

RRB NTPC 19 Jan 2021 Shift 1 Solution

Que. 1

Vijay Ghat is the resting place of which of the following personality?

- 1. Mahatma gandhi**
- 2. Lal Bahadur Shastri**
- 3. Indira Gandhi**
- 4. Atal Bihari Vajpayee**

Ans. Correct Option - 2

The correct answer is option 2 i.e., Lal Bahadur Shastri.

Vijay Ghat is the resting place of Late Shri Lal Bahadur Shastri.

Vijay Ghat is the memorial of India's second Prime Minister Lal Bahadur Shastri.

Que. 2

The HCF of two numbers is 4 and the sum of those two numbers is 36. Find how many such pairs of numbers are possible.

- 1. 1**
- 2. 2**
- 3. 3**
- 4. 4**

Ans. Given: Correct Option - 3

The HCF of two numbers is 4 and the sum of those two numbers is 36.

Concept Used:

Concept of HCF

HCF is the least common factor among two or more numbers.

Calculation:

HCF of two number is 4

Let, those numbers be $4x$ and $4y$ where x and y are prime to each other

Accordingly,

$$4x + 4y = 36$$

$$\Rightarrow 4(x + y) = 36$$

$$\Rightarrow (x + y) = 9$$

Now,

$$9 = 8 + 1$$

$$9 = 7 + 2$$

$$9 = 6 + 3$$

$$9 = 5 + 4$$

In all these cases only (8,1); (7,2); and (5,4) are prime to each other. So, such three pair is possible
∴ Such three pair of number is possible.

Que. 3

Select the option that has the same relation to the third word as the second word to the first word. School bag : Books :: Suitcase : ?

1. Food
2. Cloths
3. Gun
4. Laptop

Ans. Correct Option - 2

We carry books in school bag.

Similarly.

we carry cloths in suitcase.

Hence, 'Cloths' is the correct answer.

Que. 4

Which of the following was the author of the book "Glimpses of world history"?

1. Sardar Vallabhbhai Patel
2. Jawaharlal Nehru
3. M K Gandhi
4. Dada Bhai Naoroji

Ans. Correct Option - 2

Glimpses of world history was written by Jawaharlal Nehru in 1934. This book is a collection of letters, written by Pandit Nehru to his daughter Indira Gandhi.

Que. 5 1. 2. 3. 4. The LCM of two number is 20th multiple of 3. HCF of those two numbers is 6. If one number is 30, what is another number?

1. 16
2. 14
3. 12
4. 10

Ans. Given: Correct Option - 3

The LCM of two number is 20th multiple of 3. HCF of those two numbers is 6. One number is 30.

Concept Used:

$$\text{LCM} \times \text{HCF} = \text{1st number} \times \text{2nd number}$$

Calculation:

LCM of those two number is 20th multiple of 3

$$\Rightarrow \text{LCM of those two number is } 3 \times 20 = 60$$

HCF of those two numbers is 6

One number is 30

Let, the other number is p

Accordingly,

$$60 \times 6 = 30 \times p$$

$$\Rightarrow 360 = 30p$$

$$\Rightarrow p = 12$$

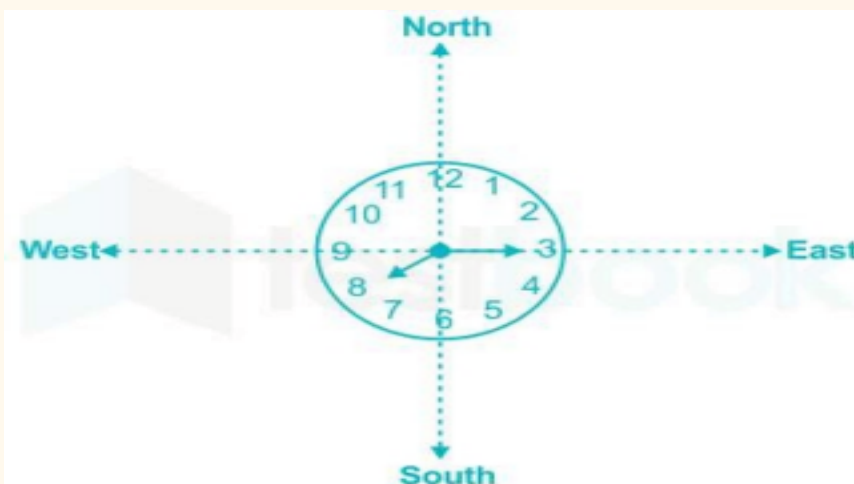
\therefore The other number is 12.

Que. 6 In a morning at 8: 15 am the minute hand of the clock is in east direction then find the direction of the hour hand ?

1. South
2. West
3. South- West
4. North - East

Ans. Correct Option - 3

According to the condition given in the question:



On observing the above figure it is clear that hour hand is in 'South- West' direction.
Hence, 'South - West' is the correct answer.

Que. 7

Which was the first bank established in India?

1. Bank of Hindustan
2. Awadh Commercial Bank
3. Punjab National bank
4. Bank of Bengal

Ans. Correct Option - 1

The correct answer is option 1, i.e., Bank of Hindustan

Banking services have been existing in India since ancient times. Mayer's Alexander and Britishers in the 17 Company set up the first European bank - The Bank of Hindustan in 1770. Awadh (Oudh) Commercial Bank was the first bank established in 1981 and governed exclusively by Indians on the basis of extending loans.

Que. 8 Find the simplified value of $(-1/8)/(-1/4) + (-1/2)^5/(-1/2)^4 = ?$

1. 1
2. 0
3. 1/2
4. 2

Ans. Correct Option - 2

Calculation:

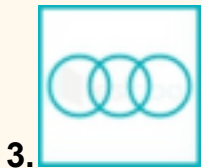
$$\begin{aligned} & (-1/8)/(-1/4) + (-1/2)^5/(-1/2)^4 \\ \Rightarrow & (-1/8) \times (-4) + (-1/2)^5/(-1/2)^4 \\ \Rightarrow & (1/2) - (1/2) \\ \Rightarrow & 0 \end{aligned}$$

\therefore The required simplified value is 0.

Que. 9

**Select the Venn diagram that best illustrates the relationship between the following classes.
Plastic, Paper, Bag**

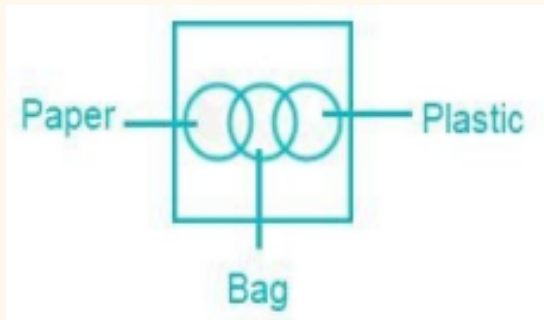




Ans. Correct Option - 3

The bag is made of either plastic or paper or something else like cotton.

So the diagram which shows the best relationship between the given variable is:



Hence, the figure in option 3 is the correct answer.

Que. 10 The Civil Aviation Ministry has given permission to build four greenfield airports which includes one International Airport at which place?

1. Hyderabad, Telangana
2. Nagpur, Maharashtra
3. Dholera, Gujarat
4. Coimbatore, Tamil Nadu

Ans. Correct Option - 3

The correct answer is Dholera, Gujarat.

The Civil Aviation Ministry gave clearance for four greenfield airports.

The three airports will be located in Andhra Pradesh and one international airport at Dholera, Gujarat. The Ministry has also given its green signal for development of a greenfield airport in Nellore and Kurnool districts of Andhra Pradesh under a public-private partnership.

Que 11. If $\sqrt{15} = 3.87$ find the value of $\frac{\sqrt{3}}{\sqrt{5}}$

1. 0.772

2. 0.774

3. 0.784

4. 0.776

Ans. Correct Option - 2

Given: $\sqrt{15} = 3.87$.

We have to find the value of $\frac{\sqrt{3}}{\sqrt{5}}$

Calculation:

$$\frac{\sqrt{3}}{\sqrt{5}} = \frac{\sqrt{3} \times \sqrt{5}}{\sqrt{5} \times \sqrt{5}}$$

$$\Rightarrow \frac{\sqrt{15}}{5}$$

$$\Rightarrow \frac{3.87}{5}$$

$$\Rightarrow 0.774$$

∴ The required value of $\frac{\sqrt{3}}{\sqrt{5}}$ is 0.774.

Que. 12 Select the option that has the same relation to the third word as the second word to the first word. Shoes : Rack :: Books : ?

1. Almira

2. Shelf

3. Drawer

4. Table

Ans. Correct Option - 2

The place which is used to keep shoes is called a rack.

Similarly,

The place which is used to keep books is called a shelf.

Hence, 'Shelf' is the correct answer.

Que. 13 Pachmarhi Biosphere reserve located in:

- 1. Uttar Pradesh**
- 2. Chhattisgarh**
- 3. Madhya Pradesh**
- 4. None of these**

Ans. Correct Option - 3

The correct answer is Madhya Pradesh.

Pachmarhi biosphere reserve:

It is a conservation area in the Satpura ranges of Madhya Pradesh.

It was designated as a biosphere reserve by UNESCO in 2009 under the MAB program.

