

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]

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

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

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

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

\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.

U $\xrightarrow{-2}$ (S) $\xrightarrow{-4}$ O $\xrightarrow{-2}$ M $\xrightarrow{-4}$ I
P $\xrightarrow{-8}$ (H) $\xrightarrow{-4}$ D $\xrightarrow{-2}$ B $\xrightarrow{-1}$ A
I $\xrightarrow{+1}$ (J) $\xrightarrow{+6}$ P $\xrightarrow{+1}$ Q $\xrightarrow{+6}$ W

Hence, the missing term is SHJ \rightarrow (b).

7. Ans: [b]

First letter: B $\xrightarrow{+2}$ D $\xrightarrow{+2}$ F $\xrightarrow{+2}$ (H) $\xrightarrow{+2}$ J

Second letter:

Z $\xrightarrow{-1}$ Y $\xrightarrow{-1}$ X $\xrightarrow{-1}$ (W) $\xrightarrow{-1}$ V

Third letter: A $\xrightarrow{+2}$ C $\xrightarrow{+2}$ E $\xrightarrow{+2}$ (G) $\xrightarrow{+2}$ I

Hence the missing term is HWG \rightarrow (b).

8. Ans: [a]

First letter: P $\xrightarrow{-1}$ O $\xrightarrow{-1}$ N $\xrightarrow{-1}$ M $\xrightarrow{-1}$ (L)

Second letter:

M $\xrightarrow{+2}$ O $\xrightarrow{+2}$ Q $\xrightarrow{+2}$ S $\xrightarrow{+2}$ (U)

Third letter: T $\xrightarrow{-1}$ S $\xrightarrow{-1}$ R $\xrightarrow{-1}$ Q $\xrightarrow{-1}$ (P)

Hence the missing term is LUP \rightarrow (a).

9. Ans: [e]

The first term consists of one letter, the second term consists of two consecutive letters and the third term consists of three consecutive letters. So, the required term will consist of four consecutive letters. Also there is a gap of one letter between the letter of the first term and first letter of the second term and a gap of two letters between the last of the second term and first letter of the third term. So, the first letter of the required term would be four steps ahead of the last letter of the third term.

Accordingly,

G H I
 $\downarrow +4$
? \rightarrow M N O P

10. Ans: [b]

Each letter of a term of the series is four steps ahead of the corresponding letter of the preceding term.

Accordingly,

3rd term \rightarrow J T

? \rightarrow N X

11. Ans: [a]

The letters of each term are moved backward one, two, three and four steps to obtain the corresponding letters of the next term.

Accordingly,

3rd term \rightarrow C F I L
 $\downarrow -1 \quad \downarrow -2 \quad \downarrow -3 \quad \downarrow -4$
4th term (?) \rightarrow B D F H

12. Ans: [e]

Each term of the series consists of two alternate letters and there is a gap of two letters between the last letter of each term and the first letter of the next term.

Accordingly,

4th term \rightarrow Q S
 $\downarrow +3$
V $\xrightarrow{+2}$ X
5th term (?) \rightarrow VX

13. Ans: [b]

Each letter of the terms is moving differently, the first one by $-3, -3, -3$,

the second one by $+1, +1, +1$ and

the third one by $+2, +3, +4$ respectively.

3rd term \rightarrow Q H G
 $\downarrow -3 \quad \downarrow +1 \quad \downarrow +4$
4th term (?) \rightarrow N I K

14. Ans: [a]

Letters in odd positions move by -3 steps and letters in even positions move by -4 steps.

Accordingly,

Z S W O T K Q G ? ?
 $\downarrow -3 \quad \downarrow -4 \quad \downarrow -3 \quad \downarrow -4 \quad \downarrow -3 \quad \downarrow -4$

15. Ans: [c]

The number of letters in the terms of the given series increases by one at each step.

The first letter of each term is two steps ahead of the last letter of the preceding term. However, each term consists of consecutive letters in order.

