lawyer
- B Court
- C School
- D Black

Answer: A

Explanation:

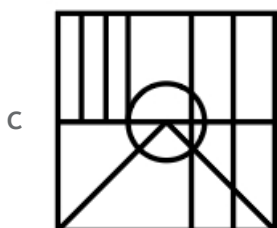
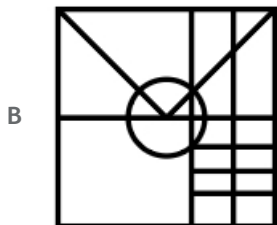
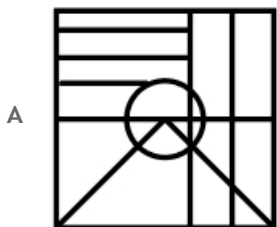
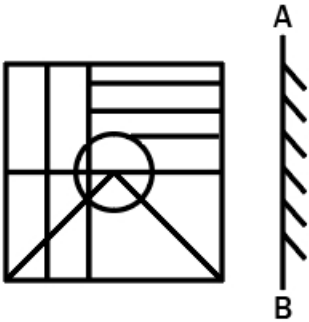
Expression = Colour : Red :: Profession : ?

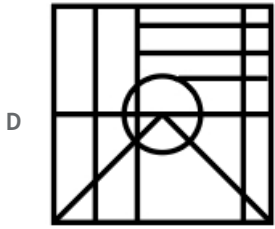
Second is a type of first, Red is a colour, similarly Lawyer is a profession.

=> Ans - (A)

Question 49

Select the correct mirror image of the given figure when the mirror is placed at line AB.





Answer: A

Explanation:

A vertical mirror is placed, so the object on the left will appear on the right and vice versa.

Thus, the three horizontal lines at top right in question figure will now appear at top left, as shown only in first figure. (Note: order of the lines will not be changed, i.e. the smallest will still remain at the bottom)

=> Ans - (A)

Question 50

Select the option in which the letters share the same relationship as that shared by the given pair of letters.

JT : NX

A TP : XT

B RK : VG

C GS : KU

D LD : PG

Answer: A

Explanation:

Expression = JT : NX

The pattern followed is that J (+4) = N and T (+4) = X

Similar pattern is observed only in TP : XT

=> Ans - (A)

Quant

Instructions

For the following questions answer them individually

Question 51

A travels 15 km with a speed of 30 km/h. He travels another 25 km with a speed of 10 km/h. What is his average speed for the entire journey?

A $\frac{40}{3}$ km/h

B $\frac{80}{3}$ km/h

C 20 km/h

D 12 km/h

Answer: A

Explanation:

Total time taken in the journey = $\frac{15}{30} + \frac{25}{10} = \frac{90}{30} = 3 \text{ hours}$

Total distance = $15 + 25 = 40 \text{ km}$

Average speed = $\frac{40}{10} = 4 \text{ km/hr}$

So, the answer would be option a) 3 km/h

Question 52

If $P : Q = 5 : 2$, then $(2P - 3Q) : (3P - 5Q)$ is equal to:

A 5 : 6

B 2 : 7

C 4 : 5

D 3 : 4

Answer: C

Explanation:

$$\frac{P}{Q} = \frac{5}{2}$$

$$\frac{2P-3Q}{3P-5Q}$$

Divide by Q both numerator and denominator ,

$$\frac{2 \times \frac{P}{Q} - 3}{3 \times \frac{P}{Q} - 5}$$

$$\frac{2 \times \frac{5}{2} - 3}{3 \times \frac{5}{2} - 5}$$

= 4:5

So, the answer would be option c) 4:5.

Question 53

The Table given below presents the number of books on different subjects kept on separate shelves. Subjects with odd and even numbers are of Arts and Science respectively.

What is the ratio of the number of books of S1 and the average number of books per subject?

A 13 : 17

B 18 : 13

C 14 : 17

D 14 : 13

Answer: A

Explanation:

$$\text{Required ratio} = \frac{26+29+31+34+36+38+44}{7}$$

$$= \frac{26}{238} \\ = 7 = \frac{26}{34} = 13:17$$

So, the answer would be option a) 13:17

Question 54

What will be the compound interest on a sum of ₹ 1200 for 2 years at the rate of 20% per annum when the interest is compounded yearly?

