RRB NTPC 29 Dec 2020 Shift 1 Solution

Que. 1 The chemical formula of lime water is:
1.CaO
2.CaCO3
3.Ca(HCO3)2
4.Ca(OH)2

Ans. Correct Option - 4
The correct answer is Ca(OH)2
When quick lime (CaO)reacts with water, lime water is produced. CaO +H2O→Ca(OH)2
Here the product is Ca(OH)2, which is slaked lime or lime water.
Mainly Calcium carbonate disassociates to produce quicklime and carbon dioxide.
Then the quick lime reacts with water and produces lime water.
Calcium hydroxide is used in many applications, including food preparation.
Limewater is the common name for a saturated Ans. of calcium hydroxide.

Que. 2 A can do a work in 40 days, B can do the same work in 60 days and C can do the same work in 80 days.They all together started the work and A left 11 days before also B left 8 days before the completion of whole task, find the number of days taken to complete the work. 1. 13 days
2. 26 days
3. 39 days
4. 52 days

Ans. GIVEN: Correct Option - 2
A can complete work in 40 days, B in 60 days and C in 80 days & A left 11 days, and B left 8 days before the completion of the whole task
FORMULA USED:
Total work = Efficiency × Time taken
CALCULATION:
A can complete work in 40 days, B in 60 days and C in 80 days & A left 11 days, and B left 8 days before the completion of the whole task
⇒ Total work = L.C.M(40, 60, 80)

⇒ 240
⇒ The efficiency of A, B, C are (240/40, 240/60, 240/80)
⇒ The efficiency of A, B, C are (6, 4, 3)
⇒ Total work of (A for 11 days & B for 8 days) = (11 × 6 + 8 × 4)
⇒ (66 + 32) = 98
⇒ Now total work = (240 + 98) = 338
⇒ total number of days required to finish the work by working together = Total work/Efficiency of (A+B+C)
⇒ 338/13 = 26
∴ Total number of days required to finish the work by working together is 26 days

Que. 3 A group of five students has different heights. Raj is shorter than Simran. Simran is shorter thanManoj.Manu is taller than only Kriti. Who among the following is the tallest?
1. Manu
2. Raj
3. Simran
4. Manoj

Ans. Correct Option - 4
According to the given statement;
A group of five students has different heights. Raj is shorter than Simran.
Simran
Raj
Simran is shorter than Manoj.
Manoj
Simran
Raj
Manu is only taller than Kriti.
Manoj
Simran
Raj
Manu
Kirti
Hence, Manoj is the tallest in the group.

Que. 4 Bile Juice is formed in the
1.Kidney
2.Salivary Gland
3.Liver

4.Lung

Ans. Correct Option - 3
The Correct answer is Liver. Liver-The liver is the largest gland in the body. The liver mainly secretes 'Bile Juice' which is stored in a Gallbladder. Bile Juice and Pancreatic juice are released into the small intestine by a common duct. Unused glucose is stored in the liver in the form of glycogen. Heparin, Urea, and Bile Juice are produced in the liver. The major supply of blood to the liver is by 'portal vein'(75%) & remaining (25%) by Hepatic artery. That is why the liver is known to have a 'Dual blood supply'.

Que. 5 Find the unit digit of $(432)^{412} \times (499)^{431}$
1. 2
2. 4
3. 6
4. 8

Ans. Correct Option - 2
Given:
$(432)^{412} \times (499)^{431}$
Concept:
$9^{even\ no}$= unit digit 1
$9^{odd\ no.}$= unit digit 9
Calculation:
(432)412 × (499)431
Taking unit digits
$\Rightarrow 2^{412} \times 9^{431}$
As we know unit digit of 2^1 = 2, 2^2 = 4, 2^3= 8, 2^4 = 6
$\Rightarrow 2^{4(103)} \times 9^{431}$
$\Rightarrow 6 \times 9$
$\Rightarrow 54$
$\therefore$ The unit digit of $(432)^{412} \times (499)^{431}$ is 4.

Que. 6 Directions: In the following question, the statement is given followed by two conclusions. You Have to Consider the statement to be true, even if it seems to be at variance from commonly known facts. You Are to decide which of the given conclusions can be drawn definitely from the given statement. Statements: Spinner bowler takes 6 wickets in a T -20 match.

Conclusions:
I. 80% of bowlers are spinners.
II. The opener will be a spinner.
1. Only I is true
2. Only II is true
3. Neither I nor II is true
4. Either I or II is true

Ans.
Given:
Correct Option - 3
Statements: Spinner bowler takes 6 wickets in a T -20 match.
Conclusions:
I. 80% of bowlers are spinners. (False, as there is no mention of the percentage of spinner bowlers in the team)II. The opener will be a spinner. (False, it is not given that the opener is a spinner.)
Hence, Neither I nor II is true.

Que. 7 Who is the present Secretary General of the United Nations Organization?
1. Ban Ki Moon
2. Antonio Guterres
3. Kofi Annan
4. Kurt Waldheim

Ans. Correct Option - 2
The correct answer is Antonio Guterres. The United Nations is an intergovernmental organization formed to maintain international peace and security. develop positive relationships among nations. The United Nations Organization was formed on 24
th October 1945, after World War II. The headquarters of the United Nations Organization is in New York City. The Charter of the UN was signed on 26
th June 1945 bt representatives of 50 nations. At present, the UN consists of 193 countries as its members. South Sudan is the last member to join the UN. Antonio Guterres is the incumbent Secretary-General of the United Nations Organization. He was appointed as the ninth secretary-general of the United Nations in 2017. Antonio Guterres is a Portuguese citizen. Kurt Waldheim was the fourth Secretary-General of the United Nations(1972 to 1981). Kofi Annan was the seventh Secretary-General of the United Nations(1997 to 2006). Ban Ki-moon was the eighth Secretary-General of the United Nations(2007 to 2016).

Que. 8 Find the value of (60^2- 54^2).

1. 342

2. 684

3. 400

4. 604

Ans. Correct Option - 2

Given:

(60^2- 54^2)

Formula used:

(a2- b2) = (a - b) × (a + b)

Calculations:

(60^2- 54^2)

⇒ (60 + 54) × (60 - 54)

⇒ 114 × 6

⇒ 684

∴ The value of (60^2- 54^2) is 684.

Que. 9 Directions: In each of the following questions, the statement is given followed by four conclusions. You Have to consider the statement to be true, even if it seems to be at variance fromcommonlyknownfacts.You are to decide which of the given conclusions can be drawn definitely from the given statement. Statements: When Savita hear its birthday, then she orders the cake. Conclusions:

I. She orders the cake

II. She hears about someone's birthday.

III. She does not order the cake.

IV. She does not hear about someone's birthday.

1. IV and III follow

2. I and II follow

3. II and III follow

4. I and IV follow.

Ans.

Given:

Correct Option - 2

Statements: When Savita hears its birthday, then she orders the cake.
Conclusions:
I. She orders the cake. (True as mentioned in the statement that she orders the cake.)
II. She hears about someone's birthday. (True, she hears someone's birthday and then orders the cake.)
III. She does not order the cake. (False, given in the statement that she orders the cake.)
IV.She does not hear about someone's birthday. (False, she hears someone's birthday.)
Hence, I and II follow.

Que. 10
1. The Indian National Congress (INC) was formed by the _____ in 1885.
1.W.C. Bannerjee
2. Dadabhai Naoroji
3. Allan Octavian Hume
4. Badruddin Tyyabji

Ans. Correct Option - 3
The correct answer is Allan Octavian Hume.
The Indian National Congress (INC) was formed by Allan Octavian Hume in 1885. INC was the first modern nationalist movement to emerge in the British Empire in Asia andAfricaand it grew to become one of the most important political parties in pre-independence India. The first session of INC was held in Bombay from 28–31 December 1885 under the chairmanshipofW.C. Bonnerjee.

Que. 11 The average of 45 numbers is 150. Later it is found that a number 46 is wrongly written as 91, then find the correct average.
1. 151
2. 147
3. 149
4. 153

Ans. Given: Correct Option - 3
The average of 45 data is 150
46 is wrongly written as 91
Concept used:
Average = Sum of total observations/Total number of observations
Calculation:
The total sum of all 45 number = 150 × 45 = 6750
Now, 46 is wrongly written as 91

The correct sum of data = 6750 – (91 – 46) = 6705
Then, Correct average of the data = 6705/45 = 149
∴ The correct average is 149

Que. 12 In the following question below some statements are given followed by some conclusions. Taking The Given statements to be true even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusions logically follows the given statements. Statement:
I. Some bells are golden
II. Some bells are red. Conclusion:
I. Some red are golden
II. No golden is red
1. Only conclusion I follows
2. Both conclusions I and II follow
3. Only conclusion II follows
4. Either conclusion I or II follow

Ans. Correct Option - 4
According to the given statement, Statement:
I. Some bells are golden
II. Some bells are red.
The possible Venn diagram is as follows:

Conclusion:
I. Some red are golden. (False, it can be true but not definite.)
II. No golden is red. (False, it can be true but not definite.)
Both the Conclusions are complimentary terms.
Hence, Either conclusion I or II follow

Que. 13 Lichen is a combination of
1.An algae and a fungus
2. An algae and a bacteria
3. A bacterium and a fungus
4. A bacterium and a gymnosperm

Ans. Correct Option - 1
A lichen is a composite organism that arises from algae or cyanobacteria (or both) living among filaments of a fungus in a symbiotic relationship.