AB DEF HIJK MNOPQ STUVWX
 $\uparrow +2 \quad \uparrow +2 \quad \uparrow +2 \quad \uparrow +2$

ALPHANUMERIC SERIES

1. Ans: [d]

Numbers: 2 $\xrightarrow{+2}$ 4 $\xrightarrow{+4}$ 8 $\xrightarrow{+6}$ 14 $\xrightarrow{+8}$ (22)

Letters: B $\xrightarrow{+1}$ C $\xrightarrow{+2}$ E $\xrightarrow{+3}$ H $\xrightarrow{+4}$ (L)

So, the missing term is 22L \rightarrow (d).

2. Ans: [a]

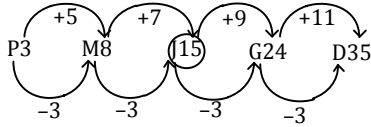
The pattern of the given series is as follows.

A1 $\xrightarrow{+2}$ C3 $\xrightarrow{+3}$ F6 $\xrightarrow{+4}$ J10 $\xrightarrow{+5}$ O15 $\xrightarrow{+6}$ U21

The missing term is, therefore, U21 \rightarrow (a).

3. Ans: [d]

The pattern followed in the series is as follows.



The missing term is J15 → (d).

4. Ans: [d]

The first letter of each term is moved two steps backward and the second letter is moved three steps forward to obtain the corresponding letters of the next term. The number in each term is 3 more than that in the preceding term.

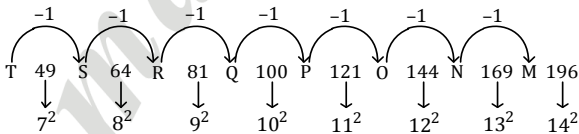
5. Ans: [c]

6. Ans: [b]

Because the letters are the same, concentrate on the number series, which is a simple 2, 3, 4, 5, 6 series, and follows each letter in order.

7. Ans: [a]

The pattern followed in the series is as follows.



The missing terms are N169 and M196 → (a).

8. Ans: [b]

The pattern followed by the letters is

First letter: G → +3 → J → +3 → M → +3 → P → +3 → S

Third letter: T → -2 → R → -2 → P → -2 → N → -2 → L

The pattern followed by the number is 4, $4 \times 2 + 1(9)$, $9 \times 2 + 2(20)$, $20 \times 2 + 3(43)$, $43 \times 2 + 4(90)$.

The second number 10 is wrong and is to be replaced by 9. So, the second term J10R does not fit in the given series.

The correct second term is J9R.

Hence, the answer is (b).

9. Ans: [b]

The series pattern is aceg/aceg/aceg

So, the required answer is ecag → (b).

10. Ans: [a]

The series pattern is abba/abba/abba

So, the required answer is baab.

11. Ans: [b]

The pattern of the series is ab/ab/ab/ab/ab/ab with 'ab' repeated six times.

So, the required answer is abba → (b).

12. Ans: [a]

The pattern of the series is abc/bca/cab/abc/bca.

The letters change places in a cyclic order.

So, the required answer is abcb → (a).

13. Ans: [a]

The pattern of the series is bcca/ccab/aabb/bcca.

So, the required answer is baab → (a).

14. Ans: [a]

15. Ans: [a]

abczy/abcdxw/abcdevu

LOGICAL REASONING

SESSION – 8

ODD MAN OUT

1. Ans: [c]

2. Ans: [d]

3. Ans: [c]

4. Ans: [d]

5. Ans: [c]

6. Ans: [c]

7. Ans: [d]

8. Ans: [d]

9. Ans: [d]

The pattern of the series is shown below.

A → +2 → C → +3 → F → +4 → J

C → +2 → E → +3 → H → +4 → L

P → +2 → R → +3 → U → +4 → Y

S → +2 → U → +3 → X → +2 → Z

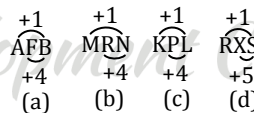
∴ SUXZ is the odd man out.

10. Ans: [b]

In all options except (b), the third and the fourth letters are reverse.

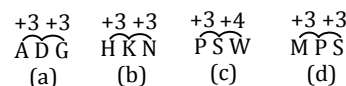
11. Ans: [d]

The pattern of the series is illustrated below,



12. Ans: [c]

The pattern if the series is illustrated below,



13. Ans: [a]

The pattern of the series is explained below, AA will be the odd one.

Since alternatively, Rank of B is 2 so, BB