Modern Logic

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1. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
How many such pairs of letters are there in the word 'PREAMBLE', each of which has as many letters between them as in the English alphabet?

A]ONE
B]TWO
C]NONE
D]THREE
E]FOUR

2. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
After distributing the sweets equally among 25 children, 8 sweets remain. Had the number of children been 28, 22 sweets would have been left after equal distribution. What was the total number of sweets?

A]348
B]358
C]328
D]368
E]378

3. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
How many such 5's are there in the following number sequence, each of which is preceded by 3 or 4 but not followed by 8 or 9?
3595455358456735755452351O

A]THREE
B]FOUR
C]SIX
D]FIVE

E]SEVEN

4. QUESTION

DIRECTIONS for the question: In the following question three words are given below, which have something in common among themselves. Choose one out of the four given alternatives, which mentions the quality common to the three given words.
Harmattan: Chinook: Foehn

A]BIRDS
B]WINDS
C]FISHES
D]INSECTS
E]FLY

5. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
In a cricket match, five batsmen A, B, C, D and E scored an average of 36 runs. D scored 5 more than E; E scored 8 fewer than A, B scored as many as D and E combined; and B and C scored 107 between them. How many runs did E score?

A]45
B]28
C]62
D]20
E]10

6. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
Robin says, If Jai gives me Rs. 40, he will have half as much as Atul, but if Atul gives me Rs. 40, then the three of us will have the same amount." What is the total amount of money that Robin, Jai and Atul have between them?

A]RS320
B]RS360
C]RS240
D]RS420
E]RS520

7. QUESTION

DIRECTION for the question: Solve the following question and mark the correct answer.
A clock gains 15 minutes per day. It is set right at 12 noon. What time will it show at 4:00 am, the next day?

A]4.10am
B]4.20am
C]4.45am
D]5.00am
E]4.30am

8. QUESTION

DIRECTIONS for the question: Choose the correct option
Claymore is related to Sword in the same way as Beretta is related to

A]CLUB
B]AXE
C]GUN
D]KNIFE
E]SIEVE

9. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
Count each 1 in the following sequence of numbers that is immediately followed by 2, if 2 is not immediately followed by 3. How many such 1s are there?
1 2 1 3 4 5 1 2 3 5 2 1 2 6 1 4 5 1 1 2 4 1 2 3 2 1 752125

A]4
B]5
C]2
D]7
E]9

10. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
Which two months in a year have the same calendar?

A]April,November
B]April,July
C]June,October
D]October,December
E] June, July

11. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
If today is Thursday, then what will be the day on 363rd day?

A]SATURDAY
B]THURDAY
C]SUNDAY
D]WEDNESDAY
E]MONDAY

12. QUESTION

DIRECTIONS for the question: In the following question, four out of the five alternatives are same in certain way and so form a group. Find the odd one that does not belong to the group.
1. Sky
2) Star
3) Planet
4) Comet

5) Moon

A]STAR
B]PLANET
C]SKY
D]COMET
E]MOON

13. QUESTION

DIRECTION for the question: In the following question, five words have been given out of which four are alike in some manner, while the fifth one is different. Choose out the odd one.
A]SLEET
b) Fog
c) Hailstone
d) Vapour
e)Mist

A]FOG
B]HAILSTONE
C]SLEET
D]VAPOUR
E]MIST

14. QUESTION

DIRECTIONS for the question: In the following question, five words have been given out of which four are alike in some manner, while the fifth one is different. Choose out the odd one.
1. Metre
b) Furlong
c) Yard
d) Mile
e) Acre

A]FURLONG
B]YARD
C]METRE
D]MILE
E]ACRE

15. QUESTION

DIRECTIONS for the question: Solve the following question and mark the best possible option.
In a certain code, '467' means 'leaves are green,' '485' means green is good' and '639' means 'they are playing. Which digit stands for 'leaves' in that code?

A]6
B]7
C]4
D]3

E]9

16. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option
At a dinner party every two guests used a bowl of rice between them, every three guests used a bowl of dal between them and every four used a bowl of meat between them. There were altogether 65 dishes. How many guests were present at the party?