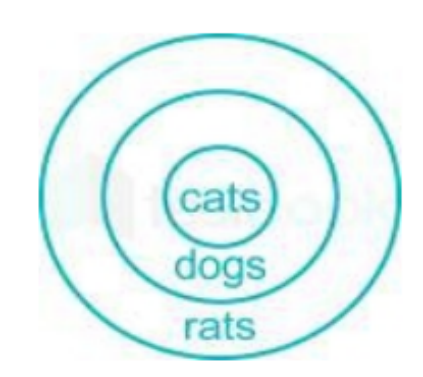
Que. 14 Two trains are going from Bangalore to Chennai with a speed of 80km/hr and 100 km/hr. If the train with slower speed starts 1 hour before then find the time taken by the second train to catch the 1st train.
1. 6 hours
2. 5 hours
3. 4 hours
4. 8 hours

Ans. GIVEN: Correct Option - 3
Speed of trains are 80 km/hr and 100 km/hr and lower speed train start 1 hour earlier
FORMULA USED:
Distance = Time × Speed
CALCULATION:
Speed of trains are 80 km/hr and 100 km/hr and slower speed train start 1 hour earlier
⇒ Distance covered by slower train in 1 hour = 80 × 1 = 80 km
Relative speed = 100 - 80 = 20 km/hr
So the time is taken by the faster train to cross the slower train = 80/20 = 4 hours
∴ Time taken by 2nd train to catch the 1st train is 4 hours

Que. 15 In the following question below some statements are given followed by some conclusions. Taking The Given statements to be true even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusions logically follows the given statements.
Statement:
I. All cats are dogs
II. All dogs are rats
Conclusion:
I. Some cats are rats. II. No cats are rats. 1. Only conclusion I follows
2. Both conclusions I and II follow
3. Only conclusion II follows
4. Either conclusion I or II follow

Ans.
Given:

Statement:
I. All cats are dogs
II. All dogs are rats
Correct Option - 1
The possible Venn diagram is as follows:



Conclusion:
I. Some cats are rats. (True, as all cats are dogs and all dogs are rats. So, some cats are rats, true.)
II. No cats are rats. (False, as according to the diagram cats are a part of rats also.)
Hence, Only conclusion I follow.

Que. 16
1. Who discovered the cell in 1665?
Robert Hooke
2. Robert Crook
3. David Thomson
4. Marie Francois

Ans. Correct Option - 1
The cell was discovered by Robert Hooke in 1665. Since it looked strangely similar to Cellular or small rooms which monks inhabited, thus deriving the name. However, what Hooke actually saw was the dead cell walls of plant cells (cork) under Simple Microscope.

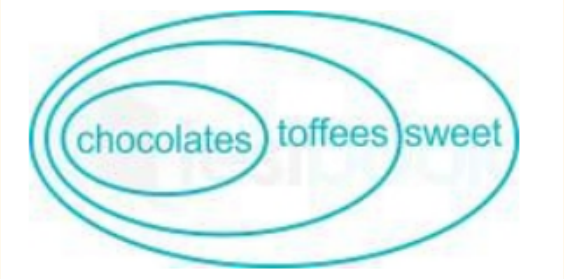
Que. 17 If A, B, and C can do a piece of work in 5 days, B, C, and D can do the same work in 10 days, C, D, and A can do the same work in 15 days, D, A, and B can do the same work in 30 days. Find The Time Taken by A + B + C + D?
1. 9 days
2. 7 days
3. 9.5 days
4. 7.5 days

Ans. Correct Option - 4 Given:
Time is taken by:
A + B + C = 5 days
B + C + D = 10 days
C + D + A = 15 days
D + A + B = 30 days
Concept used:
Total time = Work/One-day work
Calculation:
If the time is taken to do work by A + B + C = 5 days
⇒ 1 day work by A + B + C = 1/5 ……(1)
If the time is taken to do work by B + C + D = 10 days
⇒ 1 day work by B + C + D = 1/10 ……(2)
If the time is taken to do work by C + D + A = 15 days
⇒ 1 day work by C + D + A = 1/15 ……(3)
If the time is taken to do work by D + A + B = 30 days
⇒ 1 day work by D + A + B = 1/30 ……(4)
Adding (1),(2),(3), and (4), we get
1 day work by (A + B + C), (B + C + D), (C + D + A), and (D + A + B) = 1/5 + 1/10 + 1/15 + 1/30
⇒ 1 day work by 3A + 3B + 3C + 3D = (6 + 3 + 2 + 1)/30
⇒ 1 day work by 3(A + B + C + D) = 12/30
⇒ 1 day work by 3(A + B + C + D) = 2/5
Total time = Work/One-day work
Total time taken by 3(A + B + C + D) = 1/(2/5)
⇒ Total time taken by 3(A + B + C + D) = 5/2
⇒ Total time taken by (A + B + C + D) = 5/2 × 3
⇒ Total time taken by (A + B + C + D) = 15/2 days
⇒ Total time taken by (A + B + C + D) = 7.5 days
∴ The total time taken to do a work by A + B + C + D is 7.5 days

Que. 18 In the following question below some statements are given followed by some conclusions. Taking The Given statements to be true even if they seem to be at variance from commonly known facts, read all the conclusions and then decide which of the given conclusions logically follows the given statements. Statement:
I. All chocolates are toffees. II. All toffees are sweet
Conclusion:
I. Some chocolates are sweet.
II. All chocolates are sweet.

1. Only conclusion I follows
2. Both conclusions I and II follow
3. Only conclusion II follows
4. Either conclusion I or II follow

Ans.
Given:
Statement:
Correct Option - 2
I. All chocolates are toffees.
II. All toffees are sweet
The possible Venn diagram is as follows;



Conclusion:
I. Some chocolates are sweet. (True, as all chocolates are toffees and all toffees are sweet. So, chocolates are a part of sweets.)
II. All chocolates are sweet. (True, according to the diagram all chocolates are a part of sweet.)
Hence, both conclusions I and II follow.

Que. 19
1. Which blood group is a universal acceptor?
1. O+
2. O–
3. AB–
4. AB+

Ans. Correct Option - 4
AB+ is the blood group which is a universal acceptor since it has both kinds of antigens, which are Antigen A and Antigen B. People having a blood group of AB+ can accept blood from any person of any blood group.

Que. 20
If cost price of 5 articles is equal to selling price of 8 articles then find the profit or loss percentage?
1.25.5% loss
2. 35% profit
3. 37.5% loss
4. 40% profit

Ans. Correct Option - 3 Given:
5CP = 8SP
Formula used:
Loss% = (CP – SP)/CP × 100
Calculation:
5CP = 8SP
⇒ CP/SP = 8/5
⇒ SP/CP = 5/8
⇒ 1 – SP/CP = 1 – 5/8 [Subtract 1 both sides]
⇒ (CP – SP)/CP = (8 – 5)/8
⇒ (CP – SP)/CP × 100 = 3/8 × 100
⇒ Loss%= 37.5% [Loss% = (CP – SP)/CP × 100]
∴ The loss% is 37.5%.

Que. 21 In a given code form:
P + Q means P - Q
P ÷ Q means P × Q
P × Q means P + Q
P - Q means P ÷ Q
What is the correct answer for the given mathematical equation 5 × 32 - 16 ÷ 7 + 19 = ?
1. 1
2. 2
3. 3
4. 0

Ans. Correct Option - 4
According to the given statement;
Given equation:
5 × 32 - 16 ÷ 7 + 19

Using code:
5 + 32 ÷ 16 × 7 - 19;
5 + 2 × 7 - 19
19 - 19 = 0
Hence, the correct answer is 0

Que. 22
1. Who is considered as the Father of Indian Constitution?
Bal Gangadhar Tilak
2. Rajendra Prasad
3. Bhim Rao Ambedkar
4. Jawaharlal Nehru

Ans. Correct Option - 3
The correct answer is option 3 i.e Bhim Rao Ambedkar.
Bhim Rao Ambedkar is considered as the Father of the Indian Constitution. He was the chief architect of the Constitution of India. He was appointed Chairman of the Constitution Drafting Committee in 1947.

Que. 23 A sum of Rs 10000 amounts to 12200 in 2 years and Rs 13300 in 3 years at simple interest. Find The Rate of interest.
1. 10%
2. 11%
3. 12%
4. 22%

Ans. Correct Option - 2 Given- Concept Used- Simple Interest = P × R × T/100 [where P = Principal, R = Rate, T = Time]
Interest = Amount - Prinicipal
CalculationInterest for 3rd year = Amount after 3 years - Amount after 2nd years
⇒ 13300 - 12200
⇒ 1100
According to Question- 1100 = 10000 × R × 1/100
⇒ R = 11%
∴ Rate of interest = 11%

Que. 24 In a given code form:
P + Q means P - Q
P ÷ Q means P × Q

P × Q means P + Q
P - Q means P ÷ Q
What is the correct answer for given mathematical equation 49 - 7 × 6 ÷ 3 + 20 = ?
1. 8
2. 7
3. 5
4. 6

Ans. Correct Option - 3
According to the given statement;
Given equation:
49 - 7 × 6 ÷ 3 + 20
Using code:
49 ÷ 7 + 6 × 3 - 20;
7 + 18 - 20;
25 - 20 = 5
Hence, the correct answer is 5

Que. 25
1. Who won the IPL 2020?
Chennai Super Kings
2. Mumbai Indians
3. Delhi Daredevils
4. Rajasthan Royals

Ans. Correct Option - 2
The correct answer is Mumbai Indians. The current IPL title holders are the Mumbai Indians, who won the 2020 season. Mumbai Indians have the maximum number of titles, won five titles.