Que. 14 Shailendra, Amit and Suraj can complete a work in 6, 12 and 15 days respectively. Find the time taken to complete the work if they are working together.

- 1. 60/17 days**
- 2. 60/23 days**
- 3. 60/19 days**
- 4. 60/29 days**

Ans. Correct Option - 3 Given:

Time taken by Shailendra to complete the work = 6 days
Time taken by Amit alone to complete the work = 12 days
Time taken by Suraj alone to complete the work = 15 days

Formula used:
Efficiency = Total work/Time taken

Calculation:

LCM of 6, 12 and 15 = 60 = Total work

Efficiency of Shailendra = $60/6$ units/day

⇒ 10 units/day

Efficiency of Amit = $60/12$ units/day

⇒ 5 units/day

Efficiency of Suraj = $60/15$ units/day

⇒ 4 unit/day

Total efficiency of Shailendra, Amit and Suraj = $(10 + 5 + 4)$ units/day ⇒ 19 units/day

Time taken to complete the work together = $60/19$ days ⇒ $60/19$ days

∴ The time taken by B alone to complete the work is $60/19$ days

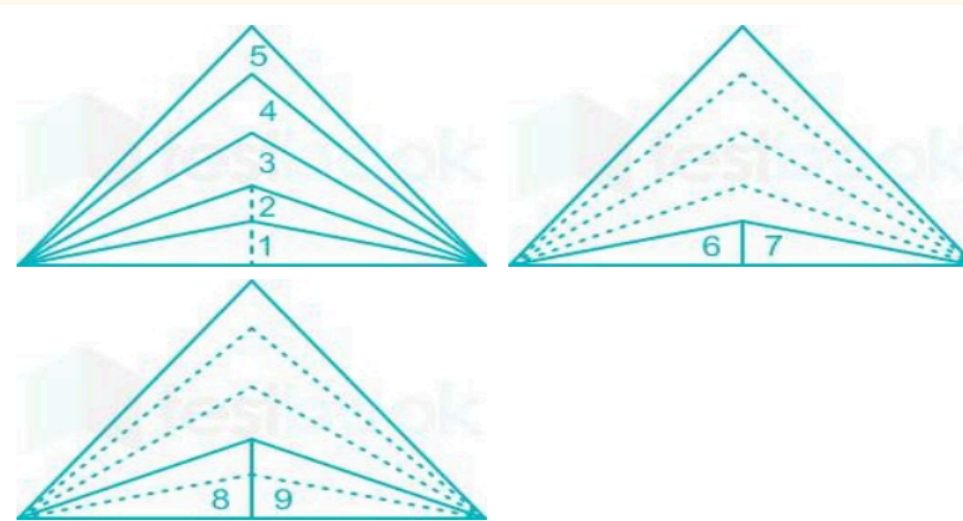
Que. 15 Count the number of triangle in the following figure.



1. 9
2. 11
3. 13
4. 10

Ans. Correct Option - 1

The count of the triangles are given below:



Hence, '9' is the correct answer.

Que. 16 Consider the following statements regarding Right to Equality in the Indian Constitution. 1. Article 14 – All are equal before the law.

2. Article 16 – Equal opportunity in public employment.

3. Article 17 – Untouchability is Prohibited.

4. Article 19 – Abolition of Titles.

Which of the following is INCORRECT?

1. 1
2. 2
3. Only 2 and 4
4. Only 4

Ans. Correct Option - 4

Que. 17 A and B together can do a work in 30 days and A alone can do it in 40 days. In how many days B alone can do this?

- 1. 120 days**
- 2. 110 days**
- 3. 80 days**
- 4. 100 days**

Ans. Given: Correct Option - 1

Time taken by A and B to complete the work = 30 days

Time taken by A alone to complete the work = 40 days

Formula used:

Efficiency = Total work/Time taken

Calculation:

LCM of 30 and 40 = 120 = Total work

Efficiency of A and B = $120/30$ units/day

⇒ 4 units/day

Efficiency of A = $120/40$ units/day

⇒ 3 units/day

Efficiency of B = $(4 - 3)$ unit/day

⇒ 1 unit/day

Time taken by B alone = $120/1$ days

⇒ 120 days

∴ The time taken by B alone to complete the work is 120 days

Que. 18

Find the odd one out?

- 1. Yellow**
- 2. Red**
- 3. Orange**
- 4. Blue**

Ans. Correct Option - 2

All the colors are present in the Rainbow but only the Red color has the highest wavelength. Hence, Red is the odd one out.

Red color has the highest wavelength, this is the reason it is used to stop vehicles on the road, indicators, or to give signs of danger.

Que. 19

Who is the chief executive officer (CEO) of Amazon?

- 1. Werner Vogels**
- 2. Jeff Bezos**
- 3. Alain Monié**
- 4. Barnaby Dorfman**

Ans. Correct Option - 2

Jeff Bezos is the CEO of Amazon.

Que. 20 Pipe A can fill a tank in 20 minutes and Pipe B can empty the same tank in 30 minutes. Find the time taken to fill the empty tank if both pipes are opened together.

- 1. 40 mins**
- 2. 50 mins**
- 3. 70 mins**
- 4. 60 mins**

Ans. Correct Option - 4 Given:

Time taken by Pipe A to fill the tank = 20 mins

Time taken by Pipe B to empty the tank = 30 mins

Formula used:

Efficiency = Total work/Time taken

Calculation:

LCM of 20 and 30 = 60 units = Total work

Efficiency of pipe A = $60/20$ units/min

$\Rightarrow 3$ units/min

Efficiency of pipe B = $60/30$ units/min

$\Rightarrow -2$ units/min

Total efficiency of pipe A and pipe B = $(3 - 2)$ units/min

$\Rightarrow 1$ unit/min

Time taken to fill the tank = $60/1$ mins

$\Rightarrow 60$ mins

\therefore Time taken to fill the tank is 60 mins

Que. 21 Select the option that has the same relation to the third word as the second word to the first word. Book : Reading :: Poem : ?

1. Listening
2. Singing
3. Rhyming
4. Reading

Ans. Correct Option - 3

Books are used for reading.

Similarly,

Poems are used for rhyming.

Hence, 'Rhyming' is the correct answer.

Que. 22

Who is the Founder of Google?

1. Eric Schmidt
2. Jeff Bezos
3. Eugene Charniak
4. Larry Page

Ans. Correct Option - 4

The correct answer is Larry Page.

Google was founded by Larry Page and Sergey Brin on September 4, 1998.

They originally nicknamed their new search engine "BackRub", because the system checked back links to estimate the importance of a site.

Que. 23 The angles of a triangle are in ratio 4 : 3 : 2, what will be the supplementary of the largest angle of the triangle?

1. 60°
2. 80°
3. 90°
4. 100°

Ans. Given: Correct Option - 4

The ratio of angles of triangle = 4 : 3 : 2

Formula used:

Sum of all angles of triangle = 180°

The supplementary angle of x = $180^\circ - x$

Calculation:

Let the angles be $4x$, $3x$ and $2x$

Sum of all angles of triangle = 180°

$$4x + 3x + 2x = 180^\circ$$

$$\Rightarrow 9x = 180^\circ$$

$$\Rightarrow x = 20^\circ$$

Angles of the triangle are $4x = 80^\circ$, $3x = 60^\circ$, and $2x = 40^\circ$

Largest angle of triangle = 80°

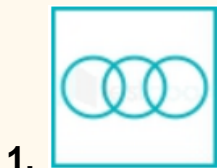
Supplementary angle of $80^\circ = 180^\circ - 80^\circ$

$$\Rightarrow \text{Supplementary angle of } 80^\circ = 100^\circ$$

\therefore Supplementary angle of largest angle of the triangle is 100°

Que. 24

Select the Venn diagram that best illustrates the relationship between the following classes. Mobile, Internet, webmail



Ans. Correct Option - 2

Webmail is the part of the internet while mobile is electronic equipment.

So the diagram which shows the best relation between the given three variables is:



Hence, the figure in option 2 is the correct answer.

Que. 25

'India: The Future is Now' is written by .

1. Arundhati Roy
2. Amish Tripathi
3. Natwar Singh
4. Shashi Tharoor

Ans. Correct Option - 4

'India: The Future is Now' is written by Shashi Tharoor.

Shashi Tharoor is an author and an MP from Thiruvananthapuram constituency. An Era of Darkness: The British Empire in India was also written by Shashi Tharoor. Arundhati Roy won the Man Booker Prize for Fiction in 1997 for her novel The God of Small Things.

Que. 26 If the height of the class as follows(in cm):

152, 148, 150, 153, 147

What is the difference between mean and median?

1. 5
2. 7
3. 0
4. 2

Ans. Given: Correct Option - 3

Numbers = 152, 148, 150, 153, 147

Formula used:

Mean = Sum of numbers / Number of observations

Concept used:

Median is the middle number of all the observations when the numbers are arranged in ascending order. If the number of observations is even, then the median is average of two middle terms.

Calculations:

Mean = Sum of numbers / Number of observations

Mean = $(152 + 148 + 150 + 153 + 147)/5$

\Rightarrow Mean = $750/5$

\Rightarrow Mean = 150

Arranging the numbers in ascending order,

147, 148, 150, 152, 153

⇒ Median = 150

Difference = 150 - 150

⇒ 0

∴ The difference between mean and median is 0.