A ₹ 624

B ₹ 504

C ₹ 576

D ₹ 528

Answer: D

Explanation:

Amount after 2 years

$$= P \left(1 + \frac{r}{100}\right)^2$$

$$= 1200 \left(1 + \frac{20}{100}\right)^2$$

$$= 1728$$

$$\text{Interest} = 1728 - 1200 = \text{Rs } 528$$

So, the answer would be option d) 528

Question 55

The simple interest on a sum for a certain number of years, same as the rate percentage of the interest, is equal to the sum itself. The number of years is equal to:

A 5

B 10

C 8

D 1

Answer: B

Explanation:

$$S.I = \frac{P \times r \times t}{100}$$

In this case S.I = P

and $r = t$

$$P = \frac{P \times t \times t}{100}$$

$$t^2 = 100 \Rightarrow t = 10$$

So , the answer is option b)10.

Question 56

Pipe A can fill a tank in 6 hours. Pipe B can fill the same tank in 8 hours. Pipe A, B and C together can fill the same tank in 12 hours. Then which of the following statements is true for pipe C?

- A It can fill the tank in 4 hours 40 minutes
- B It can fill the tank in 4 hours 48 minutes
- C It can empty the tank in 4 hours 48 minutes
- D It can empty the tank in 4 hours 40 minutes

Answer: C

Explanation:

Pipe A, B and C together can fill the same tank in 12 hours.

Let C fill the tank in c hours.

$$\frac{1}{6} + \frac{1}{8} + \frac{1}{c} = \frac{1}{12}$$

$$\frac{1}{c} = \frac{1}{12} - \frac{7}{24} = -\frac{5}{24}$$

Since it is negative , instead of filling C will empty the tank.

$$C \text{ takes } \frac{24}{5} = 4.8 \text{ hrs}$$

So, the answer would be option c)It can empty the tank in 4 hours 48 minutes.

Question 57

By selling an article for ₹ 320, a man incurs a loss of 20%. What should be the selling price of an article to gain 20%?

- A ₹ 450
- B ₹ 480
- C ₹ 420
- D ₹ 500

Answer: B

Explanation:

Let the cost price be Rs.x .

A/c to question , a man incurs a loss of 20% after selling at Rs.320 ,

$$\frac{80}{100} \times x = 320 \Rightarrow x = 400$$

Cost price = Rs. 400

To gain 25% , selling price should be

$$\frac{120}{100} \times 400 = 480$$

So , the answer would be option b)480.

Question 58

0.1 percent of 1.728×10^6 spherical droplets of water, each of diameter 2 mm, coalesce to form a spherical bubble. What is the diameter (in cm) of the bubble?

- A 1.2
- B 1.6
- C 1.8
- D 2.4

Answer: D

Explanation:

$0.1\% \text{ of } 1.728 \times 10^6$

$$= \frac{0.1}{100} \times 1.728 \times 10^6$$

$$= \frac{1}{1000} \times 1728 \times 10^6$$

$$= 1728$$

1728 spherical droplets of water

Diameter = 2mm = 0.2 cm

Radius = $0.2/2 = 0.1$ cm

Volume of one Drop = $(4/3) \pi r^3 = (4/3) \pi (0.1)^3 \text{ cm}^3$

Volume of 1728 spherical droplets of water = $1728 * (4/3) \pi (0.1)^3 = (4/3) \pi * 1.728 \text{ cm}^3$

let us say Diameter of of Spherical Bubble = D cm

Radius = $D/2$ cm

Volume = $(4/3) \pi (D/2)^3 = (4/3) \pi D^3/8 \text{ cm}^3$

Equating both volumes:

$$(4/3) \pi D^3/8 = (4/3) \pi * 1.728$$

$$\Rightarrow D^3 = 8 * 1.728$$

$$\Rightarrow D^3 = 2^3 * 1.2^3$$

$$\Rightarrow D^3 = (2 * 1.2)^3$$

$$\Rightarrow D = 2.4 \text{ cm}$$

Diameter in cm of the spherical bubble = 2.4 cm

option D is correct

Question 59

The ratio of monthly incomes of Pawan and Sunil is 4 : 3 and the ratio of their monthly expenditures is 3 : 2. If Pawan and Sunil save ₹ 4000 and ₹ 6000 respectively per month, then what is the sum of their monthly incomes?