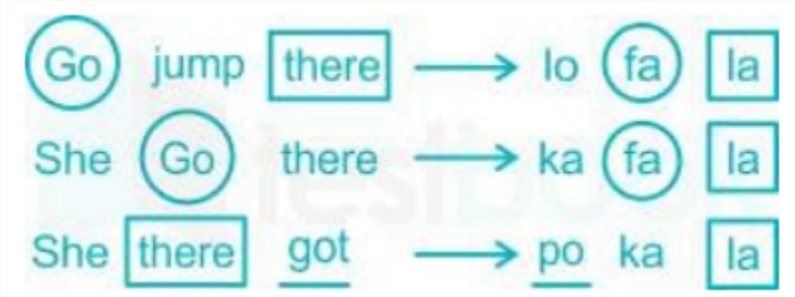
Que. 26 If a number is in the form of $8^{10} \times 9^{7} \times 7^{8}$, find the total number of prime factors of the given number.
1. 52
2. 560
3. 3360
4. 25

Ans. Correct Option - 1 Given:
The number is $8^{10} \times 9^{7} \times 7^{8}$

Concept used:
If a number of the form xa × yb × zc ..... and so on, then total prime factors = a + b + c..... and so onWhere x, y, z,.....are prime numbers
Calculation:
The number $8^{10} \times 9^{7} \times 7^{8}$
can be written as $(2^{3})^{10} \times (3^{2})^{7} \times 7^{8}$
The number can be written as $2^{30} \times 3^{14} \times 7^{8}$
Total number of prime factors = 30 + 14 + 8
∴ The total number of prime factors are 52

Que. 27 Direction: Study the following information carefully and answer the given questions.
In a certain code language, 'Go jump there' coded as 'lo fa la'
'She Go there' coded as 'ka fa la'
'She there got' coded as 'po ka la' Question:-
How is 'Go got' coded in the given language?
1. lo ka
2. fa po
3. fa ka
4. ka la

Ans. Correct Option - 2
According to the given coded form;



Hence, 'Go got' is coded as fa po

Que. 28 Mahatma Gandhi was elected as the President of the Indian National Congress (INC) in the Annual
Session held at
1. Ahmedabad
2. Poona
3. Belgaum

4. Kanpur

Ans. Correct Option - 3
The correct answer is option 3, i.e. Belgaum. Mahatma Gandhi was elected as the President of the Indian National Congress (INC) in the Annual
Session held at Belgaum in 1924. He held the position of the President of the INC only once. The Congress Annual Sessions were held at Ahmedabad twice in 1902 and 1921 where SurendranathBanerjea and C.R. Das were elected presidents respectively. The Poona Annual Congress Session was held in 1895 with Surendranath Banerjea as its new elected president. The Kanpur Annual Congress Session was held in 1925 with Sarojini Naidu as its new elected president.

Que. 29
An equal amount of sum is invested in two different schemes for 2 years at simple interest withrates14% p.a and 11% p.a. If the total interest after 2 years is Rs.2724, then find the sum invested on each scheme.
1. Rs.4688
2. Rs.5448
3. Rs.4680
4. Rs.5746

Ans. Given: Correct Option - 2
Sum is invested for 2 years at the rates 14% and 11%
Total sum of S.I = Rs.2724
Concept used:
S.I = (P × R × T)/100
Calculation:
Let the sum be Rs.x
Then, S.I for 2 years @ 14% = 28x/100
Also, S.I for 2 years @ 11% = 22x/100
Total interest = 28x/100 + 22x/100 = 50x/100
As per the question, 50x/100 = 2724
⇒ x = 2724 × 100/50
⇒ x = 5448
∴ The sum is Rs.5448

Que. 30 In a certain code language,
25 ÷ 5 = 15
30 ÷ 6 = 20
35 ÷ 7 = ?

What will replace the '?' mark sign.
1. 20
2. 5
3. 10
4. 25

Ans. Correct Option - 4
The pattern followed here is;
25 ÷ 5 = 5 × 3 = 15;
30 ÷ 6 = 5 × 4 = 20;
35 ÷ 7 = 5 × 5 = 25
Hence, the correct answer is 25

Que. 31
The headquarters of UNESCO is at
1.New york
2. Paris
3. Geneva
4. Rome

Ans. Correct Option - 2
The correct answer is option 2 i.e Paris
Explanation:
UNESCO
It stands for United Nations Educational, Scientific and Cultural Organisation. It was formed on 4th November 1945. Its headquarters are in Paris, France. Currently, UNESCO has 193 members and 11 associate members. The US, Israel, and Liechtenstein are members of the UN, but not members of UNESCO. Three countries, namely, Palestine, Niue, and the Cook Islands are members of UNESCO, but not of the UN. India was the founding member of UNESCO. India has 38 world heritage sites.

Que. 32 If the sum of LCM and HCF of two numbers is 396 and the difference between the LCM and HCF is 324 and the 1st number is 72 then find the second number.
1. 125
2. 180
3. 126
4. 127

Ans. Given: Correct Option - 2
LCM + HCF = 396, LCM - HCF = 324
First number = 72
Formula used:
LCM × HCF = First number × second number
Calculation:
LCM + HCF = 396--------(1)
LCM - HCF = 324--------(2)
By solving (1) and (2)
⇒ LCM = 360, HCF = 36
LCM × HCF = First number × second number
⇒ 360 × 36 = 72 × second number
⇒ second number = 180
∴ The second number is 180.

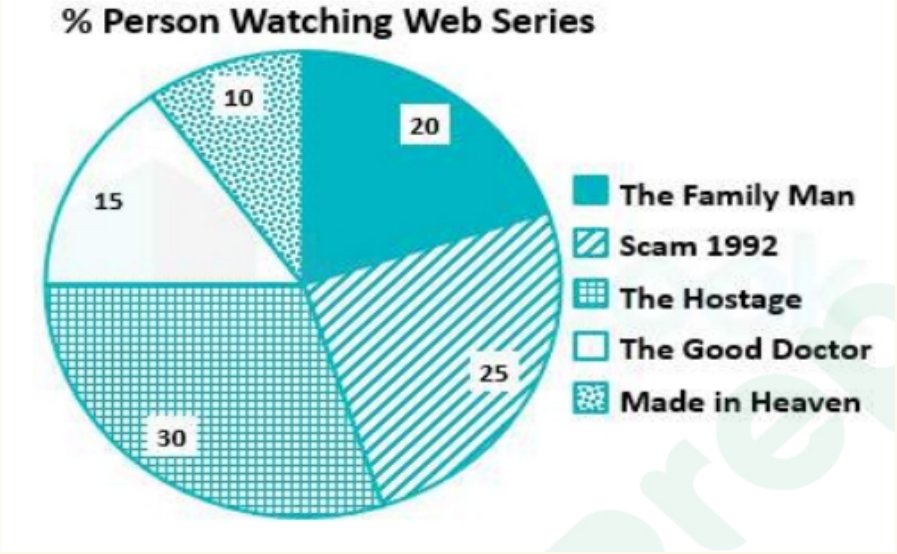
Que. 33 Select the option that can replace the question mark (?) and complete the given series. 8, 27, 64, 125, ?
1. 225
2. 144
3. 121
4. 216

Ans. Correct Option - 4
The pattern followed here is;
$8 = 2^3$
$27 = 3^3$
$64 = 4^3$
$125 = 5^3$
$216 = 6^3$
Hence, the correct answer is 216.

Que. 34
Which of the following country is not a member of SAARC?
1. Nepal
2. Maldives
3. China
4. Afghanistan

Ans. Correct Option - 3
China is not a member of SAARC. SAARC is South Asian Association for Regional Cooperation, which is a regional intergovernmental
organization. Its members are these nations- India, Afghanistan, Pakistan, Bhutan, Nepal, Maldives, Sri Lanka andBangladesh. Trick: MBBS PAIN
M - Maldives, B - Bhutan, B - Bangladesh, S - Sri Lanka, P - Pakistan, A - Afghanistan, I - India , N- Nepal

Que. 35 The following pie chart shows the distribution of the total number of people watching five different web series – The Family Man, Scam 1992, The Hostage, The Good Doctor, and Made in Heaven. Read The pie chart carefully and answer the questions that follow.



If the total number of persons watching the web series is 1000, find the difference between the number of
persons watching The Hostage and The Good Doctor.
1. 200
2. 175
3. 225
4. 150

Ans. Correct Option - 4
Total number of persons watching the web series = 1000
Difference in the percentages of the persons watching The Hostage and The Good Doctor = 30 – 15 =15%So, the required difference = (15/100) × 1000 = 150
∴ The difference between the number of persons watching The Hostage and The Good Doctor is 150

Que. 36 Select the related number from the given alternatives. 11 : 141 :: 17 : ?