Que. 27 In the question, a statement is given, followed by two arguments, I and II. You have to consider the statement to be true even if it seems to be at variance from commonly known facts. You have to decide which of the given arguments, if any, is a strong argument.

Statement: Plastics are one of the most pollutant things in the environment.

Argument :

I. Plastics should be recycled to minimize pollution.

II. Plastics should be ban to eliminate plastic pollution.

1. Both follows.

2. Only I follows

3. Only II follows

4. None follows

Ans. Correct Option - 1

Given:

Statement: Plastics are one of the most pollutant things in the environment.

Argument :

I. Plastics should be recycled to minimize pollution. (Follow: as recycling makes plastic reusable and minimize the pollutant in environment.)

II. Plastics should be ban to eliminate plastic pollution. (Follow: by banning plastic and replacing it with reusable degradable item will help in curbing plastic pollution.)

Hence, both argument follows.

Que. 28

Which of the following is an example of Primary Cache memory?

1. Registers

2. PROM

3. HDD

4. Pen drive

Ans. Correct Option - 1

Primary Cache memory – Registers

Primary Main memory – PROM (Programmable Read only Memory)

Secondary memory – HDD (Hard Disk Drive) [Magnetic Disk]

Secondary memory – Pen drive [Flash memory]

Que. 29 The age of people as follows:

18, 12, 10, 16, 19, 15, 13, 10.

Find the median of the given data.

- 1. 14.5**
- 2. 16**
- 3. 14**
- 4. 15**

Ans. Given: Correct Option - 3

Age of people = 18, 12, 10, 16, 19, 15, 13, 10.

Concept used:

Median is the middle number of all the observations when the numbers are arranged in ascending order. If the number of observations is even, then the median is average of two middle terms.

If n is odd then, Median = $\{(n/2) + 1\}$ th term

If n is even then, Median = $[(n/2)$ th term + $\{(n/2) + 1\}$ th term]/2

Calculations:

Arranging the ages in ascending order,

10, 10, 12, 13, 15, 16, 18, 19

∴ Number of terms = 8 i.e. even.

So, Median = $[(n/2)$ th term + $\{(n/2) + 1\}$ th term]/2

$(n/2)$ th term = $8/2$

⇒ 4 th term

⇒ 13

$\{(n/2) + 1\}$ th term = $\{(8/2) + 1\}$ th term

⇒ 5th term

⇒ 15

Median = $(13 + 15)/2$

⇒ $28/2$

⇒ 14

∴ The median of the given data is 14.

Que. 30 In a certain code language, BOX is written as OBK, then how will the word UNIVERSITY written in that code language?

- 1. EVHIREFGLV**
- 2. EVHIRYFGLV**
- 3. HAVIREFVGL**
- 4. HAVIREEVGL**

Ans. Correct Option - 3

According to the English Alphabet series and its positional value:

The pattern follow is:

$$B = 2; 2 + 13 = 15; 15 = O$$

$$O = 15; 15 + 13 = 28(26 + 2); 2 = B$$

$$X = 24; 24 + 13 = 37(26 + 11); 11 = K$$

Similarly,

$$U + 21; 21 + 13 = 34(26 + 8); 8 = H$$

$$N + 14; 14 + 13 = 27(26 + 1); 1 = A$$

$$I + 9; 9 + 13 = 22; 22 = V$$

$$V + 22; 22 + 13 = 35(26 + 9); 9 = I$$

$$E + 5; 5 + 13 = 18; 18 = R$$

$$R + 18; 18 + 13 = 31(26 + 5); 5 = E$$

$$S + 19; 19 + 13 = 32(26 + 6); 6 = F$$

$$I + 9; 9 + 13 = 22; 22 = V$$

$$T + 20; 20 + 13 = 33(26 + 7); 7 = G$$

$$Y + 25; 25 + 13 = 38(26 + 12); 12 = L$$

Hence, UNIVERSITY is coded as HAVIREFVGL

Que. 31 When were the first Lok Sabha elections held in India?

1. 25 October 1951 to 21 February 1952

2. 25 October 1947 to 21 February 1948

3. 25 October 1948 to 21 February 1949

4. 25 October 1950 to 21 February 1951

Ans. Correct Option - 1

The first General Elections were held from 25 October 1951 to 21 February 1952. Till 2014, India has witnessed sixteen Lok Sabha elections.

Que. 32 Find the mean of the following data:

22, 29, 31, 35, 28, 29

1. 28.5

2. 29

3. 26

4. 27

Ans. Given: Correct Option - 2

Numbers = 22, 29, 31, 35, 28, 29

Formula used:

Mean = Sum of observations/Number of observations

Calculations:

Mean = Sum of observations/Number of observations

$$\Rightarrow \text{Mean} = (22 + 29 + 31 + 35 + 28 + 29)/6$$

$$\Rightarrow \text{Mean} = 174/6$$

$$\Rightarrow \text{Mean} = 29$$

∴ The mean of the following data is 29.

Que. 33

If M = 14, CAT = 57 then GLASS = ?

1. 73

2. 51

3. 56

4. 77

Ans. Correct Option - 4

According to the English Alphabet series and its positional value:

Pattern followed here is: the letter is coded as opposite positional value

M = 13, Opposite positional value = 14

Similarly,

$$\text{CAT} = 24 + 26 + 7 = 57$$

And,

$$\text{GLASS} = 20 + 15 + 26 + 8 + 8 = 77$$

Hence, 77 is the coded form of GLASS.

Que. 34

Who is known as the "father of green revolution" in India?

1. Vikram Sarabhai

2. MS Swaminathan

3. Somnath Desai

4. S. Radhakrishnan

Ans. Correct Option - 2

The correct answer is option 2, i.e, MS Swaminathan.

The father of Green Revolution is MS Swaminathan.

He is an Indian geneticist and administrator, known for his role in India's Green Revolution. He has been called the father of the green revolution for his role introducing HYV of wheat in India. He is the founder of the MS Swaminathan Research Foundation.

- Que. 35** A person travels a certain distance in 10 hours, if he covers the first half at a speed of 30 km/hr and second half with the speed of 20 km/hr, then what will be the total distance covered by him?
1. 120 km
 2. 160 km
 3. 100 km
 4. 240 km

Ans. Given: Correct Option - 4

Total time taken = 10 hours

Speed in first half = 30 km/hr

Speed in second half = 20 km/hr

Formula used:

Time = Distance/Speed

Calculation:

Let the total distance covered be $2x$ km

As, he covered the first half (i.e. x km) with 30 km/hr

Time taken to cover first-half = Distance/Speed = $x/30$ hours

He covered the second half (i.e. x km) with 20 km/hr

Time taken to cover second half = $x/20$ hours

Total time taken = 10 hours

$$\Rightarrow x/30 + x/20 = 10$$

$$\Rightarrow 5x/60 = 10$$

$$\Rightarrow x = 120$$

Total distance covered by him = $2x = 2 \times 120 = 240$ km \therefore Total distance covered by him is 240 km

Que. 36 In the following question, select the related number from the given alternatives.

28 : 66 :: 31 : ?

1. 76
2. 72
3. 74
4. 70

Ans. Correct Option - 2

The pattern followed here is:

$$28 \times 2 + 10;$$

$$56 + 10 = 66$$

Similarly,

$$31 \times 2 + 10;$$

$$62 + 10 = 72$$

Hence, 72 is the correct answer.

Que. 37

When did the symbol of the Indian rupee become vague?

- 1. 15 July, 2010**
- 2. 22 September, 2011**
- 3. 21 March, 2012**
- 4. 23 August, 2009**

Ans. Correct Option - 1

The correct answer is 1 i.e. 15 July 2010.

Points to know about the Indian rupee:

The symbol of the Indian rupee came into vague on 15th July 2010.

The new symbol is an amalgamation of Devanagari 'Ra' and the Roman 'R' without the stem. The new symbol designed by D Udaya Kumar, a post-graduate of IIT Bombay was finally selected by the Union Cabinet on 15th July 2010.

Que 38. Find the equation of the tangent to the circle $x^2 + y^2 = 9$, which passes through the point on the circle where $x = 2$ and y is positive.