- A ₹ 60000
- B ₹ 70000
- C ₹ 50000
- D ₹ 36000

Answer: B

Explanation:

Let the salaries of Pawan and Sunil be $4x$ and $3x$. Also, their expenditure be $3y$ and $2y$.

So, their respective savings would be $(4x - 3y)$ and $(3x - 2y)$

$$4x - 3y = 4000$$

$$3x - 2y = 6000$$

Solving the equations, we get $x = 10000$

Their total monthly salary will be $(4x+3x) = 70000$

So, the answer would be option b) ₹ 70000

Question 60

What is the value of

$$32 \div 4 \text{ of } 2 \times 3 + [5 \text{ of } 6 - \{7 \text{ of } 8(10 + 6^5 \text{ of } 6 \div 5 - 1) \div 80\}] - 7 \times 3 \div 2?$$

A 7.5

B 17.5

C 12.5

D 22.5

Answer: D

Explanation:

$$32 \div 4 \text{ of } 2 \times 3 + [5 \text{ of } 6 - \{7 \text{ of } 8(10 + 6^5 \text{ of } 6 \div 5 - 1) \div 80\}] - 7 \times 3 \div 2$$

$$= 32 \div 8 \times 3 + [30 - \{56(10 + 5 \div 5 - 1) \div 80\}] - 7 \times 3 \div 2$$

$$= 4 \times 3 + [30 - \{56(10 + 1 - 1) \div 80\}] - 7 \times 3 \div 2$$

$$= 12 + [30 - \{7\}] - 7 \times 3 \div 2$$

$$= 12 + 21 - 7 \times 3 \div 2$$

$$= 22.5$$

So, the answer would be option d) 22.5

Question 61

What is the value of

$$\frac{72 \div 9 + 3 - 6 - (2 \times 3) + 5 \text{ of } 3 - (1 + 5 \times 2 - 2)}{8 \div 4 + 2 - (6 \times 8 \div 2) + (7 \times 4 - 2 \times 2)} \quad ?$$

A $\frac{11}{4}$

B $\frac{5}{4}$

C 0

D $\frac{15}{4}$

Answer: B

Explanation:

$$\frac{72 \div 9 + 3 - 6 - (2 \times 3) + 5 \text{ of } 3 - (1 + 5 \times 2 - 2)}{8 \div 4 + 2 - (6 \times 8 \div 2) + (7 \times 4 - 2 \times 2)}$$

$$= \frac{8 + 3 - 6 - 6 + 15 - (1 + 10 - 2)}{2 + 2 - (6 \times 4) + (28 - 4)}$$

$$= \frac{8 + 3 - 6 - 6 + 15 - 9}{2 + 2 - 24 + 24}$$

$$\frac{5}{4}$$

So, the answer would be option b) $\frac{5}{4}$

Question 62

If the volumes of two cubes are in the ratio of 64 : 125, then what is the ratio of their total surface areas?

A 9 : 16

B 4 : 5

C 16 : 25

D 64 : 125

Answer: C

Explanation:

Let the side of the cube be 's'.

Given, Volumes of two cubes are in the ratio of $\frac{64}{125} = \frac{4^3}{5^3}$

$\Rightarrow s_1 : s_2 = 4 : 5$

Surface Area = $6s^2$

Their ratio = $\frac{4^2}{5^2} = 16 : 25$

So, the answer would be option c) 16 : 25.

Question 63

The average of 13 numbers is 42. If a 14th number is included, then the average becomes 44. What is the 14th number?