1. 309

2. 301

3. 269

4. 285

Ans. Correct Option - 1

The logic is -

$11 : 141 \rightarrow 11^2 + 20 = 121 + 20 = 141$

Similarly,

$17 : ? \rightarrow 17^2 + 20 = 289 + 20 = 309$

Hence, '309' is the correct answer.

Que. 37

Which one of the following is computer high-level programming language?

1.COBOL

2. PASCAL

3. BASIC

4. All of the above

Ans. Correct Option - 4

The correct answer is All of the above.

Language that can be used to create programs is known as programming language.

It is the primary interface of a programmer with a computer. A programming language with strong abstraction from the details of the computer is called a high level programming language. High-level programming language uses English words and familiar mathematical symbols. Programs coded in a high-level programming language has to be converted into machine language before its execution.

Examples of high-level programming language are:

COBOL. PASCAL. BASIC. FORTRAN. ALGOL. PROLOG. Java. Python. Visual Basic. C. C++.

Que. 38

1. What is the ratio of the number of persons watching Scam 1992 and Made in Heaven?

2 : 5

2. 5 : 2

3. 5 : 3

4. 2 : 3

Ans. Correct Option - 2
The percentage of persons watching Scam 1992 = 25%
The percentage of persons watching Made in Heaven = 10%
So, the required ratio = 25/10 = 5 : 2
∴ The ratio of the number of persons watching Scam 1992 and Made in Heaven is 5 : 2

Que. 39
Select the related number from the given alternatives. 5 : 27 :: 9 : ?
1. 91
2. 86
3. 83
4. 78

Ans.
The logic is - Correct Option - 3
5 : 27 → $5^2 + 2 = 25 + 2 = 27$
Similarly,
9 : ? → $9^2 + 2 = 81 + 2 = 83$
Hence, '83' is the correct answer.

Que. 40
The Jataka tales are associated with which of the following sects?
1. Lingayat
2. Shaivism
3. Jainism
4. Buddhism

Ans. Correct Option - 4
The correct answer is Buddhism. Jataka tales are works of literature that are about Gautam Buddha's previous births. Buddhism: Buddhism is a faith that was founded by Siddhartha Gautama ("the Buddha") in5thCentury B.C. The Buddhism religion is based upon the teachings, life experience of its founder Siddhartha Gautam, born in circa 563 BCE.

Que. 41 If 'A' is 6 times more efficient than 'B', 'B' takes 32 days to complete the task, then find the number of days required to finish the whole work by 'A' and 'B' working together.
1. 2 days
2. 4 days
3. 6 days

4. 8 days

Ans. Given: Correct Option - 2
A is 6 times more efficient than B, & B takes 32 days to complete the task. Formula used:
Total work = Efficiency × Time taken
Calculation:
A is 6 times more efficient than B
Efficiency of A : Efficiency of B = 7 : 1
Total work = Efficiency of B × Time taken
⇒ 1 × 32 = 32 units
Number of days required to finish the whole work by (A + B) = Total work/Efficiency of (A+ B)
⇒ 32/8
⇒ 4
∴ The total number of days required to finish the whole work by (A + B) is 4 days.

Que. 42 Select the related letter /number from the given alternatives. ABE : 8 :: KLO : ?
1. 31
2. 38
3. 33
4. 32

Ans. Correct Option - 2
Here the logic is -
ABE = 1 + 2 + 5 = 8
Similarly,
KLO = 11 + 12 + 15 = 38
Hence, '38' is the correct answer.

Que. 43
Central Drug Standard Controller Organisation (CDSCO) headquarter is located in .
1. New Delhi
2. Mumbai
3. Pune
4. Noida

Ans. Correct Option - 1
The correct answer is New Delhi.

The Central Drugs Standard Control Organisation(CDSCO) under the Directorate General of HealthServices,Ministry of Health & Family Welfare, Government of India is the National Regulatory Authority(NRA)of India.
Its headquarter is located in New Delhi.
Dr. Harsh Vardhan is the union minister of the Ministry of Health & Family Welfare.

Que. 44 Find the value of cos 20° × cos 40°× cos 80°
1. 1/8
2.1/4
3. 1/16
4. 1/12

Ans. Given: Correct Option - 2
cos 20° × cos 40°× cos 80° Formula used:
cos (60 - x) cos x cos (60 + x) = (1/4) cos 3x
Calculations:
As we know, cos (60 - x) cos x cos (60 + x) = (1/4) cos 3x
Put x = 20°
cos (60 - 20) cos 20° cos (60 + 20) = (1/4) cos (3 × 20)
⇒ cos 40° × cos 20° × cos 80° = (1/4) × cos 60°
⇒ cos 20° × cos 40° × cos 80° = (1/4) × (1/2) = 1/8
∴ The value of cos 20° × cos 40°× cos 80° is 1/8.

Que. 45 Select the related word from the given alternatives. Cat : Feline :: Dog : ?
1. Canine
2. Cunning
3. Cunine
4. Bovine

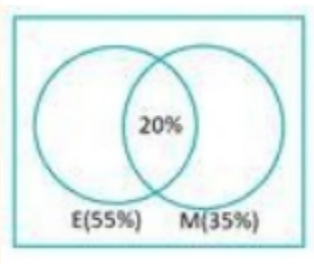
Ans. Correct Option - 1
The logic is -
Cat : Feline → Cat belongs to the Feline family.
Similarly,
Dog : ? → Dogs belong to the Canine family.
Hence, 'Canine' is the correct answer.

Que. 46 Who was the first President of India?
1. V V Giri
2. Dr Rajendra Prasad
3. Dr Zakir Hussian
4. Dr Radha Krishnan

Ans. Correct Option - 2
The correct answer is Dr. Rajendra Prasad.
Dr. Rajendra Prasad was the first President of India. He was in office from 1952 to 1962. He was elected by the Electoral College, following the first General Elections in 1951 and get re-elected in 1957. Sarvepalli Radhakrishnan and Zakir Hussain were the 2nd and 3rd Presidents of India respectively.

Que. 47 In an examination 55% students passed in English, 35% students passed in Mathematics and20%students passed in both the subjects. If 1200 students failed then how many students appeared in the examination?
1. 4800
2. 4000
3. 3600
4. 3200

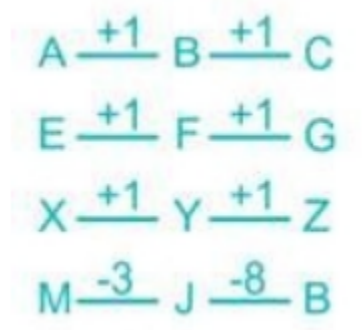
Ans. Given: Correct Option - 2
55% students passed in English, 35% students passed in Mathematics and 20% students passed in both the subjects.
Calculation:



55% students passed in English, 35% students passed in Mathematics and 20% students passed in both the subjects.
Students passed = (55 + 35 - 20)% = 70%
Students failed = (100 – 70)% = 30%
According to question, 30% = 1200
⇒ 100% = (1200/30) × 100 = 4000
∴ 4000 students appeared in the examination.

Que. 48
Select the odd letters from the given alternatives
1. ABC
2. EFG
3. XYZ
4. MJB

Ans.
The logic is - Correct Option - 4



Hence, 'MJB' is the correct answer.

Que. 49
World Environment Day is celebrated on .
1.21st May
2. 27th May
3. 5th June
4. 14th November

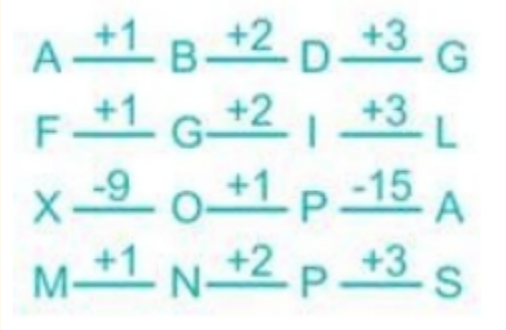
Ans. Correct Option - 3
World Environment Day:
It was established by the United Nations General Assembly in 1972 on the first day of the StockholmConference on the Human Environment. World Environment Day is celebrated on 5 th June of every year. The United Nations started it to spread awareness and action for the protection of our environment.

Que. 50 In an election, Ram gets 40% of the total votes while Ranu gets 60% of the total votes, if the difference of their votes is 3500, then find the total number of votes?
1. 15000
2. 17500
3. 18500
4. 8750

Ans. Given: Correct Option - 2
Ram gets 40% of the total votes.
Ranu gets 60% of the total votes.
Difference of their votes = 3500.
Calculation:
Let the total number of votes be x.
Votes of Ram = 40% of x = 0.4x
Votes of Ranu = 60% of x = 0.6x
Difference = 0.6x – 0.4x
⇒ 3500 = 0.2x
⇒ x = 3500/0.2
⇒ x = 17500
∴ Total number of votes are 17500.

Que. 51
Select the odd letters from the given alternatives
1.ABDG
2. FGIL
3. XOPA
4. MNPS

Ans.
The logic is - Correct Option - 3



Hence, 'XOPA' is the correct answer.

Que. 52
Deficiency of which of the following causes Beri Beri in human beings?
1. Vitamin B1
2. Vitamin C
3. Vitamin D
4. Vitamin A

Ans. Correct Option - 1
Option 1 is the correct answer.
The deficiency of vitamin B1 causes Beri Beri.