- 1. $\sqrt{5}y = 2x - 9$**
- 2. $\sqrt{5}y = -2x + 9$**
- 3. $2y = -\sqrt{5}x + 4\sqrt{5}$**
- 4. $2y = -\sqrt{5}x - 4\sqrt{5}$**

Ans. Correct Option - 2 Given:

Equation of circle is $x^2 + y^2 = 9$

Tangent passes through the point on the circle where $x = 2$

Concept used:

Slope = $(y_2 - y_1)/(x_2 - x_1)$

If two lines are perpendicular then the product of their slope = -1 Equation of line can be written as $y = mx + c$, here m is the slope of the line and c is the y-intercept Calculation:

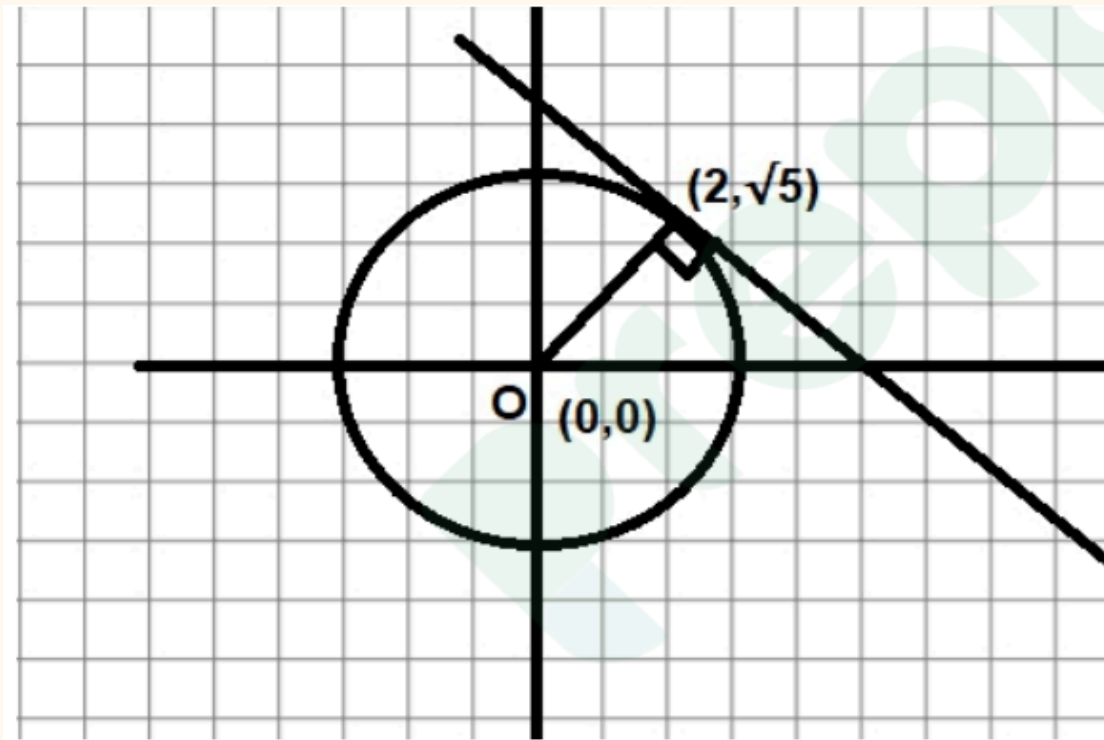
As tangent passes through $(2, y)$, as this point lie on the circle

Then it will satisfy the equation of the circle $x^2 + y^2 = 9$

$$\Rightarrow 2^2 + y^2 = 9$$

$$\Rightarrow y^2 = 9 - 4 = 5$$

$$\Rightarrow y = \sqrt{5} \text{ (as, } y \text{ is positive)}$$



$$\text{Slope of radius} = (y_2 - y_1)/(x_2 - x_1) = (\sqrt{5} - 0)/(2 - 0) = \sqrt{5}/2$$

$$\text{Slope of tangent} \times \text{Slope of radius} = -1$$

$$\Rightarrow \text{Slope of tangent (m)} = -1/(\sqrt{5}/2) = -2/\sqrt{5}$$

$$\text{Equation of tangent will be } y = mx + c$$

$$\Rightarrow y = (-2/\sqrt{5}) \times x + c$$

As this passes through $(2, \sqrt{5})$

$$c = y + (2/\sqrt{5}) \times x = \sqrt{5} + (2/\sqrt{5}) \times 2$$

$$\Rightarrow c = 9/\sqrt{5}$$

$$\text{Equation of tangent will be: } y = (-2/\sqrt{5})x + 9/\sqrt{5}$$

$$\Rightarrow \sqrt{5}y = -2x + 9$$

$$\therefore \text{Equation of tangent will be } \sqrt{5}y = -2x + 9$$

Que. 39 In an alphabet series: A interchanges its position with C, B interchanges its position with D, and so on till P. Which of the following letter will come at the 13th place from left end?

1. M
2. N
3. O
4. P

Ans. Correct Option - 3

According to the given information:

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
Interchanges Position															
C	D	A	B	G	H	E	F	K	L	I	J	O	P	M	N

M is at 13th place from left and will be replaced by O
Hence, O will come at 13th place in coded form

Que. 40 Zojila Tunnel, recently in news is located in which state/Union Territory? 1. Himachal Pradesh

2. Jammu and Kashmir
3. Arunachal Pradesh
4. Uttarakhand

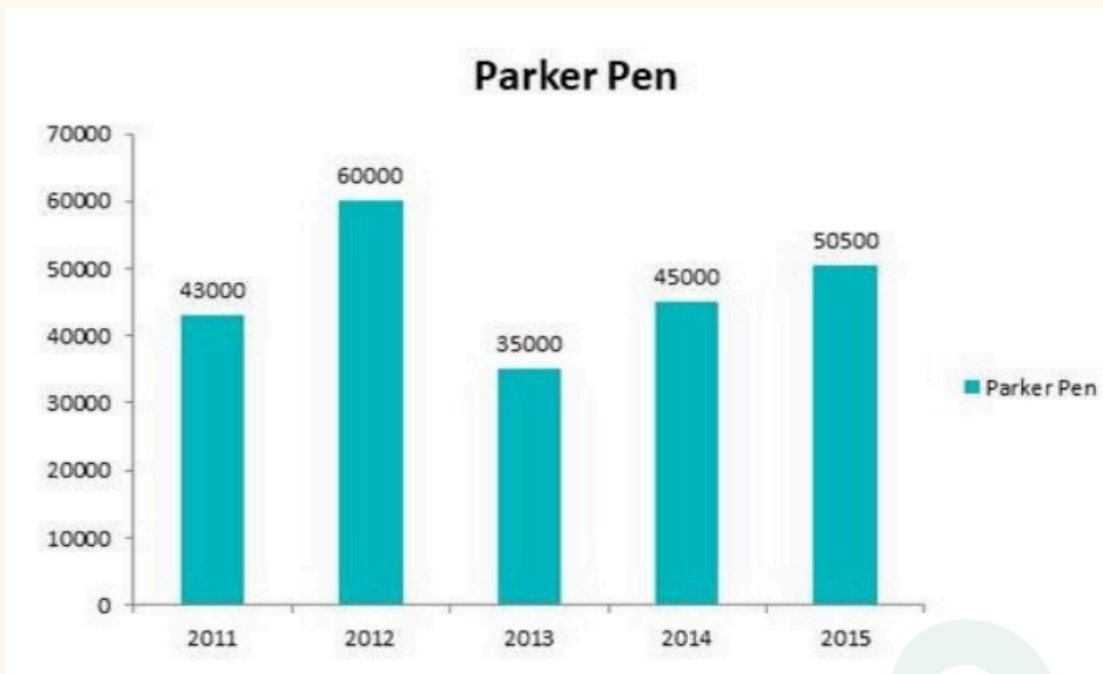
Ans. Correct Option - 2

The correct answer is Jammu and Kashmir.

In News -

Union Road Transport and Highways Minister will initiate simultaneous blasting for Zojila Tunnel Jammu and Kashmir and Ladakh. Hence option 2 is correct.

Que. 41 Directions: The following questions are based on the bar graph given below which represents the sales of Parker Pen sold in different years 2011, 2012, 2013, 2014,2015.



- Find the difference of pens sold in 2011 and 2012 to the pens sold in 2013, 2014, and 2015. 1. **27500**
2. **27000**
3. **30000**
4. **25000**

Ans. Given: Correct Option - 1

Sales of pens in 2011 = 43000

Sales of pens in 2012 = 60000

Sales of pens in 2013 = 35000

Sales of pens in 2014 = 45000

Sales of pens in 2015 = 50500

Calculation:

Total sales in 2011 and 2012

$$\Rightarrow 43000 + 60000$$

$$\Rightarrow 103000$$

Total sales in 2013, 2014, and 2015

$$\Rightarrow 35000 + 45000 + 50500$$

$$\Rightarrow 130500$$

Difference of sales

$$\Rightarrow 130500 - 103000$$

$$\Rightarrow 27500$$

\therefore The difference in sales is 27500.

Que. 42 Find the missing number from the options given below.

4	7	?	4	7
5	7	36	5	7
6	9	56	6	9

1. 30
2. 29
3. 34
4. 33

Ans. Correct Option - 1

The pattern followed here is:

$$5 \times 7 + (7 - 5) - 1$$

$$35 + 2 - 1 = 36$$

Similarly,

$$6 \times 9 + (9 - 6) - 1$$

$$54 + 3 - 1 = 56$$

And,

$$4 \times 7 + (7 - 4) - 1$$

$$28 + 3 - 1 = 30$$

Hence, 30 is the correct answer.

Que. 43

Raghuram Rajan is the author of which of these books?

1. Kadve Pravachan
2. Matoshree
3. I Do What I Do
4. Playing With Fire

Ans. Correct Option - 3

Raghuram Rajan, an Indian economist and 23rd Governor of the RBI is the author of the book 'I Do What I Do'.

Que. 44

The sales of pens in 2012 is how much percent to the sales of pens in 2013, 2014. 1.

