

LOGICAL REASONING

SESSION – 6

NUMBER SERIES

24. Ans: [c]

In the first and second statements, the common code is rps and the common word is morning. So, rps means morning. In the first and the third statements, the common code is ski and the common word is nice. So, ski means nice. Therefore, in the first statement, tri means Sunday.

25. Ans: [d]

Tractor is used for ploughing. It is called car and hence (d).

26. Ans: [c]

$R \rightarrow \#$ and $F \rightarrow 5$ Hence, $S \rightarrow 3$

$O \rightarrow 4$ $I \rightarrow \star$ $T \rightarrow 7$

$S \rightarrow 3$ $R \rightarrow \#$

$O \rightarrow 4$

$E \rightarrow \$$ $S \rightarrow 3$ $R \rightarrow \#$

$T \rightarrow 7$ $E \rightarrow \$$

Solutions for 27 and 28

pit na sa \rightarrow you are welcome

] \rightarrow na \rightarrow are

na ho pa la \rightarrow they

are very good]]

ka da la \rightarrow who is

good

] \rightarrow la \rightarrow good

od ho pit la \rightarrow

they welcome good people

\rightarrow pit \rightarrow welcome

Also, ho \rightarrow they

27. Ans: [d]

people \rightarrow od

28. Ans: [c]

very \rightarrow pa

29. Ans: [d]

30. Ans: [d]

31. Ans: [b]

32. Ans: [a]

33. Ans: [c]

34. Ans: [b]

35. Ans: [c]

36. Ans: [c]

37. Ans: [b]

38. Ans: [a]

39. Ans: [d]

I. ja pa na \rightarrow go home now]

II. na da ta \rightarrow come back home] \rightarrow na \rightarrow home Hence, ja means either go or now.

40. Ans: [e]

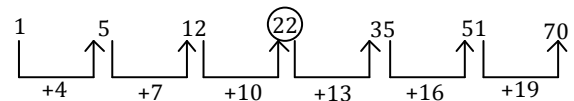
I. \rightarrow 481 \rightarrow sky is blue]]

246 \rightarrow sea is deep] \rightarrow is \rightarrow 4] \rightarrow sea 6

II. \rightarrow 698 \rightarrow sea looks blue]. Hence, deep \rightarrow 2

1. Ans: [c]

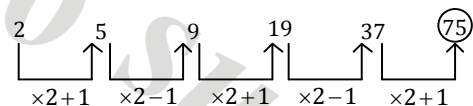
Clearly, the given series follows the following pattern.



Hence, the answer is 22 \rightarrow (c).

2. Ans: [b]

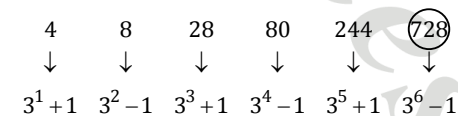
The following pattern is followed in the series.



Hence, the answer is 75 \rightarrow (b).

3. Ans: [d]

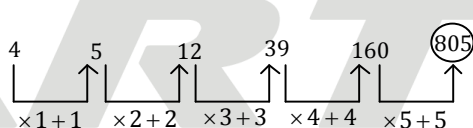
The series follows the following pattern.



Hence, the answer is 728 \rightarrow (d).

4. Ans: [c]

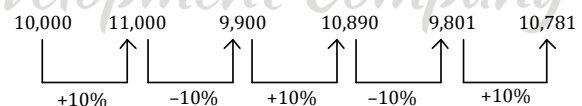
The following pattern is used in the given series.



Hence, the answer is 805 \rightarrow (c).

5. Ans: [c]

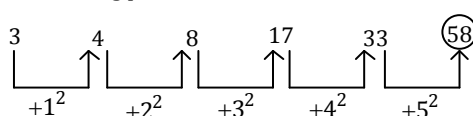
We add or subtract alternately 10% of the term to get the next term.



Hence, the answer is 10781 \rightarrow (c).

6. Ans: [b]

The following pattern is used in the series.



Hence, the answer is 58 \rightarrow (b).

7. Ans: [b]

The sequence consists of two series, the one consisting of cubes of odd numbers and the other the square of even numbers.

$$\begin{array}{ccccccccc} 1 & & 27 & & 125 & & 343 & & (729) \\ \downarrow & & \downarrow & & \downarrow & & \downarrow & & \downarrow \\ 1^3 & & 3^3 & & 5^3 & & 7^3 & & 9^3 \\ & & \downarrow & & \downarrow & & \downarrow & & \downarrow \\ & & 2^2 & & 4^2 & & 6^2 & & 7^2 \end{array}$$

The answer is 729 → (b).