Que. 53
Find the total numbers between 100 and 200 which are divisible by 12.
1. 6
2. 16
3. 8
4. 12

Ans.
Calculation:
Correct Option - 3
The total number between 1 and 100 divisible by 12 = 100/12 = 8.33
⇒ 8 (Taking proper number)
The total number between 1 and 200 divisible by 12 = 200/12 = 16.67
⇒ 16 (Taking proper number)
The total number between 100 and 200 which are divisible by 12 = 16 – 8 = 8
∴ The total number between 100 and 200 which are divisible by 12 is 8.

Que. 54
Select the odd word from the given alternatives
1. Mango
2. Pineapple
3. Apple
4. Lotus

Ans.
The logic is - Correct Option - 4
All (Mango, Pineapple, Apple) except "Lotus" are fruits while Lotus is a flower.
Hence, 'Lotus' is the correct answer.

Que. 55
Gita Govinda is written by which of the following Indian Poet?
1. Jayadev
2. Rudrabhatta

3. Jinadattasuri
4. Raghavanka

Ans. Correct Option - 1
Gita Govinda is a work composed by the 12th-century Indian poet, Jayadeva. It describes the relationship between Krishna and the gopis (female cow herders) of Vrindavana. In Gita Govinda also mentioned Radha and Indian classical dance. It's written in the Sanskrit language.

Que. 56
If the side of a cube is $2\sqrt{3}$ cm, then find the total surface area of the cube.
1. 96 cm2
2. 72 cm2
3. 48 cm2
4. 60 cm2

Ans. GIVEN: Correct Option - 2
Side of the cube = $2\sqrt{3}$ cm
FORMULA USED:
Total surface area of the cube = 6 × side 2
CALCULATION:
Side of the cube = $2\sqrt{3}$ cm
Total surface area of the cube = $6 \times (2\sqrt{3})^2$
⇒ 6 × 12
⇒ 72 cm 2
∴ The total surface area of the cube is 72 cm 2.

Que. 57 Select the odd word from the given alternatives
1. December
2. March
3. July
4. June

Ans. Correct Option - 4
The logic is - All months except "June" has 31 days while June has only 30 days in a month.

Month	Days
December	31
March	31
July	31
June	30

Hence, 'June' is the correct answer.

Que. 58
Who is the governor of Telangana
1. Tamilisai Soundararajan
2. Biswabhusan Harichandan
3. Vajubhai Vala
4. None of these

Ans. Correct Option - 1
The correct answer is Tamilisai Soundararajan.
Tamilisai Soundararajan is an Indian medical doctor serving as the 2nd and current Governor of Telangana. She was the former President of the Tamil Nadu BJP. Dr. Tamilisai Soundararajan was born on 2nd June 1961, in Nagercoil, KanyaKumari District, Tamil Nadu.

Que. 59 If the investment of A, B and C are in the ratio of 1/2 : 1/3 : 1/4 .If the total profit is Rs.15600 for 1 year, then find the highest profit share?
1. Rs.3600
2. Rs.2400
3. Rs.7200
4. Rs.4800

Ans. GIVEN: Correct Option - 3
The investment of A, B & C are in the ratio of 1/2 : 1/3 : 1/4. Total profit = Rs.15600
CONCEPT USED:
Profit = Investment × Time
CALCULATION:
The investment of A, B & C are in the ratio of 1/2 : 1/3 : 1/4 & the total profit = Rs.15600
L.C.M of (2, 3, 4) = 12
The investment ratio of A, B & C = 12/2 : 12/3 : 12/4. = 6 : 4 : 3
1 unit = 15600/(6 + 4 + 3) = 15600/13
Highest profit share = (15600/13) × 6

= 1200 × 6 = Rs.7200
∴ The highest Profit share is Rs. 7200.

Que. 60 Select the option that will fill in the blank and complete the given series. 4, 8, 12, 16, ?
1. 20
2. 21
3. 24
4. 36

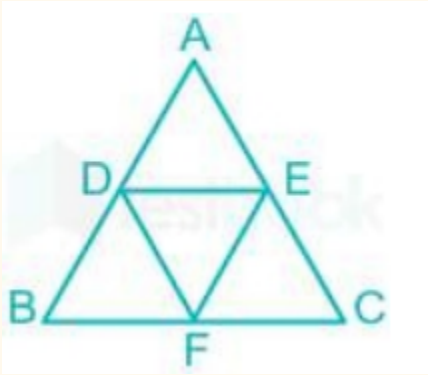
Ans.
Correct Option - 1
The logic is - 4 × 1 = 4
4 × 2 = 8
4 × 3 = 12
4 × 4 = 16
4 × 5 = 20
Hence, '20' is the correct answer.

Que. 61
Which is the first National Park of India?
1. Kanha National Park
2. Dudhwa National Park
3. Rajaji National Park
4. Corbett National Park

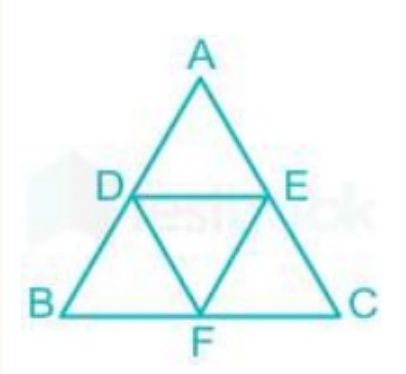
Ans. Correct Option - 4
The correct answer is Jim Corbett National Park. India's first national park was established in 1936 as Hailey National Park, now known as Jim Corbett National Park, Uttarakhand.

Que. 62 D,E,F are the mid points of sides AB, BC, CA of ΔABC. Area of ΔDEF is what percent of area of ΔABC ?
1. 20%
2. 25%
3. 50%
4. 40%

Ans. Correct Option - 2 Given
D,E,F are the mid points of sides AB, BC, CA
Concept Used



If D,E,F are the mid points of sides AB, BC, CA of ΔABC then DE = 1/2 × BC, EF = 1/2 × AB and FE=1/2×AB
Calculation-



Here, DE = 1/2 × BC, EF = 1/2 × AB and FE = 1/2 × AB
(Area of DEF)/(Area of ABC) = DE 2 /BC 2
⇒ 1/4
∴ Area of ΔDEF = (1/4 × 100)% of ΔABC
⇒ 25% of ΔABC.

Que. 63 A series is given with one term missing. Select the correct alternative from the given ones that will complete the series. 8, 24, 12, ?, 18, 54
1. 36
2. 20
3. 16
4. 14

Ans.
The logic is - Correct Option - 1

Hence, '36' is the correct answer.

Que. 64
Sir Sean Connery passed away in October 2020. He was related to which of the following fields?
1.Acting
2. Cricket
3. Politics
4. Chess

Ans. Correct Option - 1
The correct answer is Acting. Sir Sean Connery, best known for his portrayal of the fictional James Bond, has died. He was 90 years old.
It was his performance as an Irish cop in Brian De Palma's The Untouchables that brought himanOscar.
He also won two Bafta awards and three Golden Globes in his long and storied career.
He was knighted by Queen Elizabeth II in 2000.

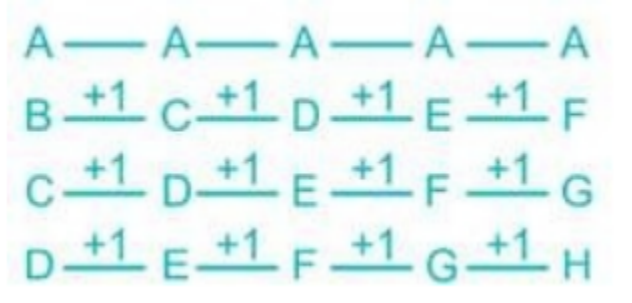
Que. 65
If x3 + y3 = 35 and x + y = 5 then find the value of x4 + y4.
1. 87
2. 89
3. 97
4. 93

Ans. Given: Correct Option - 3
x3 + y3 = 35 and x + y = 5
Concept Used:
a3 + b3 = (a + b)3 – 3ab(a + b)
a2 + b2 = (a + b)2 – 2ab
Calculation:
x + y = 5---------(1)
x3 + y3 = 35
⇒ (x + y)3 – 3xy(x + y) = 35

⇒ (5)3 – 3xy(5) = 35
⇒ 125 – 15 xy = 35
⇒ 15xy = 90
⇒ xy= 6---------(2)
x4 + y4
⇒ (x2)2 + (y2)2
⇒ (x2 + y2)2 – 2 x2 y2
⇒ {(x + y)2 – 2xy}2 – 2(xy)2
⇒ $\{5^2 – 2 \times 6\}2 – 2 \times 6^2$
[Using (1) and (2)]
⇒ (25 – 12)2 – 72
⇒13^2 – 72
⇒ 169 – 72
⇒ 97
∴ The required value of x4 + y4 is 97.