60%

2. 75%

3. 70%

4. 80%

Ans. Correct Option - 2

Given:

Sales of pens in 2012 = 60000

Sales of pens in 2013 = 35000

Sales of pens in 2014 = 45000

Formula used:

Percentage = (Part value/Original value) × 100

Calculation:

Total sales in 2013 and 2014

⇒ 35000 + 45000

⇒ 80000

Sales in 2012 = 60000

Percent to the sales of pens

⇒ (60000/80000) × 100

⇒ 75%

∴ Percent of the sales of pens is 75%.

Que 45.

Ram and Shyam go together outside on date 5 of any month. Ram goes outside every 4th day while Shayam goes outside on every 5th day. On which date they both will go together after 5?

1. 20th

2. 22nd

3. 25th

4. 27th

Ans.

Correct Option - 3

Given:

They both go together on date 5 of any month.

Ram go outside every 4th day while Shayam go outside on every 5th day

Ram will go next time on 9, 13, 17, 21, 25

Shyam will go next time on 10, 15, 20, 25

Hence, they will go together on 25th day

Que. 46

Which among the following tribe is not found in India?

- 1. Bhils**
- 2. Zulu**
- 3. Bru-Reang**
- 4. Sahariyas**

Ans. Correct Option - 2

The Zulu is a tribal community mostly found in South Africa.

Que. 47

Find the sales of pens in 2016, if the sales have increased by 20% to the sales of pens in previous year.

- 1. 60400**
- 2. 60700**
- 3. 60600**
- 4. 60800**

Ans. Given: Correct Option - 3

Sales of Pens in 2015 = 50500

Formula used:

Percentage = $(\text{Part value}/\text{Original value}) \times 100$

Calculation:

In 2016 Sales increased by 20%

$\Rightarrow 50500 \times (20/100)$

$\Rightarrow 10100$

Total sales in 2016

$\Rightarrow 50500 + 10100$

$\Rightarrow 60600$

\therefore The total sales in 2016 is 60600.

Que. 48 Find the wrong term in the following series.

0, 4, 17, 48, 100

- 1. 4**
- 2. 17**
- 3. 48**
- 4. 100**

Ans.

Correct Option - 2

The logic is :

$$1^3 - 1^2 = 0$$

$$2^3 - 2^2 = 4$$

$$3^3 - 3^2 = 18 \neq 17$$

$$4^3 - 4^2 = 48$$

$$5^3 - 5^2 = 100$$

Thus, the wrong term is "17".

Que. 49 Who among the following was appointed as the first acting Prime Minister of India after the demise of Jawaharlal Nehru in 1964?

1. Lal Bahadur Shastri
2. Gulzarilal Nanda
3. VP Singh
4. PVR Narsimha Rao

Ans. Correct Option - 2

Gulzarilal Nanda was appointed as the first ever acting Prime Minister of India after the demise of the first PM of India, Jawaharlal Nehru in 1964.

Que. 50

The sale of pens in 2014 is decreased by how much percent to the sale of pen in 2012.

1. 20%
2. 15%
3. 30%
4. 25%

Ans. Given: Correct Option - 4

Sales of pens in 2012 = 60000

Sales of pens in 2014 = 45000

Formula used:

Percentage = (Part value/Original value) × 100

Calculation:

Decrease of sales in 2014

⇒ 60000 - 45000

⇒ 15000

Percent decrease in the sale of the pen

$$\Rightarrow (15000/60000) \times 100$$

$$\Rightarrow 25\%$$

∴ Percent decrease in the sale of the pen is 25%.

Que 51.The two statements below are followed by three conclusions labeled I, II and III. Assuming That the information in the statements is true, even if it appears to be at variance with generally established facts, decide which conclusion(s) logically and definitely follow(s) from the information given in the statements.

Statements:

1. Some mangoes are fruits.
2. All fruits are sweets.

Conclusions:

- I. Some sweets are mangoes.
- II. All sweets are fruits.
- III. Some mangoes are neither fruits nor sweets.

1. Only conclusions I and III follow
2. Only conclusions II and III follow
3. Only conclusions I and II follow
4. Only conclusion I follows

Ans.

Correct Option - 4

Here the logic is:

The least possible Venn diagram for the given statements is as follows,

Conclusions:

- I. Some sweets are mangoes → True (As some fruits are mangoes and all fruits are sweets so some sweets are mangoes)
- II. All sweets are fruits → False (All fruits are sweets)
- III. Some mangoes are neither fruits nor sweets. → False Hence, 'only conclusion I follows' is the correct answer

Que. 52

Sarojini Naidu was the President of which Congress session

1. 1922, Gaya
2. 1928, Calcutta
3. 1925, Kanpur
4. 1931, Karachi

Ans. Correct Option - 3

The correct answer is 1925, Kanpur.

Sarojini Naidu:

She was the first Indian woman president of the Indian National Congress.

She became the president of the Indian National Congress in the Kanpur session in 1925.

She was given the title of "Nightingale of India" for her contributions in the field of poetry writing.

She was called 'Bharat Kokila'.

Que. 53

Find the average of pens sold in all years.

1. 46000

2. 46700

3. 45000

4. 48400

Ans. Given: Correct Option - 2

Sales of pens in 2011 = 43000

Sales of pens in 2012 = 60000

Sales of pens in 2013 = 35000

Sales of pens in 2014 = 45000

Sales of pens in 2015 = 50500

Formula used:

Average = Sum of values/Number of values

Calculation:

Sum of sales in all years

$\Rightarrow 43000 + 60000 + 35000 + 45000 + 50500$

$\Rightarrow 233500$

Number of values = 5

Average of all years

$\Rightarrow (233500/5)$

$\Rightarrow 46700$

\therefore Average of all years is 46700.

Que. 54 In a certain code language the word MATTER is coded as TAMRET then what is the code for BEYOND?

1. YEDONB

2. YDNBNO

3. YEBDNO

4. YBENOD

Ans. Correct Option - 3

The code for MATTER is



Here the logic is interchanging half of the alphabets in reverse order as shown in above figure
Similarly,

The code for BEYOND is



So, the code for BEYOND is YEBDNO

Hence, the correct answer is YEBDNO.

Que. 55 Programme "The Make in India" was started on

1. November 2012
2. September 2014
3. January 2014
4. September 2016

Ans. Correct Option - 2

The correct answer is September 2014.

The Make in India program aims to convert India to a self-reliant country and to give the Indian Economy Global recognition.

The Make in India program was started on 25th September 2014.

It was launched by the prime minister of India Narendra Modi.

It was launched during the 12th five-year planning in India.

Que. 56 The average of 11 numbers is 28. If the average of the first 5 numbers is 23 and the average of the next 5 numbers is 25, then find the 11th number.

1. 68
2. 58
3. 73
4. 63

Ans. Given: Correct Option - 1

Average of 11 numbers = 28

Average of first 5 numbers = 23

Average of next 5 numbers = 25

Formula used:

Sum of observations = Average \times Number of observations

Calculation:

Sum of 11 numbers = 28×11

$\Rightarrow 308$

Sum of first 5 numbers = 23×5

$\Rightarrow 115$

Sum of next 5 numbers = 25×5

$\Rightarrow 125$

Total sum of first 10 numbers = $(115 + 125)$

$\Rightarrow 240$

11th number = $(308 - 240)$

$\Rightarrow 68$

\therefore The 11th number is 68

Que. 57 In the following series, one of the numbers does NOT fit. Find the INCORRECT number. 0, 3, 8, 15, 24, 35, 48, 62, 80, 99

1. 62

2. 35

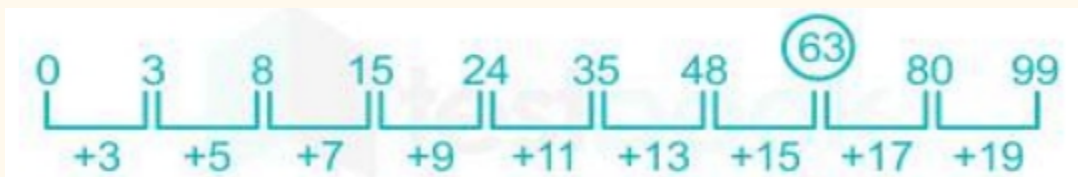
3. 48

4. 99

Ans.

Correct Option - 1

The logic is:



Instead of 62, it should be 63.

Hence, '62' is the incorrect number in the series.

Que. 58 Which of the following is NOT a computer virus?

1. AIDS
2. Anna Kournikova
3. Brain
4. Don

Ans. Correct Option - 4

The Anna Kournikova VBS.SST computer virus, informally known as "Anna," is a viral worm that uses Visual Basic to infect Windows systems when a user unwittingly opens an email note with an attachment that appears to be a graphic image of Russian tennis star Anna Kournikova.

AIDS and Brain are also types of computer viruses.

AIDS is the first virus known to exploit the MS-DOS "corresponding file" vulnerability.

Que. 59

If $\tan A = x - \frac{1}{4x}$, then what will be the value of $\sec A - \tan A$?