A 70

B 62

C 66

D 68

Answer: A

Explanation:

Average of 13 numbers = 42

Total of 13 numbers = $42 \times 13 = 546$

If 14th number is included, then the average becomes 44.

Let the 14th number be x.

$$\frac{546+x}{14} = 44 \Rightarrow x = 70$$

So, the answer would be option a) 70.

Question 64

Radius of base of a right circular cone and a sphere is each equal to r. If the sphere and the cone have the same volume, then what is the height of the cone?

A 7r

- B 4r
- C 2r
- D 3r

Answer: B

Explanation:

Volume of cone and sphere are equal.

$$\frac{1}{3} \pi r^2 h = \frac{4}{3} \pi r^3$$

Since radius for both of them is equal ,

$$h = 4r$$

So, the answer would be option b)4r.

Question 65

What is a single discount equivalent to two successive discounts of 10% and 15%?

- A 21.5%
- B 23.5%
- C 25%
- D 26.5%

Answer: B

Explanation:

$$\text{Required discount \%} = -10 - 15 + \frac{150}{100} = -23.5 \%$$

So, the answer would be option b)-23.5 %

Question 66

Selling price of an article is $\frac{8}{7}$ of cost price. What is the profit percentage?

- A $\frac{100}{9}$
- B $\frac{100}{11}$
- C $\frac{100}{8}$
- D $\frac{100}{7}$

Answer: D

Explanation:

$$\text{Profit} = \frac{8}{7} CP - CP = \frac{1}{7} CP$$

$$\text{Profit Percentage} = \frac{\frac{1}{7} CP}{CP} \times 100 = \frac{100}{7}$$

So , the answer would be option d) $\frac{100}{7}$

Question 67

What is the HCF of $2^3 \times 3^4$ and $2^5 \times 3^2$?

- A $2^5 \times 3^3$
- B $2^3 \times 3^4$
- C $2^3 \times 3^2$
- D $2^5 \times 3^4$

Answer: C

Explanation:

The HCF of $2^3 \times 3^4$ and $2^5 \times 3^2$:

Check for the highest power of 2 and 3 which is common

$$2^3 \times 3^2$$

Question 68

A number is first increased by 20% and then reduced by 15%. If the final value is 2040, then what is the initial value of the number?

- A 2100
- B 1800
- C 2000
- D 1900

Answer: C

Explanation:

Let the initial number be x.

$$100 \times \frac{120}{100} \times \frac{85}{100} x = 2040$$

$$x = \frac{2040 \times 100 \times 100}{120 \times 85} = 2000$$

So, the answer would be option c)2000.

Question 69

The daily average rainfall on 5 days of a week is 30 mm. If the rainfall on 6th and 7th day are 42 mm and 25 mm respectively, then what is the average daily rainfall for the 7 days?

- A 31
- B 29.5
- C 33
- D 28.5

Answer: A

Explanation:

$$\text{Total rainfall for 5 days} = 30 \times 5 = 150 \text{ mm}$$

$$\text{Total rainfall for 7 days} = 150 + 42 + 25 = 217 \text{ mm}$$

$$\text{Average rainfall for 7 days} = \frac{217}{7} = 31 \text{ mm}$$

So, the answer would be option a)31

Question 70

The Table given below presents the number of books on different subjects kept on separate shelves. Subjects with odd and even numbers are of Arts and Science respectively.

The number of books of S3 is what percent (correct to one decimal place) of the average number of Science books?

- A 92.1
- B 91.2
- C 93.1
- D 90.7

Answer: A

Explanation:

Number of books in S3 = 31

Average number of science books = $\frac{29+34+38}{3} = 33.66$

Required % = $\frac{31}{33.66} \times 100 = 92.1\%$

So, the answer would be option a)92.1%

Question 71

The Table given below shows the number of students having obtained different marks.

What is the mean marks per student?