A]65
B]90
C]60
D]75
E]85

17. QUESTION

DIRECTIONS for the question: Solve the following question and mark the best possible option.
Mrs. Susheela celebrated her wedding anniversary on Tuesday, 30th September, 1997. When will she celebrate her next wedding anniversary on the same day?

A]30SEP2004
B]30SEP2002
C]30SEP2003
D]30SEP1998
E]30SEP2003

18. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
If the first day of the year (other than the leap year) was Friday, then which was the last day of that year?

A]FRIDAY
B]SATURDAY
C]Monday
D]SUNDAY
E]TUESDAY

19. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
Five boys are standing in a row facing East. Deepak is to the left of Sameer, Tushar and Shailendra. Sameer, Tushar and Shailendra are to the left of Sushil. Shailendra is between Sameer and Tushar. If Tushar is fourth from the left, how far is Sameer from the right?

A]SECOND
B]THIRD
C]FIRST
D]FOURTH
E]FIFTH

20. QUESTION

DIRECTIONS for the question: Solve the following question and mark the best possible option.
If 18th February, 1997 falls on Tuesday, then what will be the day on 18th February, 1999?

A]Tuesday
B]Thursday
C]Monday
D]Friday
E]Wednesday

21. QUESTION

DIRECTION for the question: Solve the following question and mark the best possible option.
If the 1st half of the English alphabet is reversed and so is the 2nd half, then which letter is 7th to the right of the 12th letter from the left side?

A]U
B]R
C]S
D]T
E]A

SOLUTION

1.SOLUTION [B] TW0
Given word: PREAMBLE
Their mapping with places is as shown
Hence, we can see that 2 such pairs are there → Backward: AE, BE

2.SOLUTION [B] 358
Let the total number of sweets be (25x + 8).
Then, (25x + 8) - 22 is divisible by 28
(25x-14) is divisible by 2828x - (3x+14) is divisible by 28
(3x + 14) is divisible by 28⇔ x = 14.
Therefore Total number of sweets = (25 × 14+ 8) = 358.

3.SOLUTION [D] FIVE
The correct option is D Five
There are 5 such fives in the given sequence that comes after 3 or 4 immediately and is not followed by 8 or 9 immediately.
Answer is Option D.

4.SOLUTION [B] WINDS

5.SOLUTION [D] 20

Concept- E scores 20 runs.
First, we will calculate the sum of the runs scored by A, B, C, D and E from the formula of mean or average which is
Average of (a, a_2, az, a_1...a) n terms → Average of (a, a2, a3, a_1...a) n terms =- summation of (a, a, a, a_1...a) n (a + a_2 + as + a_1...+a)
n Also, let us assume the runs scored by A to be x. Then, we will calculate the individual runs scored by the other four players in terms of x based on the conditions mentioned in the Question statement. Then, we will form a linear equation of single variable by equation the summation of the individual runs scored by each player and the summation of their runs calculated from the formula of mean. Solving this equation forx, we will obtain our desired answer.
Given, 5 batsmen A, B, C, D and E scored an average of 36 runs, i.e., Average runs of 5 batsmen = Summation of individual scores by each batsman no. of batsmen → Summation of individual scores by each batsman = [(Average runs of 5 batsmen) x (no. of batsmen)] → Summation of individual scores by each batsman = (36×5)=180
Now, since
assumed, that A scored runs, given in the Question is that, E scored 8 fewer than A, i.e., (x-8) runs scored 5 more than E, i.e., [(x-8)+5]=(x-3) runs
B scored as many as D and E combined, i.e.,
Runs of B = (Runs of D) + (Runs of E)
Runs of B = [(x-3)+(x-8)]
Runs of B = (2x-11)
And B and C scored 107 between them. Let us assume C scored
"c" runs, Therefore, c+(2x-11)=107
c=107-(2x-11)

c=(107+11)-2x
⇒ c = (118-2x)
Therefore, summation of the runs scored by all 5 batsmen are
[x+ x+(2x-11)+(118-2x)+(x-3)+(x-8)]=180
⇒[([(x+2x-2x+x+x)+(118-11-3-8)]=180
⇒[[3x+118-(11+3+8)}]=180
[3x+(118-22)] = 180 ⇒[3
⇒ (3 (3x+96)=180
> 3x = (180-92) ⇒
⇒ 3x = 84
84 ⇒x=
3
⇒ x = 28
..(x-8)=(28-8)=20
Hence, the correct answer is 20.