1. $2x$
2. x
3. $\frac{1}{2x}$
4. $\frac{1}{2x^2}$

Ans. Given:

Correct Option - 3

$$\tan A = x - \frac{1}{4x}$$

Identity used:

$$\sec^2 A = 1 + \tan^2 A$$

$$(x + y)^2 = x^2 + y^2 + 2xy$$

$$(x - y)^2 = x^2 + y^2 - 2xy$$

Calculation:

$$\text{As, } \tan A = x - \frac{1}{4x}$$

Squaring both sides we'll get

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

$$\Rightarrow \tan^2 A = x^2 + \frac{1}{16x^2} - \frac{1}{2}$$

$$\text{We know that } \sec^2 A = 1 + \tan^2 A$$

$$\Rightarrow \sec^2 A = 1 + x^2 + \frac{1}{16x^2} - \frac{1}{2}$$

$$\Rightarrow \sec^2 A = x^2 + \frac{1}{16x^2} + \frac{1}{2}$$

$$\Rightarrow \sec^2 A = \left(x + \frac{1}{4x}\right)^2$$

$$\Rightarrow \sec A = x + \frac{1}{4x}$$

According to the question we have to find $\sec A - \tan A$

$$\Rightarrow \sec A - \tan A = x + \frac{1}{4x} - (x - \frac{1}{4x})$$

$$\Rightarrow \sec A - \tan A = \frac{1}{4x} + \frac{1}{4x} = \frac{1}{2x}$$

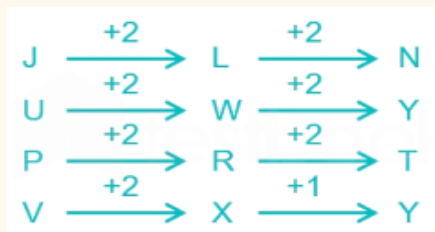
\therefore The value of $\sec A - \tan A$ is $\frac{1}{2x}$

Que. 60 Four letter-clusters have been given, out of which three are alike in some manner, while one is different. Select the odd letter-cluster.

1. JLN
2. UWY
3. PRT
4. VXY

Ans. Correct Option - 4

The pattern followed here is:



Hence, 'VXY' is odd among them.

Que. 61 Which hormone is secreted by the pituitary gland?

1. Adrenaline
2. Growth hormone
3. Insulin
4. Thyroxin

Ans. Correct Option - 2

The Correct Answer is Growth hormone.

Growth hormone is released into the bloodstream from the anterior pituitary gland.

Que. 62

A : B = 3 : 4 and B : C = 5 : 6 Find the C : A

1. 5 : 2
2. 15 : 24
3. 8 : 5
4. 5 : 8

Ans. Given: Correct Option - 3

$A : B = 3 : 4$ and $B : C = 5 : 6$. We have to find the $C : A$ Concept Used:

Concept of ratio and proportion

Calculation:

$$A : B = 3 : 4$$

$$\Rightarrow A/B = 3/4 \text{----- (1)}$$

And, $B : C = 5 : 6$

$$\Rightarrow B/C = 5/6 \text{----- (2)}$$

Multiplying (1) and (2) get,

$$(A/B) \times (B/C) = (3/4) \times (5/6)$$

$$\Rightarrow (A/C) = (5/8)$$

$$\Rightarrow A : C = 5 : 8$$

$$\Rightarrow C : A = 8 : 5$$

$$\therefore C : A = 8 : 5$$

Que 63. Direction: In the question below there are two statements followed by two conclusions I and II. You have to take the two given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Statements:

I. All bottles are cups.

II. Some cups are jugs.

Conclusions:

I. Some bottles are jugs.

II. No jug is cup.

1. Only conclusion I follows.

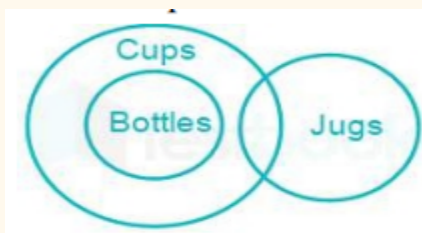
2. Only conclusion II follows.

3. Either conclusion I or II follows.

4. Neither conclusion I nor II follows.

Ans. Correct Option - 4

The least possible Venn diagrams are given below,



Conclusions:

I. Some bottles are jugs → False (It is possible but not definite.)

II. No jug is cup → False (Some cups are jugs.)

Hence, neither conclusion I nor II follows.

Que. 64

Heating of sulphide ore to a high temperature in presence of air

1. Refining

2. Calcination

3. Roasting

4. Smelting

Ans. Correct Option - 3

The correct answer is Roasting.

Roasting is a process of heating of sulphide ore to a high temperature in the presence of air. It is a step in the processing of certain ores.

Que. 65

If $\sin A = 1/2$ and $\cos B = 1/2$ then find the value of $A + B$.

1. 75°

2. 60°

3. 120°

4. 90°

Ans. Given:

Correct Option - 4

$$\sin A = 1/2$$

$$\cos B = 1/2$$

Values used:

$$\sin 30^\circ = 1/2$$

$$\cos 60^\circ = 1/2$$

Calculation:

$$\sin A = 1/2 = \sin 30^\circ$$

$$\Rightarrow A = 30^\circ$$

$$\cos B = 1/2 = \cos 60^\circ$$

$$\Rightarrow B = 60^\circ$$

We have to find the value of $A + B$

$$A + B = 30^\circ + 60^\circ$$

$$\Rightarrow A + B = 90^\circ$$

∴ The value of $A + B$ is 90°

Que. 66 Kunal's birthday is on Monday 29th June. On what day of the week will be Nishith's Birthday in the same year if Nishith was born on 17th December?

- 1. Friday**
- 2. Thursday**
- 3. Saturday**
- 4. Wednesday**

Ans. Correct Option - 2

Kunal's birthday → 29 June, Monday

Nishith's birthday → 17 December

So, June has remaining → 1 Day

July → 31

August → 31

September → 30

October → 31

November → 30

th December)

December 17 → (as Nishith was born on 17

Total Days → 171 Days

Dividing 171 days by 7 (as there are 7 days in a week)

We get remainder 3

Thus, 3 days ahead of Kunal's birthday will be the Nishith birthday which will be on Monday + 3 = Thursday. Hence the answer is Thursday.

Que. 67 What is special about a sword-billed hummingbird?

- 1. It is the largest bird in the world**
- 2. Its bill is longer than rest of its body**
- 3. It lives only in Antarctica**
- 4. It cannot fly**

Ans. Correct Option - 2

The sword-billed hummingbird (*Ensifera ensifera*) is a species of hummingbird from South. It is noted as the only species of bird to have a bill longer than the rest of its body.

Que. 68 A and B invested Rs. 1.5 lakh and Rs. 1 lakh respectively in a firm. If the profit after 1 year is Rs. 24,000, find the share of A.

1. Rs. 12,360
2. Rs. 14,400
3. Rs. 9600
4. Rs. 15,480

Ans. Given: Correct Option - 2

Investment of A = Rs. 1.5 lakh

Investment of B = Rs. 1 lakh

Total profit after 1 year = Rs. 24,000

Concept used:

Share of profit is directly proportional to the amount of investment multiplied by time of investment Calculation:

Total investment of A and B = Rs. (1.5 + 1) lakh

⇒ Rs. 2.5 lakh

Share of A = Rs. $(1.5/2.5) \times 24,000$

⇒ Rs. 14,400

∴ The share of A is Rs. 14,400

Que. 69 Select the letter that can replace the question mark (?) in the following series.

F, I, K, N, P, S, U, ?

1. Q
2. P
3. S
4. X

Ans. Correct Option - 4

According to the English Alphabet series and its positional value:

The pattern followed here is,

F $\xrightarrow{+3}$ I $\xrightarrow{+2}$ K $\xrightarrow{+3}$ N $\xrightarrow{+2}$ P $\xrightarrow{+3}$ S $\xrightarrow{+2}$ U $\xrightarrow{+3}$ X

Hence, 'X' is the correct answer.

Que. 70 Ornithology is the study of

1. Fish
2. Coins
3. Relics
4. Birds

Ans. Correct Option - 4

The correct answer is Birds.

Ornithology is the study of Birds .

Que. 71 In 80 litres pure milk, 8 litres of milk is replaced by water if this process is repeated two times then what will be the ratio of milk and water in the final mixture?

1. 81 : 19
2. 19 : 81
3. 63 : 17
4. 17 : 63

Ans. Given: Correct Option - 1

Quantity of pure milk = 80 litres

Quantity of milk removed and replaced by water = 8 litres

Formula used:

Amount of milk left = Initial amount $\times [1 - (\text{Amount taken out and replaced})/\text{Initial amount}]^n$ Here n is the number of times the process repeated

Calculation:

Amount of milk left = $80 \times [1 - 8/80]^2$

\Rightarrow Amount of milk left = $80 \times 81/100 = 64.8$ litres

Amount of water in the final mixture = $80 - 64.8 = 15.2$ litres

The ratio of milk and water in the final mixture = $64.8 : 15.2 = 81 : 19$ \therefore The ratio of milk and water in the final mixture is 81 : 19

Que. 72 Study the given pattern carefully and select the number that can replace the question mark(?) in it.

14	4	28
21	6	63
45	8	?