- A 13.5
- B 12.25
- C 15.5
- D 14.25

Answer: A

Explanation:

Required mean

$$= \frac{10 \times 6 + 12 \times 5 + 14 \times 2 + 16 \times 2 + 18 \times 5}{20} = 13.5$$

So, the answer would be option a) 13.5

Question 72

If $\frac{a}{b} = \frac{3}{4}$, $\frac{b}{c} = \frac{4}{5}$ and $\frac{c}{d} = \frac{5}{6}$, then the sum of the numerator and the denominator (which are coprimes) of $\left(\frac{a}{d}\right)^{10}$ is:

A 1025

B 4097

C 2049

D 513

Answer: A

Explanation:

Given that $\frac{a}{b} = \frac{3}{4}$, $\frac{b}{c} = \frac{4}{5}$ and $\frac{c}{d} = \frac{5}{6}$

$$\text{Then, } \frac{a}{d} = \frac{a}{b} \times \frac{b}{c} \times \frac{c}{d}$$

$$\Rightarrow \frac{a}{d} = \frac{3}{4} \times \frac{4}{5} \times \frac{5}{6}$$

$$\Rightarrow \frac{a}{d} = \frac{1}{2}$$

Therefore, sum of the numerator and the denominator (which are coprimes) of $\left(\frac{a}{d}\right)^{10} = 1 + 2^{10} = 1025$

Question 73

A man leaves from P at 6 am and reaches Q at 2 pm on the same day. Another man leaves Q at 8 am and reaches at 3 pm on the same day. At what time do they meet?

A 11:46 am

B 11:24 am

C 10:48 am

D 11:00 am

Answer: C

Explanation:

If PQ = x km, then

Speed of person starting from P = $\frac{x}{8}$ kmph

Speed of person starting from Q = $\frac{x}{7}$ kmph

Relative speed = $\frac{x}{8} + \frac{x}{7}$

$$= \frac{15x}{56} \text{ kmph}$$

Distance covered by first person till 8 a.m. = $2 \times \frac{x}{8} = \frac{x}{4}$

$$\text{Remaining distance} = x - 4 \text{ km} = 4$$

$$\text{Time of meeting} = \frac{\text{Remaining distance}}{\text{Relative speed}}$$

$$= \frac{3x}{15x}$$

$$= 2.08 \text{ hours}$$

∴ Required time = 10:48 a.m.

Question 74

The Table given below presents the number of books on different subjects kept on separate shelves. Subjects with odd and even numbers are of Arts and Science respectively.

Subjects	Number of books
S1	26
S2	29
S3	31
S4	34
S5	36
S6	38
S7	44

What is the ratio of the total number of books on Arts to that of Science?

- A 141 : 97
- B 145 : 93
- C 137 : 101
- D 149 : 89

Answer: C

Explanation:

Total number of books of Arts = S1 + S3 + S5 + S7 = 137

Total number of books of Science = S2 + S4 + S6 = 101

Their ratio = 137:101

So, the answer would be option c) 137:101

Question 75

Two teachers A and B can complete an academic work in 10 days and 15 days respectively. They started the work together, but A left after 5 days and another teacher C joined, who alone can complete the work in 60 days. In how many days the work got completed?

- A 7
- B 5
- C 6
- D 2

Answer: A

Explanation:

A/c to question, A can complete the work in 10 days, B in 15 days, and C in 60 days.

A and B work together for 5 days and complete

$$5 \times \left(\frac{1}{10} + \frac{1}{15} \right) = \frac{5}{6} \text{ of work}$$

Remaining work = $\frac{1}{6}$ th of work

B and C together can complete the work in $\left(\frac{1}{15} + \frac{1}{60} \right) =$

$\frac{1}{12}$ They will complete $\frac{1}{6}$ th of work in

$$\frac{\frac{1}{6}}{\frac{1}{12}} = 2 \text{ days Total days to complete the work} = 5 + 2 = 7 \text{ days}$$

So, the answer would be option a) 7

General knowledge

Instructions

For the following questions answer them individually

Question 76

Which article of Indian constitution deals with discrimination against any Indian citizen on various grounds?

- A Article 11
- B Article 19
- C Article 13
- D Article 15

Answer: D

Question 77

Silver Fiber Revolution is associated to:

- A Leather
- B Oil seeds
- C Jute
- D Cotton

Answer: D

Question 78

The Indian Standard Time is calculated from the clock tower of _____.