6.SOLUTION[B] 360
Clearly, we have:
J - 40 = 1/2 * A .(i)
A - 40 = J.....(ii)
A - 4O = R + 4O .....(iii)
Solving (i) and (ii) simultaneously, we get : J = 120 and A = 160 . Putting A = 160 in (iii), we get R = 80.
Total money =R+J+A=Rs. (80 + 120 + 160) = Rs 360

7.SOLUTION[a] 4.10 am
The clock gains 15 min in 24 hours Therefore, in 16 hours, it will gain 10 minutes Hence, the time shown by the clock will be 4.10 am.

8.SOLUTION [C] GUN

To determine the relationship between "Claymore" and "Sword" and apply the same relationship to "Beretta", let's analyze the given words:

A Claymore is a type of sword, specifically a large, two-handed sword used in medieval times.

Similarly, a Beretta is a type of firearm, specifically a brand of pistols and firearms.

So, in both cases, the first word represents a specific type or brand within the broader category represented by the second word.

The correct option, then, would be:

C) GUN

9.SOLUTION[A] 4

Counting the 1s
To solve this problem, we need to count the number of 1s that are immediately followed by 2, but only if the 2 is not immediately followed by 3. Let's go through the sequence step by step to count these occurrences.
Sequence: 12134512352126145112412321752125

Step 1: Look for the first occurrence of 1.
- The first occurrence of 1 is followed by 2 (12).
- The 2 is not immediately followed by 3.
Step 2: Count this occurrence and continue searching for the next occurrence of 1.
- Count = 1
Step 3: Look for the second occurrence of 1.
The second occurrence of 1 is followed by 3 (13). The 3 is immediately followed by 4.
Step 4: Skip this occurrence and continue searching for the next occurrence of 1.
- Count remains at 1
Step 5: Look for the third occurrence of 1.
The third occurrence of 1 is followed by 2 (12).
The 2 is not immediately followed by 3.
Step 6: Count this occurrence and continue searching for the next occurrence of 1.
- Count = 2
Step 7: Look for the fourth occurrence of 1.
The fourth occurrence of 1 is followed by 3 (13).
- The 3 is immediately followed by 4.
Step 8: Skip this occurrence and continue searching for the next occurrence of 1.
- Count remains at 2
Step 9: Look for the fifth occurrence of 1.
- The fifth occurrence of 1 is followed by 2 (12).
- The 2 is not immediately followed by 3.
Step 10: Count this occurrence and continue searching for the next occurrence of 1.
- Count = 3
Step 11: Look for the sixth occurrence of 1.
- The sixth occurrence of 1 is followed by 3 (13).
- The 3 is immediately followed by 4.
Step 12: Skip this occurrence and continue searching for the next occurrence of 1
- Count remains at 3
Step 13: Look for the seventh occurrence of 1.
The seventh occurrence of 1 is followed by 2 (1 2).
- The 2 is not immediately followed by 3.
Step 14: Count this occurrence and continue searching for the next occurrence of 1.
- Count = 4
Step 15: Look for the eighth occurrence of 1.
The eighth occurrence of 1 is followed by 3 (13). - The 3 is immediately followed by 4.

10.SOLUTION[b] APRIL ,JULY
Two months will have the same calendar if the period between them is divisible by 7. April, July have the same calendar in the year. Hence, “April, July” is the correct answer.