1. 195
2. 180
3. 210
4. 150

Ans. Correct Option - 2

The Logic followed here is:

The third number = The First number \times second number \div 2

In Row 1,

$$14 \times 4 \div 2$$

$$= 14 \times 2 = 28$$

In Row 2,

$$21 \times 6 \div 2$$

$$= 21 \times 3 = 63$$

Similarly,

In Row 3,

$$45 \times 8 \div 2$$

$$= 45 \times 4 = 180$$

Hence, the correct answer is "180".

Que. 73 'Delhi-Agra-Jaipur' has been called –

1. Rajasthan calling
2. Palace on Wheels
3. Maru Triangle
4. Golden Triangle

Ans. Correct Option - 4

The correct option is the Golden Triangle.

Delhi-Agra and Jaipur are known by the name of Golden Triangle.

It is called this because of the Triangular shape formed due to the location of these cities.

Que. 74 By selling a sweater for Rs. 750, a shopkeeper gains 25%. For how much should he sell it to gain 30%?

1. 720
2. 780
3. 600
4. 180

Ans. Given: Correct Option - 2

Initial Selling Price (SP) of the sweater = Rs. 750

Initial gain% = 25%

Required gain% = 30%

Formula used:

$$CP = SP \times 100 / (100 + P\%)$$

$$SP = CP \times (100 + P\%) / 100$$

Here CP is Cost Price, SP is Selling Price and P% is Gain percentage

Calculation:

$$CP = (\text{Initial SP}) \times 100 / (100 + P\%)$$

$$\Rightarrow CP = 750 \times 100 / (100 + 25)$$

$$\Rightarrow CP = \text{Rs. } 600$$

As he wants to sell the sweater at gain of 30%

$$\text{Required SP} = CP \times (100 + P\%) / 100$$

$$\Rightarrow \text{Required SP} = 600 \times (100 + 30) / 100 = 780$$

\therefore He should sell the sweater at Rs. 780 to gain 30%

Que. 75 Select the number-pair that is different from the other three? 1. 15-120

2. 16-416

3. 12-648

4. 6-38

Ans. Correct Option - 4

The pattern is as follows,

All the numbers on the right are multiple numbers of the left side number.

1) 15-120 \rightarrow 120 is the multiple of the 15.

2) 16-416 \rightarrow 416 is the multiple of the 16.

3) 12-648 \rightarrow 648 is the multiple of the 12.

Only 38 is not the multiple of the number 6

Hence, 6 – 38 is the correct answer.

Que. 76 Velocity of sound is maximum in .

1. Solid

2. Liquid

3. Gas

4. Steam

Ans. Correct Option - 1

The correct answer is Solid.

Sound travels fastest in solids and slowest in air.

The correct order of sound velocity is- solids > liquids (Oil > water) > gases.

This is due to the fact that the particles in solids are closer together than the particles in liquids or gases.

Que. 77 The marked price of an article is Rs. 4000. If the shopkeeper sold the article at a 10% discount but still got a profit of 20%, find the cost price of the article.

1. Rs. 3200

2. Rs. 2880

3. Rs. 3000

4. Rs. 3300

Ans. Given: Correct Option - 3

Marked price = Rs. 4000

Discount = 10%

Profit = 20%

Formula used:

$$SP = MP \times [(100 - \text{Discount}\%)/100]$$

$$CP = SP \times [100/(100 + \text{Gain}\%)]$$

Calculation:

$$SP = \text{Rs. } 4000 \times (90/100)$$

$$\Rightarrow \text{Rs. } 3600$$

$$CP = \text{Rs. } 3600 \times (100/120)$$

$$\Rightarrow \text{Rs. } 3000$$

∴ The cost price of article is Rs. 3000

Que. 78 A series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

EKP, ?, IQX, KTB, MWF

1. GMU

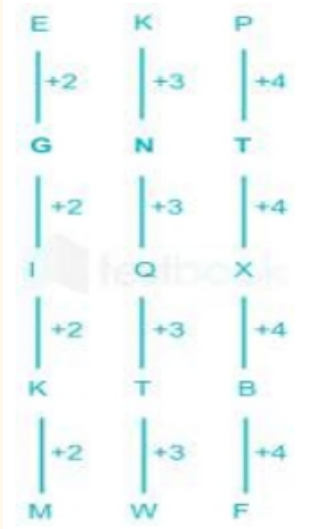
2. GNT

3. HOV

4. FLT

Ans. Correct Option - 2

The pattern followed is:



Hence, 'GNT' is the correct answer.

Que. 79 Which acid is used in eye wash?

1. Nitric Acid
2. Boric Acid
3. Oxalic acid
4. None of the above

Ans. Correct Option - 2

Boric acid (H_3BO_3) is used in eye, to wash to and clean the eyes. It helps remove pollutants from the eye and provide soothing relief from irritants.

Que. 80 The length of a room is $(3x + 10)$ m and the breadth of the room is $(2x + 5)$ m. The area of four walls of the room is $(60x + 180)$ m². What is the height of the room?

1. 4 m
2. 6 m
3. 7 m
4. 8 m

Ans. Correct Option - 2 Given:

The length of the room is $(3x + 10)$ m and breadth of the room is $(2x + 5)$ m. The area of four walls of the room is $(60x + 180)$ m². We have to find the height of the room.

Concept Used:

If the length, breadth and height of a room be l , b and h then the area of four walls of the room is $[2 \times (l + b) \times h]$ Calculation:

Let, the height of the room be h

Accordingly,

$$2 \times \{(3x + 10) + (2x + 5)\} \times h = (60x + 180)$$

$$\Rightarrow (5x + 15)h = 30x + 90$$

$$\Rightarrow (5x + 15)h = 6(5x + 15)$$

$$\Rightarrow h = 6$$

\therefore The height of the room is 6 m.

Que. 81 Read the statement below and decide which of the conclusions logically follows it? **Statement:**

Nowadays the prices of goods are increasing.

Conclusions:

- I. All things are becoming rare.**
- II. People cannot eat things.**
- 1. Only conclusion (I) follows.**
- 2. Neither (I) nor (II) follows.**
- 3. Only conclusion (II) follows.**
- 4. Both conclusions (I) and (II) follow.**

Ans.

Correct Option - 2

Given,

Statement:

Nowadays the prices of goods are increasing.

Conclusions:

I. All things are becoming rare. \rightarrow This statement does not follow as all things are not becoming rare. II. People cannot eat things. \rightarrow This statement also does not follow as the statement is regarding increasing prices of goods and it has nothing to do with what people can eat and not.

Hence, the correct answer is Neither (I) nor (II) follows.

Que. 82 Blood and lymph are types of

- 1. Permanent tissue**
- 2. Connective tissue**
- 3. Epithelial tissue**
- 4. Muscular tissue**

Ans. Correct Option - 2

The correct answer is Option 2, i.e. Connective Tissue.

Connective tissue provides support, binds together, and protects tissues and organs of the body. Connective tissue consists of three main components: cells, protein fibers, and an amorphous ground substance.

Together the fibers and ground substance make up the extracellular matrix.

Que. 83. $2^{x-1} + 2^{x+1} = 320$. Find the value of x.

1. 6

2. 7

3. 8

4. 5

Ans. Correct Option - 2

Given:

$$2^{x-1} + 2^{x+1} = 320.$$

We have to find the value of x.

Calculation:

$$2^{x-1} + 2^{x+1}$$

$$= 320$$

$$\Rightarrow 2^x/2 + 2$$

$$\times 2 = 320$$

$$\Rightarrow 2^x(1/2 + 2) = 320$$

$$\Rightarrow 2^x \times (5/2) = 320$$

$$\Rightarrow 2^x = 320 \times (2/5)$$

$$\Rightarrow 2^x = 64 \times 2$$

$$\Rightarrow 2^x = 128$$

$$\Rightarrow 2^x = 2^7$$

$$\Rightarrow x = 7$$

∴ The required value of x is 7.

Que. 84 In a code language, 'TORCH' is written as 'WRUFK'. How will 'WINTER' be written in that language?

1. ZLPWGU

2. ZLQWHU

3. YLQXHU

4. ZLQWHV

Ans. Correct Option - 2

The positions of the letters according to the English alphabet series :

Given,

'TORCH' is written as 'WRUFK'

The pattern followed here is,



Similarly,



Hence, the correct answer is ZLQWHU.

Que. 85 Hydrochloric acid is present in

1. Stomach
2. Small intestine
3. Large intestine
4. Liver

Ans. Correct Option - 1

Hydrochloric acid breaks down proteins in the stomach to prepare them for digestion and kills bacteria that enters the stomach. HCL also helps digest other foods in your stomach.

Que. 86 Two varieties of milk with different prices is mixed in the ratio 2 : 3. The price of 1st type of milk Rs 10 per litre while the price of 2nd type of milk is Rs. 15 per litre. The average price of the mixture.