- A Hamirpur
- B Rampur
- C Mirzapur
- D Sambalpur

Answer: C

Question 79

Who among the following was the first Indian woman to swim across the English Channel?

- A Arati Saha
- B Ujwala Rai
- C Nisha Millet
- D Karnam Malleswari

Answer: A

Question 80

The name of UTI Bank was changed to _____ n 2007.

- A HDFC Bank
- B IDBI Bank
- C Centurion Bank
- D Axis Bank

Answer: D

Question 81

Which party government announced the formation of a second backward classes commission in 1978?

- A Indian National Congress Party
- B Bharatiya Janata Party
- C Janata Party
- D United Democratic Party

Answer: C

Question 82

Who is the writer of 'Becoming'?

- A Jhumpa Lahiri
- B Sudha Murthy
- C Michelle Obama
- D Hillary Clinton

Answer: C

Question 83

Blue jay or Indian Roller is the state bird of how many Indian states?

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

Answer: A

Question 84

The upper part of the respiratory tract is provided with small hair-like structures called _____.

- A bronchi
- B cilia
- C villi
- D alveoli

Answer: B

Question 85

Which of the following is declared as world heritage site by UNESCO in 2018?

- A Rani ki vav
- B The Victorian Gothic and Art Deco Ensembles of Mumbai
- C Historic city of Ahmedabad
- D The Architectural Works of Le Corbusier

Answer: B

Question 86

Which of the following gas causes explosion in coal mines?

- A Carbon dioxide
- B Nitrogen
- C Butane
- D Methane

Answer: D

Question 87

What is the contribution of agriculture sector in GDP of India in 2017-18?

A 0.154

B 0.192

C 0.16

D 0.171

Answer: D

Question 88

Pin valley National park is situated in:

A Andhra Pradesh

B Arunachal Pradesh

C Himachal Pradesh

D Madhya Pradesh

Answer: C

Question 89

Bhawai is a folk dance of which state?

A Haryana

B Maharashtra

C Gujarat

D Rajasthan

Answer: D

Question 90

Who is known as the father of Blue Revolution in India?

A Verghese Kurien

B Sam Pitroda

C Hiralal Chaudhuri

D M.S. Swaminathan

Answer: C

Question 91

Dibyendu Barua is associated with which of the following sport?

A Chess

B Hockey

C Snooker

D Tennis

Answer: A

Question 92

Which of the following is NOT a nuclear power station?

A Ramagundam

B Rawat Bhata

C Naraura

D Kalpakkam

Answer: A

Question 93

When did the Quit India Movement Start?

A 1930

B 1942

C 1932

D 1940

Answer: B

Question 94

Which of the following temple is built by Rastrakutas Dynasty?

A Kailash Temple

B Adi Kumbeswarar

C Brihadeshwara Temple

D Chennakeshava Temple

Answer: A

Question 95

In which field 'Saraswati Samman' award is given?

A Music

B Literature

C Journalism

D Dance

Answer: B

Question 96

Name the Indian sprinter who won the gold medal in women's 100m in World Universiade, 30th Summer University Games held in Naples, Italy?

A Dutee Chand

B Pinki Pramanik

C Hima Das

D Santhi Soundara

Answer: A

Question 97

_____ is the study of ancient plants, like mosses, that grow in moist, humid environments.

A Ethnobotany

B Bryology

C Palynology

D Dendrology

Answer: B

Question 98

Which of the following committees recommended inclusion of fundamental duties?

A Tarapore Committee

B Radha Krishnan Committee

C Balwantrai Mehta Committee

D Swaran Singh Committee

Answer: D

Question 99

Who became the Nawab of Bengal after Alivardi Khan?

A Sarfaraaz Khan

B Shuj-ud-din Muhammad Khan

C Siraj-ud-Daulah

D Mir Zafar

Answer: C

Question 100

Who among the following was popularly known as the 'parrot of India'?

A Tansen

B Ibn Battuta

C Amīr Khosrow

D Ziauddin Barani

Answer: C

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