11.SOLUTION[D] WEDNESDAY
The day after 363 days will be wednesday.
Today is Thursday.
So, the day after one week or 7 days will be also Thursday.
Now, if we dissociate 363 days in weeks and days we will get = 363 days
= (51×7) days + 6 days
= 51 weeks + 6 days
So, the day will be = (51st Thursday + 6 days) = Wednesday (Answer

12.SOLUTION[SKY] C

ALL ARE PALNET EXCEPT SKY

13.SOLUTION[D] VAPOUR
Based on these observations, we can conclude that the odd one out is option D) Vapour. While all the other options refer to different forms of precipitation, Vapour is a gaseous state of water and not a form of precipitation.

14.SOLUTION[E] ACRE
Explanation:
- Metre, Yard, and Mile are units of length or distance.
- Furlong is also a unit of distance, specifically used in horse racing.
- Acre, on the other hand, is a unit of area, typically used in measuring land. It represents a measure of land area rather than distance. Therefore, Acre is the odd one out.

15.SOLUTION[B] 7

THE CODE IN TABLE=

Words	Codes
leaves	7
are	6
green	4
is	8 or 5
good	5 or 8
they	3 or 9
playing	9 or 3

16.SOLUTION[C] 60
Let's solve the problem step by step:

Let's denote:
- x as the number of guests.
- y as the number of bowls of rice.
- z as the number of bowls of dal.
- w as the number of bowls of meat.

Given:
1. Every two guests used a bowl of rice between them, so $y = \frac{x}{2}$.
2. Every three guests used a bowl of dal between them, so $z = \frac{x}{3}$.
3. Every four guests used a bowl of meat between them, so $w = \frac{x}{4}$.
4. There were altogether 65 dishes, so $y + z + w = 65$.

Substituting the expressions for y, z, and w from (1), (2), and (3) into (4), we get:
$$\frac{x}{2} + \frac{x}{3} + \frac{x}{4} = 65$$

Now, let's find the least common multiple (LCM) of 2, 3, and 4, which is 12. Multiply both sides by 12 to clear the fractions:
\[6x + 4x + 3x = 65 \times 12 \]
\[13x = 780 \]

Now, divide both sides by 13 to solve for \(x \):
\[x = \frac{780}{13} = 60 \]

So, there were \(x = 60 \) guests present at the party.

Therefore, the correct answer is:
b) 60

17.SOLUTION [C]

30th September 1998 → Wednesday
30th September 1999 → Thursday
30th September 2000 → Saturday
Because 2000 is a Leap Year and there is one extra day in the month of February.
30th September 2001 Sunday
30th September 2002 → Monday
30th September 2003 Tuesday
An ordinary year has one odd day.

18.SOLUTION[A] Friday
If the year is not a leap year, then the last day of the year is the same as the first day.

19.SOLUTION[D]
The correct option is D Fourth
Deepak (D) is to the left of Sameer (Sm), Thushar (T) and Shailendra (Sh) means
D, Sm, T, Sh.
Sameer, Tushar and Shailendra are to the left of Sushil (Su) means
Sm, T, Sh, Su.
Shailendra is between Sameer and Tushar means
Sm, Sh, T.
Tushar is fourth form the left means
DOT
Combining all the arrangements,
We have D, Sm, Sh, T, Su.
So Sameer is fourth from the right.

20.SOLUTION[B] THURDAY
18th February, 1997 is Tuesday. So. 17th February, 1998 will also be Tuesday.
Again 16th February, 1999 will also be Tuesday. Hence, 18th February, 1999 will be Thursday.

21.SOLUTION[A] U
Original Alphabet: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
Reversed First Half: M L K J I H G F E D C B A
Reversed Second Half: Z Y X W V U T S R Q P O N
The 12th letter from the left side in the original alphabet is "L".
In the reversed first half, "L" corresponds to the 1st letter from the right side.
Counting 7 letters to the right of "L" in the reversed first half:
M L K J I H G F E D C B A
^ (7th letter)
So, the 7th letter to the right of the 12th letter from the left side is "M".
Therefore, the correct answer is:U