1. Rs. 11 per litre
2. Rs. 12 per litre
3. Rs. 13 per litre
4. Rs. 14 per litre

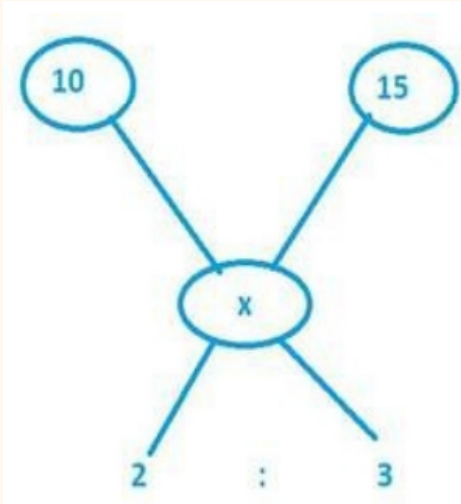
Ans. Given: Correct Option - 3

Ratio of two varieties of milk = 2 : 3

Price of 1st type of milk = Rs. 10

Price of 2nd type of milk = Rs. 15

Calculation:



Let the average price of mixture be 'x'

$$\Rightarrow (x - 10)/(15 - x) = 3/2$$

$$\Rightarrow 2x - 20 = 45 - 3x$$

$$\Rightarrow 5x = 65$$

$$\Rightarrow x = 13$$

∴ The average price of mixture is 13 Rs per litre.

Que. 87 Select the number that can replace the question mark (?) in the following series. 5, 6, 10, 19, 35, ?

1. 64

2. 73

3. 55

4. 60

Ans. Correct Option - 4

The pattern followed is,

$$2^2 = 6$$

$$5 + 1$$

$$2^2 = 10$$

$$6 + 2$$

$$2^2 = 19$$

$$10 + 3$$

$$2^2 = 35$$

$$19 + 4$$

Similarly,

$$2^2 = 60$$

35 + 5

Hence, '60' is the correct answer.

Que. 88 Chemical formula of plaster of paris:

1. CaSO_4
2. $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$
3. $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$
4. $\text{CaSO}_4 \cdot \text{H}_2\text{O}$

Ans. Correct Option - 3

The correct answer is $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$.

Chemical formula of plaster of paris: $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$

Que. 89 If 3 small spherical balls having radius 3 cm, 4 cm, and 5 cm melt together to form a big spherical ball. What is the radius of big spherical ball?

1. 8 cm
2. 7 cm
3. 6 cm
4. 9 cm

Ans. Given: Correct Option - 3

Radius of 3 small spherical balls are 3 cm, 4 cm and 5 cm respectively. Concept used:

Volume of 3 small spherical melted balls = Volume of 1 big spherical ball

Formula used:

$$\text{Volume of sphere} = \left(\frac{4}{3}\right) \times \pi \times r^3$$

where,

r = Radius of sphere

Calculations:

$$\text{Volume of sphere} = \left(\frac{4}{3}\right) \times \pi \times r^3$$

$$\text{Volume of first small ball} = \left(\frac{4}{3}\right) \times \pi \times (3)^3$$

$$\Rightarrow \left(\frac{4}{3}\right) \times \pi \times 27$$

$$\Rightarrow 36\pi \text{ cm}^3$$

$$\text{Volume of second small ball} = \left(\frac{4}{3}\right) \times \pi \times (4)^3$$

$$\Rightarrow \left(\frac{4}{3}\right) \times \pi \times 64$$

$$\Rightarrow \frac{256\pi}{3} \text{ cm}^3$$

$$\text{Volume of third small ball} = \left(\frac{4}{3}\right) \times \pi \times (5)^3$$

$$\Rightarrow \left(\frac{4}{3}\right) \times \pi \times 125$$

$$\Rightarrow 500\pi/3 \text{ cm}^3$$

$$\text{Volume of big ball} = (4/3) \times \pi \times R^3$$

$$\text{Total volume of small balls} = 36\pi + (256\pi/3) + (500\pi)/3$$

$$\Rightarrow (108\pi + 256\pi + 500\pi)/3$$

$$\Rightarrow 864\pi/3$$

$$\Rightarrow 288\pi \text{ cm}^3$$

Volume of 3 small spherical melted balls = Volume of 1 big spherical ball

$$\Rightarrow 288\pi = (4/3) \times \pi \times R^3$$

$$\Rightarrow R^3 = 216$$

$$\Rightarrow R = \sqrt[3]{216}$$

$$\Rightarrow R = 6 \text{ cm}$$

\therefore The radius of big spherical ball is 6 cm.

Que. 90 In the following question, select the related letters from the given alternatives.

AG : ZT :: JD : ?

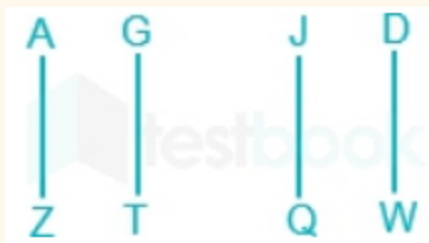
1. UV
2. PX
3. QW
4. OY

Ans. Correct Option - 3

The pattern here is as follows is replacing the letter by its opposite or reverse letter in alphabetical order i.e. A is Replaced by Z, B by Y, C by X, D by W and so on as shown in the figure below:



Hence the required conversion is,



Hence, QW is the correct alternative.

Que. 91 In a circuit, voltmeter is always connected in ?

1. Either series or parallel
2. Triangular
3. Series
4. Parallel

Ans. Correct Option - 4 **CONCEPT:**

EXPLANATION:

The voltmeter is used to measure the potential difference. It is always connected in parallel across the points where the potential difference is to measure so one end of the voltmeter is connected to the point A of a resistance AB and the other end to the point B and also it has high resistance so that it takes a negligible current from the circuit.

Voltmeters have high resistance, so in series, they would greatly decrease the current going to the circuit.

Hence option 4 is correct.

Que. 92 The SI unit of electrical conductance is_____ .

1. Ohm
2. Siemens
3. Ohm meter
4. Ampere

Ans. Correct Option - 2

CONCEPT:

Electrical conductance (K): The reciprocal of electrical resistance is called conductance. It is a measure of how easily current can flow through a material.

EXPLANATION:

The SI unit of conductance = $1/(\text{The SI unit of resistance}) = 1/\Omega = \Omega^{-1} = \text{Siemens}$.

Hence option 2 is correct.

Que. 93 Glucose and fructose are example of

1. Isotopes
2. Isotones
3. Isobars
4. Isomers

Ans. Correct Option - 4

The correct answer is Isomers.

Glucose, galactose, and fructose are isomers.

Glucose and Fructose have the same formula, meaning they are isomers. It means they all have the same molecular formula but differ structurally and chemically. The position of the oxygen differs giving different physical properties.

Que. 94 The first Satyagraha was started in Champaran, Bihar in_____ .

- 1. 1929**
- 2. 1907**
- 3. 1922**
- 4. 1917**

Ans. Correct Option - 4

The Correct Answer is Option 4 i.e 1917.

The first Satyagraha was started in Champaran, Bihar in 1917 .

Que. 95 Malaria is caused by :

- 1. Plasmodium**
- 2. Female Anopheles mosquito**
- 3. Culex mosquito**
- 4. Virus**

Ans.

Correct Option - 1

Explanation:

Malaria is caused by a protozoan Plasmodium (P. vivax, P. malaria, and P. falciparum) P. falciparum causes the most serious and fatal malignant malaria.

Que. 96 Which Vitamin is popularly known as the 'sunshine vitamin'?

- 1. Vitamin A**
- 2. Vitamin C**
- 3. Vitamin D**
- 4. Vitamin B**

Ans. Correct Option - 3

The correct answer is Vitamin D.

Vitamin D is known as 'Sunshine Vitamin'. Because our body produces vitamin D naturally when it's directly exposed to sunlight.

Vitamin D protects the teeth and bones and defends against diseases.

Que. 97 The famous book written by the scholar Al-Biruni is .

- 1. Kitab ul-Hind**
- 2. Hindustani**
- 3. Al-Hindustani**
- 4. Sher-e-Hind**

Ans. Correct Option - 1

Kitab ul-Hind is the famous book written by the scholar Al-Biruni.

Que 98.

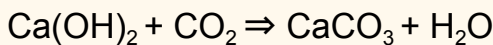
Lime water becomes milky due to which of the following gases?

1. CO₂
2. O₂
3. NO₂
4. N₂

Ans. Correct Option - 1

Lime water becomes milky due to CO₂.

CO₂ turns lime water milky, due to the formation of CaCO₃(calcium carbonate). The chemical reaction is as follows:



Que. 99 The joint sitting of the Lok Sabha and the Rajya Sabha of states is summoned by

1. The president
2. The speaker of the Lok Sabha
3. The Parliament
4. The Chairman of the Rajya Sabha

Ans. Correct Option - 1

Joint session (Article 108) refers to the meeting of both houses of parliament to consider bills together. In India Concurrence of both houses are required to pass any bill and if an ordinary bill has been rejected by any house of the parliament and if more than six months have elapsed from the date of the reception of the bill the President summon a joint session presided over by Speaker for purpose of passing the bill.

Que. 100 Which of the following parts of the brain regulates the pituitary gland?

1. Thalamus
2. Hypothalamus
3. Cerebellum
4. Cerebrum

Ans.

Correct Option - 2

Option 2 is correct:

Hypothalamus regulates the pituitary gland.

Hypothalamus is a small area of the brain.

The hypothalamus is located below the thalamus in the brain.

The hormones from the hypothalamus govern physiological functions such as temperature regulation, thirst, hunger, sleep, mood, and the release of other hormones within the body. The cerebrum is the largest part of the brain.