8. Ans: [d]

The following pattern is followed in the series.

$$\begin{array}{cccc} \begin{array}{c} 3 \times 5 \\ \swarrow \quad \searrow \\ 3 \quad 5 \\ \downarrow \quad \downarrow \\ 15 \end{array} & \begin{array}{c} 5 \times 7 \\ \swarrow \quad \searrow \\ 5 \quad 7 \\ \downarrow \quad \downarrow \\ 35 \end{array} & \begin{array}{c} 7 \times 9 \\ \swarrow \quad \searrow \\ 7 \quad 9 \\ \downarrow \quad \downarrow \\ 63 \end{array} & \begin{array}{c} 9 \times 11 \\ \swarrow \quad \searrow \\ 9 \quad 11 \\ \downarrow \quad \downarrow \\ (99) \end{array} \\ +2 & +2 & +2 & +2 \end{array}$$

Hence, the answer is 99 → (d).

9. Ans: [a]

It may be seen that each term in the series is one more than the product of the digits of the preceding term. By way of explanation, the 2nd term = 6 × 9 + 1 = 55

Similarly, 5 × 5 + 1 = 26, 2 × 6 + 1 = 13, 1 × 3 + 1 = 4

Therefore, the 5th term should be 4 and not 5.

So, 5 is the wrong term → (a).

10. Ans: [a]

The pattern in the series is as follows.

$$\begin{array}{ccccccc} 4 & & 19 & & 49 & & (93) & & 154 & & 229 \\ \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow \\ +15 & & +30 & & +45 & & +60 & & +75 \end{array}$$

The fourth term 93 is wrong and is to be replaced by 94.

Hence, the answer is 93 → (a).

11. Ans: [c]

The pattern of the series is as follows.

$$\begin{array}{ccccccc} 80 & & 42 & & (24) & & 13.5 & & 8.75 & & 6.375 \\ \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow & & \uparrow \\ \times \frac{1}{2} + 2 & & \times \frac{1}{2} + 2 & & \times \frac{1}{2} + 2 & & \times \frac{1}{2} + 2 & & \times \frac{1}{2} + 2 \end{array}$$

Hence, the third term 24 is wrong and should be replaced by 23. Hence, the answer is 24 → (c).

12. Ans: [c]

$$\begin{array}{cccccccc} 64 & 71 & 80 & 91 & 104 & 119 & (136) & 155 \\ \swarrow \quad \searrow & \swarrow \quad \searrow & \swarrow \quad \searrow & \swarrow \quad \searrow & \swarrow \quad \searrow & \swarrow \quad \searrow & \swarrow \quad \searrow \\ 7 & 9 & 11 & 13 & 15 & 17 & 19 \end{array}$$

The numbers are obtained by adding 7, 9, 11, 13, 15, 17, 19 to the previous number.

$$119 + 17 = 136, 136 + 19 = 155$$

∴ 135 is the wrong number and it should be replaced by 136.

13. Ans: [b]

$$823 \quad 734 \quad 645 \quad 556 \quad (476) \quad 378 \quad 289$$

In this series, unit's digit and ten's digit of each number is increased by 1 and the hundred's digit decreased by 1.

The series should be

$$823 \quad 734 \quad 645 \quad 556 \quad 467 \quad 378 \quad 289$$

∴ 476 is the wrong number and it should be replaced by 467.

14. Ans: [a]

$$\begin{array}{ccccccc} 895 & 870 & 821 & 740 & 619 & (445) & 225 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ -25 & -49 & -81 & -121 & -174 & -220 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ -5^2 & -7^2 & -9^2 & -11^2 & -13^2 & -15^2 \end{array}$$

Here each number is obtained by subtracting from the previous number $5^2, 7^2, 9^2, 11^2, 13^2, 15^2$ respectively.

$$619 - 13^2 = 450, 450 - 15^2 = 225$$

∴ 445 is the wrong number and it should be replaced by 450.

15. Ans: [b]

$$\begin{array}{ccccccc} 19 & 26 & (35) & 46 & 59 & 74 & 91 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 7 & 9 & 11 & 13 & 15 & 17 \end{array}$$

The series is obtained by adding 7, 9, 11, 13, 15, 17 to the previous numbers.

$$26 + 9 = 35, 35 + 11 = 46$$

∴ 33 is the wrong number and should be replaced by 35.

16. Ans: [a]

$$\begin{array}{ccccccc} 32 & 36 & (45) & 61 & 86 & 122 & 171 & 235 \\ \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow & \downarrow \\ 4 & 9 & 16 & 25 & 36 & 49 & 64 \\ \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ 2^2 & 3^2 & 4^2 & 5^2 & 6^2 & 7^2 & 8^2 \end{array}$$

$$\therefore 36 + 9 = 45, 45 + 16 = 61$$

∴ 41 is wrong and should be replaced by 45.