Que. 66 Which one set of letters, when sequentially placed in the gaps in the given letter series, shall complete it?
ABCD, ACDE, ?, AEFG, AFGH
1. ADEF
2. ACEF
3. AFCD
4. ABCF

Ans. Correct Option - 1
The logic is -



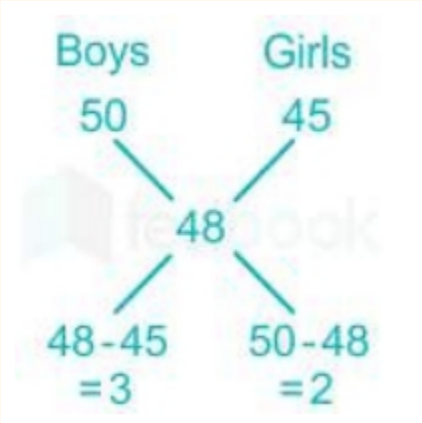
Hence, the correct answer is ADEF

Que. 67 Which is the largest freshwater lake in the World?
1. Lake Victoria
2. Lake Erie
3. Lake Superior
4. Lake Ontario

Ans. Correct Option - 3
The Largest Freshwater Lake in the world was Lake Superior (by surface area).
It was located on the border of the United States of America & Canada.
Largest FreshWater Lake by volume in the world is Lake Baikal and it is located in RussianFederation.

Que. 68 In a college there are a total 250 students. Average weight of boys is 50 and average weight of girls is 45. Also it is known that the overall average is 48. What is the number of boys in the college?
1. 150
2. 100
3. 125
4. 200

Ans. Given: Correct Option - 1
Total students in the college = 250
The average weight of boys = 50
The average weight of girls = 45
Average of total students = 48
Concept used:
Average = Total sum of observations/Total number of observations
Calculation:
We can use allegation method to solve this problem as -



The ratio of boys to girls = 3 : 2
So, the number of boys = (3/5) × 250 = 150
∴ The number of boys in the college is 150.

Que. 69 1@2@3@4@5. If @ is either "+" or "×" then, find the minimum value of the given expression.
1. 15
2. 120
3. 35
4. 7

Ans.
Given data :
1@2@3@4@5
if @ = + then, Correct Option
1 + 2 + 3 + 4 + 5 = 15
if @ = × then,
1 × 2 × 3 × 4 × 5 = 120
The minimum value is = 15
Hence, '15' is the correct answer.

Que. 70 What is GST?
1. A direct tax
2. An indirect tax
3. A corporate tax
4. A municipal tax

Ans. Correct Option - 2
A type of tax that is imposed on goods and services rather than on income is known as indirect tax. GST stands for Goods and Services Tax. It is an indirect tax which has replaced all the other indirect taxes such as sales tax, entertainment tax, etc.

Que. 71 A bookseller gives a 10% discount to his customers but he gets book on 30%discount on the market price from the merchant. What is his actual profit percentage of the book seller?

1. $28\frac{4}{7}$%

2. 20%

3. 25%

4. $14\frac{2}{7}$%

Ans. Correct Option - 1 Given:
The bookseller gives a 10% discount to his customer and he gets a 30% discount on the marked price. Concept Used:
Profit = Selling price – Cost price
Calculation:
Let, the marked price of the book be Rs. 100. The bookseller gets 30% discount on the marked price from the merchant
The bookseller pays Rs. (100 – 30) = Rs. 70
Customer get 10% discount on the marked price
Customer pays Rs. (100 – 10) = Rs. 90 to the bookseller. Profit percentage = {(90 – 70)/70} × 100
⇒ (20/70) × 100
⇒ (200/7)%
⇒ $28\frac{4}{7}$%

∴ The actual profit percentage of the bookseller is $28\frac{4}{7}$%.

Que. 72 P is brother of Q. P is the son of D. S is the daughter of P then how S is related to D?

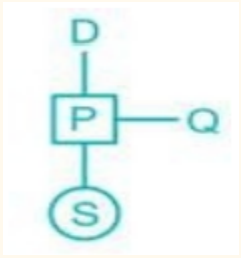
1. Grandmother

2. Grand daughter

3. Grand father

4. Daughter

Ans.
The logic is - Correct Option - 2



S is the granddaughter of D.
Hence, 'Grand daughter' is the correct answer.

Que. 73 Which among the following was the theme of Earth Day 2020?
1. Saving Earth each day
2. Nature calling
3. Facing new challenges
4. Climate Action

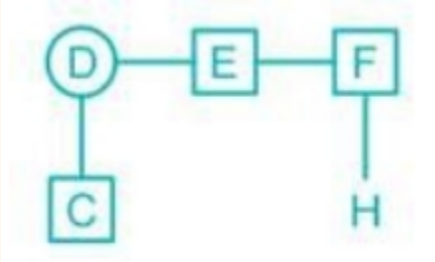
Ans. Correct Option - 4
The correct answer is Climate Action.
Earth Day: 22 April
Theme 2020: Climate Action
This year marks the 50th Anniversary of Earth Day. It is observed to create awareness among people about pollution and to celebrate the environment of our planet. The United Nations General Assembly adopted a reAns. formally recognizing the day as InternationalMother Earth Day in 2009. Also, on Earth Day 2016, the United Nations formally adopted the Paris Agreement.

Que. 74
Find the smallest perfect square number divisible by 12, 15 and 18.
1. 900
2. 1600
3. 400
4. 100

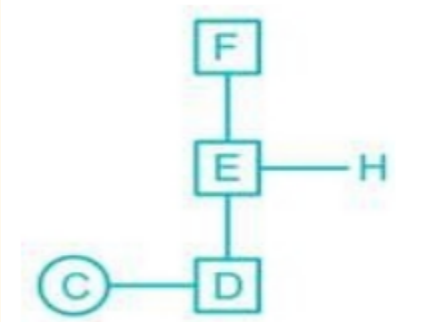
Ans. Given: Correct Option - 1
The numbers are 12, 15 and 18. Concept used:
To make N(LCM) = $x^a \times y^b \times z^c$ perfect square. (where x, y and z are prime numbers and a, b and c are integers)
Multiply the number by the same number whose power is odd. Calculations:
12 = $2^2 \times 3^1$
15 =$3^1 \times 5^1$
18 = $2^1 \times 3^2$
N = $2^2 \times 3^1 \times 5^1$
Multiply N by 5 to get perfect square, 5N = $2^2 \times 3^2 \times 5^2$ = 900
∴ The smallest perfect square number divisible by 12, 15 and 18 is 900.

Que. 75 In the following question, the symbols *, +, - and & are used with the following meaning as illustrated below:
P * Q = P is the father of Q
P + Q = P is son of Q
P - Q = P is the brother of Q
P & Q = P is the sister of Q
Which of the following represents C is the husband of H?
1. C + D & E - F * H
2. C & D + E - F * H
3. C - D & E + F * H
4. C * D & E - F + H

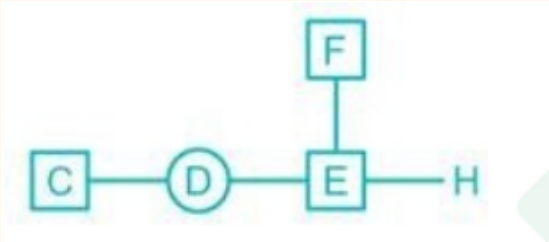
Ans. Correct Option - 4
The logic is -
1) C + D & E - F * H



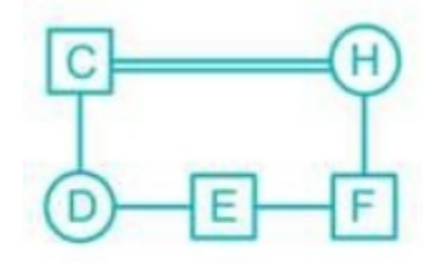
C is a Cousin of H.
2) C & D + E - F * H



C is a niece of H
3) C - D & E + F * H



C is the brother of H.
4) C * D & E - F + H



C is the husband of H
Hence, 'C * D & E - F + H' is the correct answer.

Que. 76 Which of the following article is related to the President of India?
1. Article 52
2. Article 51
3. Article 51A
4. Article 40

Ans. Correct Option - 1
Option 1 is correct, i.e. Article 52.
Article 52 of the Constitution says that there shall be a President of India.

Que. 77 ΔABC and ΔPQR are similar to each other. If the ratio of area of ΔABC and ΔPQR is 1 : 16, and the length of side AC is 28 cm, then find the length of PR.
1. 156 cm
2. 96 cm
3. 100 cm
4. 112 cm

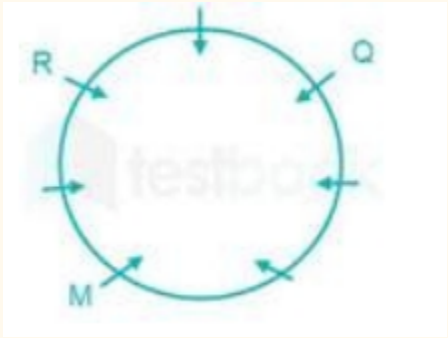
Ans. Given: Correct Option - 4
ΔABC and ΔPQR are similar to each other. Ratio of area of ΔABC and ΔPQR = 1 : 16
Length of side AC = 28 cm
Concept:
Relation among areas, side of similar triangles ABC and PQR
(Area of ΔABC and ΔPQR) = (AB/PQ)2 = (BC/QR)2 = (AC/PR)2
Calculation:
Let PR be x cm

(Area of ΔABC and ΔPQR) = (AC/PR)2
⇒ (1/16) = (28/x)2
Taking square root on both the sides
⇒ √(1/16) = √(28/x)2
⇒ (1/4) = (28/x)
⇒ x = 28 × 4
⇒ x = 112 cm
∴ The length of PR is 112 cm.