17. Ans: [c]

$$2, 6, 12, 20, 30, 42, 56$$

$$2 = 1 \times 2, 6 = 2 \times 3, 12 = 3 \times 4, 20 = 4 \times 5, 30 = 5 \times 6$$

$$42 = 6 \times 7, 56 = 7 \times 8$$

∴ $8 \times 9 = 72$ is the next number

18. Ans: [c]
 $165, 195, 255, 285, 345$
 $11 \times 15 = 165$
 $13 \times 15 = 195$
 $17 \times 15 = 255$
 $19 \times 15 = 285$
 $23 \times 15 = 345$
 The next number will be $29 \times 15 = 435$

19. Ans: [a]
 $5, 10, 13, 26, 29, 58, 61$
 $\times 2 + 3 \quad \times 2 + 3 \quad \times 2 + 3$
 The numbers are alternately multiplied by 2 and added to 3.
 \therefore The next number is $61 \times 2 = 122$

20. Ans: [c]
 $51975 \quad 9450 \quad 2100 \quad 600 \quad 240 \quad 160$
 $\times \frac{2}{11} \quad \times \frac{2}{9} \quad \times \frac{2}{7} \quad \times \frac{2}{5} \quad \times \frac{2}{3} \quad \times \frac{2}{1}$
 $160 \times 2 = 320$
 The next number is $160 \times \frac{2}{1} = 320$

21. Ans: [c]
 $444 \quad 467 \quad 513 \quad 582 \quad 674 \quad 789$
 $23 \quad 46 \quad 69 \quad 92 \quad 115 \quad 138$
 $23 \quad 23 \quad 23 \quad 23 \quad 23$
 $789 + 138 = 927$
 The next number is 927.

22. Ans: [c]
 $15, 25, 40, 130, (?), 2560$
 $15 \times 1 + 10 = 25, 25 \times 2 - 10 = 40, 40 \times 3 + 10 = 130$
 The next number will be $130 \times 4 - 10 = 510$
 $510 \times 5 + 10 = 2560$
 \therefore The required number is 510.

23. Ans: [c]
 $6, 42, (?), 1260, 5040, 15120, 30240$
 $\times 7 \quad \times 6 \quad \times 5 \quad \times 4 \quad \times 3 \quad \times 2$
 $42 \times 6 = 252$
 The number is 252

24. Ans: [d]
 $282 \quad 286 \quad 302 \quad (?) \quad 402 \quad 502$
 $4 \quad 16 \quad 36 \quad 64 \quad 100$
 $\uparrow \quad \uparrow \quad \uparrow \quad \uparrow \quad \uparrow$
 $2^2 \quad 4^2 \quad 6^2 \quad 8^2 \quad 10^2$
 \therefore The number is $302 + 36 = 338$

25. Ans: [a]

$$\begin{array}{ccccccc} & & & & 84.5 & & \\ & & & & \boxed{} & & \\ 6 & 4 & 8 & 23 & (?) & 385.25 \\ \underbrace{\hspace{1cm}} & \underbrace{\hspace{1cm}} & \underbrace{\hspace{1cm}} & \underbrace{\hspace{1cm}} & & & \\ 2 & 4 & 15 & & & & \end{array}$$

$$6 \times 0.5 + 1 = 4, 4 \times 1.5 + 2 = 8$$

$$8 \times 2.5 + 3 = 23, 23 \times 3.5 + 4 = 84.5$$

$$84.5 \times 4.5 + 5 = 385.25$$

\therefore The required number is 84.5.

LOGICAL REASONING

SESSION – 7

ALPHA SERIES

- Ans: [a]
 Observing closely, it may be seen that the first and the second letters of each term are moved five places forward to obtain the corresponding letters of the next term.
 Accordingly the first letter of the missing term (5th term) will be five places ahead of P i.e. U, and the second letter must be five places ahead of R i.e., W.
 So, the missing term is UW. Hence, the answer is (a).
- Ans: [b]
 It may be seen that the second term U is three places after R and so also all succeeding terms. So, the next term after D is 3 places after D i.e., G.
 Hence the answer is G \rightarrow (b).
- Ans: [c]
 $H \xrightarrow{+1} I \xrightarrow{+2} K \xrightarrow{+3} N \xrightarrow{+4} (R)$
 The missing term is R \rightarrow (c).
- Ans: [a]
 First letter: $A \xrightarrow{+1} B \xrightarrow{+1} C \xrightarrow{+1} (D)$
 Second letter: $I \xrightarrow{+1} J \xrightarrow{+1} K \xrightarrow{+1} (L)$
 Hence, the missing term is DL \rightarrow (a).
- Ans: [a]
 First letter:
 $D \xrightarrow{+3} G \xrightarrow{+4} K \xrightarrow{+3} N \xrightarrow{+4} R \xrightarrow{+3} (U)$
 Second letter:
 $F \xrightarrow{+4} J \xrightarrow{+3} M \xrightarrow{+4} Q \xrightarrow{+3} T \xrightarrow{+4} (X)$
 Hence, the missing term is UX \rightarrow (d)
- Ans: [b]
 Analysing the given terms, the pattern of the series is as follows.