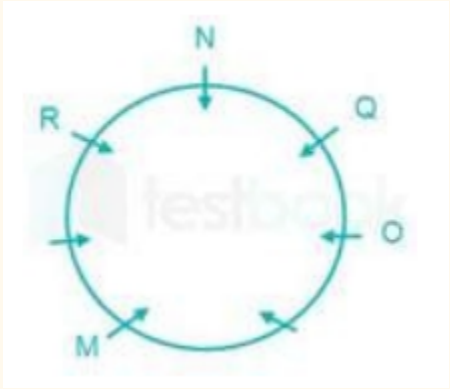
Que. 78 Seven friends M, N, O, P,Q, R and S are sitting around a circular table facing towards the centre(not necessarily in the same order). M is third to the left of Q and second to the right of R. N and O are to the immediate right and immediate left of Q respectively. S is not the neighbor of R. Who is sitting third to the left of P?

1. S
2. N
3. Q
4. O

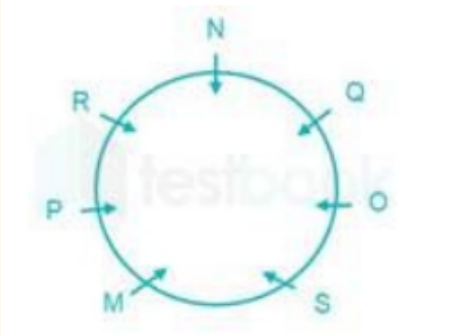
Ans. Correct Option - 3
M is third to the left of Q and second to the right of R.



N and O are to the immediate right and immediate left of Q respectively.



S is not the neighbor of R.



Hence, Q is sitting third to the left of P.

Que. 79 In which country is the International Cricket Council (ICC) headquartered?
1. UK
2.United Arab Emirates
3. Australia
4. New Zealand

Ans. Correct Option - 1
The International Cricket Council (ICC) is headquartered in Dubai, United Arab Emirates. It is the international governing body of cricket. It was founded as the Imperial Cricket Conference 1909 by representatives from England, Australia and South Africa, renamed the International CricketConference in 1965 and took up its current name in 1989. The ICC has 106 members: 10 Full Members that play Test matches, 38 Associate Members, and57Affiliate Members.

Que. 80 Find the value of 64 ÷ 8 + 3^3 – 2 × 16.
1. 5
2. 4
3. 2
4. 3

Ans. Correct Option - 4
Given:
64 ÷ 8 + 3^3 – 2 × 16
Concept used:

Calculation:

$64 \div 8 + 3^3 - 2 \times 16$

$\Rightarrow (64 \div 8) + 27 - (2 \times 16)$

$\Rightarrow 8 + 27 - 32$

$\Rightarrow 35 - 32$

$\Rightarrow 3$

$\therefore$ The value is 3.

Que. 81 Choose the correct mirror image of the given problem figure when the mirror is placed to the left of the figure.

1. 

2. 

3. 

4. 

Ans. Correct Option - 3

The mirror image would be as follows:

Hence, option 3 is the correct answer.

Que. 82 Anil Kumar Chaudhary was the chairman of .(2018-dec 2020)

1. BHEL

2. SAIL

3. NTPC

4. ONGC

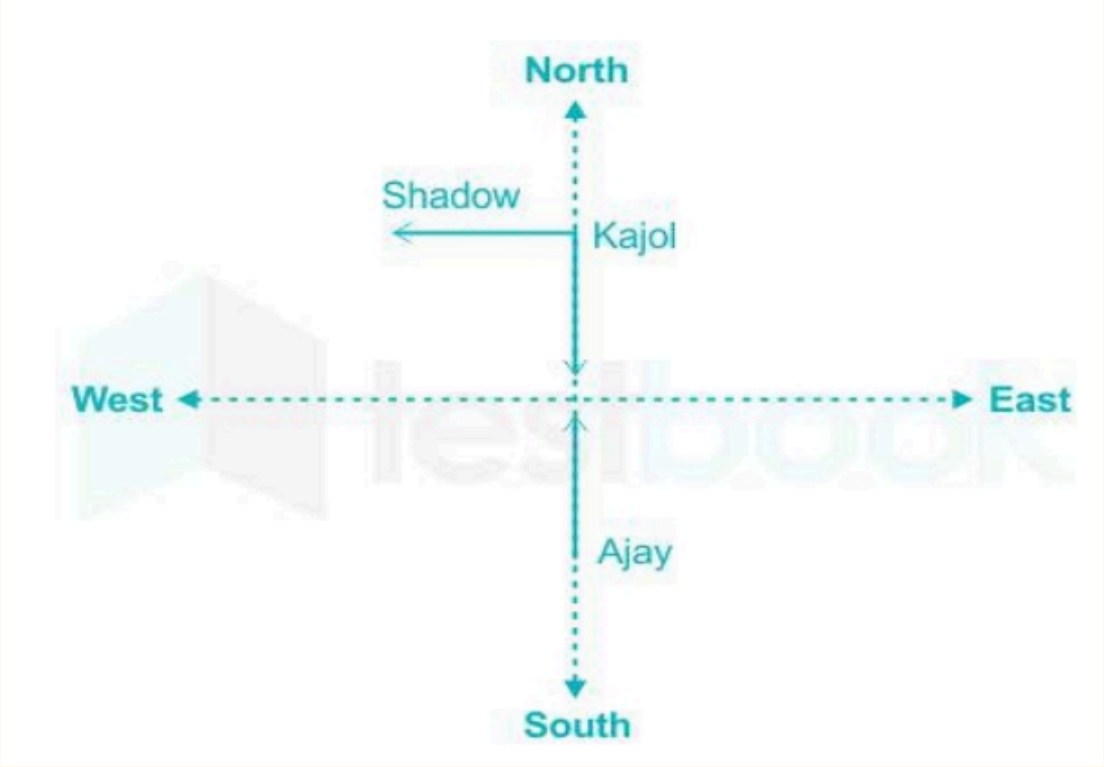
Ans. Correct Option - 2
Anil Kumar Chaudhary was the former chairman of the Steel Authority of India (SAIL).

Que. 83 The amount becomes 12100 after 2 years and 13310 after 3 years, then find the rate of simple interest.
1. 10%
2. 12.5%
3. 15%
4. 8.5%

Ans. Given: Correct Option - 2
The amount for 2 years = 12100
The amount for 3 years = 13310
Formula used:
Simple Interest = (Principal × rate × time)/100
Calculation:
Interest for 3rd year
⇒ 13310 – 12100 = 1210
Interest for 3 years = 1210 × 3 = 3630
Principal = 13310 – 3630 = 9680
Now, 1210 = (9680 × rate × 1)/100
⇒ rate = 12.5%
∴ The rate of interest is 12.5%.

Que. 84 Ajay and Kajol are doing yoga in the morning. Ajay and Kajol are facing each other. Kajol's shadowfalls left side of Ajay. Which direction Ajay is facing?
1. South
2. South-west
3. North
4. East

Ans. Correct Option - 3
In the morning Sun rises in the east and so any shadow falls towards the west. Now, Kajol's shadowfalls to the left of Ajay. Hence, Ajay is facing north.



Hence, the correct answer is “North”.

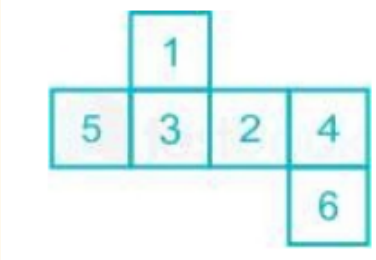
Que. 85 What is the theme of the 'World Environment Day 2020'?
1. 'Time for Nature'
2. 'Beat Air Pollution'
3. 'Beat Plastic Pollution'
4. 'Connecting People to Nature - in the city and on the land, from the poles to the equator'

Ans. Correct Option - 1
The correct answer is 'Time for Nature' The World Environment Day is celebrated on 5 th June every year and it is the United Nation's principal vehicle for encouraging awareness and action for the protection of the environment. It was held for the first time in 1974.
The theme for 2020 is 'Time for Nature' - a concern that is both urgent and existential.

Que. 86 A rectangular shaped pipe is of dimension 2 m x 10 m, if water is running at 10 km/hr then find the volume of water collected in 15 minutes.
1. 25,000 m3
2. 2,000 m3
3. 5,000 m3
4. 50,000 m3

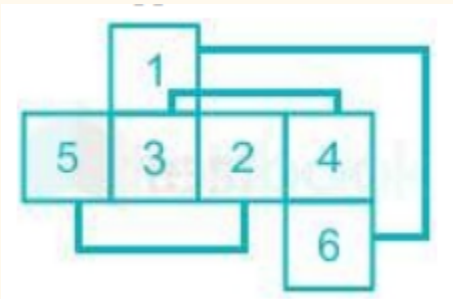
Ans. Correct Option - 4 Given:
Length of pipe = 2 m
Breadth of pipe = 10 m
Speed of water = 10 km/hr
Time = 15 minutes
Calculation:
Speed = 10 km/hr = 10 × (5/18) m/sec = 25/9 m/s
Time = 15 minutes = (15 × 60) sec = 900 sec
Length (H) = (25/9) × 900 = 2500
Volume = L × B × H
= 2 × 10 × 2500 = 50,000 m3
∴ Volume of water collected in 15 minutes is 50,000 m3.

Que. 87
If the following figure is folded to form a cube, then which number will be on the face opposite the face having number '1'?



1. 5
2. 4
3. 1
4. 6

Ans. Correct Option - 4
Faces opposite to each other is shown below:



So, the face opposite to the face having number '1' is ‘6’. Hence, ‘6’ is the correct answer.

Que. 88

Which of the following movie won the Oscar Awards 2020 for Best Picture?

1. Once Upon a Time in Hollywood

2. Joker

3. Judy

4. Parasite

Ans. Correct Option - 4

The correct answer is option 4 i.e., Parasite.

Parasite won the Oscar Awards 2020 for Best Picture. It is the first time that a South Korean movie has won the International Feature Film Category in the history of the Oscars. The director of the movie is Bong Joon Hoo, who also won the Oscar Award for Best Direction. The Oscar Award is famously known as Academy Awards. This was the 92nd Academy Awards which was held in Dolby Theatre, Los Angeles.

Que. 89

What will be the height of the building from a point 25 m away from the base of the building if the angle of elevation of the top of the building from that point is 30°?

1. 25/√3 m

2. 25 m

3. √3 m

4. √3/25 m

Ans. Given: Correct Option - 1

The angle of elevation = 30°

Distance between point and base of building = 25 m

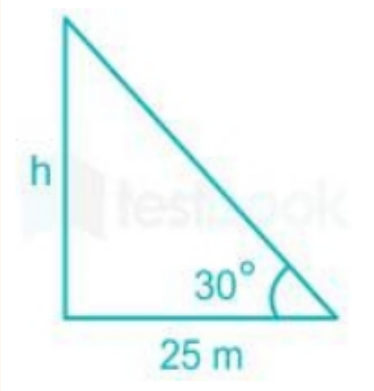
Concept used:

In a right-angled triangle

tanθ = perpendicular/base

Calculation:

Let the height of the building be ‘h’.



tanθ = perpendicular/base
⇒ tan30° = h/25
⇒ 1/√3 = h/25
⇒ h = 25/√3
∴ The height of the building is 25/√3.

Que. 90 Which answer figure will complete the pattern in the following question figure?

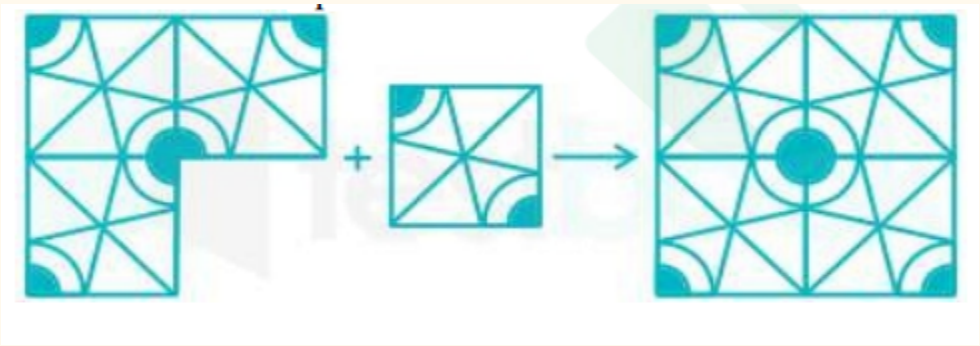
1. 

2. 

3. 

4. 

Ans. Correct Option - 1



Hence, the figure in option 1) will complete the pattern.

Que. 91 When was Sansad Adarsh Gram Yojna launched?
1. 2014
2. 2015
3. 2016
4. 2017

Ans. Correct Option - 1
The correct answer is 2014.
Hon'ble Prime Minister Shri Narendra Modi launched the Saansad Adarsh GramYojana(SAGY) on 11 October 2014 on the birth anniversary of Lok Nayak Jai Prakash Narayanat VigyanBhawan, New Delhi.

Que. 92 Sukreswar Temple is located in which state in India?
1. Assam
2. Gujarat
3. Madhya Pradesh
4. Tamil Nadu

Ans. Correct Option - 1
The correct answer is Assam.

Sukreswar Temple is an important Shiva temple in the state of Assam in India.
The temple is located on the Sukreswar or Itakhuli hill on the south bank of river Brahmaputra in the Panbazar locality of Guwahati city.

Que. 93
Who was awarded the Nobel prize for the discovery of neutrons?
1. James Chadwick
2. J J Thomson
3. Rutherford
4. Niels Bohr

Ans. Correct Option - 1
The Correct Answer is Option 1 i.e James Chadwick.
James Chadwick:
He was a British physicist. He was associated with the discovery of Neutrons and also awarded the Nobel Prize for the discovery of neutrons.
JJ Thomson:
He was a British Physicist. He was credited with the discovery of the electron.
Niels Bohr:
He was a Danish physicist. He received the Nobel Prize for his services in the investigation of the structure of atoms and of the radiation emanating from them.
Rutherford:
Rutherford was awarded the 1908 Nobel Prize in Chemistry for his theory of atomic structure. He discovered the nucleus of the atom in 1911. He is known as the father of nuclear physics.

Que. 94
Which among the following gase is also known as ‘Laughing Gas’?
1.Sulphur dioxide
2. Nitrous oxide
3. Carbon dioxide
4. Carbon monoxide

Ans. Correct Option - 2
Nitrous oxide is also known as "Laughing Gas".
The chemical formula of Nitrous oxide is N2O. It is a colorless, non-flammable gas at room temperature, with a faint metallic smell and taste. It is a potent oxidizer similar to molecular oxygen at elevated temperatures. It has important medical uses for its anesthetic and pain-reducing effects, especially in surgery and dentistry.

Que. 95 What does a Light year indicate?
1. Time
2. Distance
3. Both
4. None

Ans. Correct Option - 2
Light year is the distance traveled by light in one year. It is a unit of distance.

Que. 96
What would be the mass of a 70 kg man on the moon as well as on the earth?
Take g = 9.8m/s2 for earth, and g = 1.63 m/s2 for the moon.
1. 105.0 kg on Moon and 70 kg on Earth
2. 140.0 kg on Moon and 70 kg on Earth
3. 70.0 kg on both Moon and Earth
4. 35.0 kg on Moon and 70 kg on Earth

Ans. Correct Option - 3
Mass of a body is constant everywhere in the universe, so the mass of this 70 kg man would be the same on the earth as well as on the moon.

Que. 97 Which of the following bacteria causes Cholera?
1. Coccus
2. Spirillum
3. Vibrio
4. Bacillus

Ans. Correct Option - 3
Cholera is an infectious disease that causes severe watery diarrhea which can lead to dehydration and even death if untreated. It is caused by eating food or drinking water contaminated with a bacterium called Vibrio Cholerae.

Que. 98 From which medium Sound wave cannot pass through?
1. Solid
2. Vacuum
3. Ideal gas
4. Liquid

Ans.
CONCEPT:
Correct Option - 2
Wave: The disturbance that transfers energy from one place to another is called a wave.
There are mainly two types of waves:
Electromagnetic waves: The wave which is generated due to vibration between electric field and magnetic field and it does not need any medium to travel is called an electromagnetic wave. It can travel through a vacuum. Light is a form of energy which is an example of electromagnetic waves. Electromagnetic waves are transverse in nature because they propagate by varying their electric and magnetic fields so that both the fields propagate perpendicular to each other.
Mechanical waves: The oscillation of matter which is responsible for the transfer of energy through the medium is called a mechanical wave. It can't travel through a vacuum. Examples: Sound wave, wave in a string, water wave.
EXPLANATION:
The vacuum is the medium from where the sound wave cannot pass. A vacuum is basically an area without any air. Since the sound wave is a mechanical wave that's why it cannot travel through a medium where there is no matter of vibrations to works in, i.e, it can't travel through a vacuum. So option 2 is correct. The sound wave can travel through solids, liquid and gas medium.

Que. 99 The chemical formula of Urea is .
1. (NH4)2CO2
2. (NH2)CO
3. (NH4)2CO
4. NH2CONH2

Ans. Correct Option - 4
Urea, also known as carbamide, is an organic compound with the chemical formula NH2CONH2 or CH4N2O.

Que. 100 Famous Moroccan traveler Ibn-e-battuta came to Delhi at the time of which of the following rulers?
1. Allauddin Khilji
2. Akbar
3. Mohammad Bin Tughlaq
4. Balban

Ans. Correct Option - 3

Famous Moroccan traveler Ibn-e-batuta came to Delhi at the time of Mohammad bin Tughlaq.

Abu Abdullah Muhammad Ibn Battuta, better known simply as Ibn Battuta was a Muslim scholar and traveller.

Hearing of the sultan of Delhi, Muḥammad bin Tughluq (1325–51), and his fabulous generosity Muslim scholars, he decided to try his luck at his court.

After crossing the Hindu Kush mountain range, he arrived at the frontiers of India on the Indus River in around 1333 AD.

He was born in Tangier, Morocco in 1304. After traveling the whole world for 29 years, he recorded his experiences in a huge travelogue known as the Rihla, Rihla means journey.