



# Reasoning Ability

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**SOLUTIONS**

# INDEX

## Chapter 1

Series Completion .....1

## Chapter 2

Alphabet Test and Number Test .....10

## Chapter 3

Coding–decoding.....13

## Chapter 4

Distance and Directions .....22

## Chapter 5

Blood Relations .....32

## Chapter 6

Sitting Arrangements .....40

## Chapter 7

Puzzle Test.....51

## Chapter 8

Syllogism .....60

## Chapter 9

Order and Ranking.....72

## Chapter 10

Inequalities .....75

## Chapter 11

Input and Output.....85

## Chapter 12

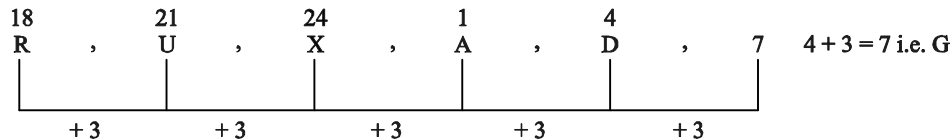
Data Sufficiency .....90

<b>Chapter 13</b>	
Eligibility Test.....	96
<b>Chapter 14</b>	
Statement Conclusions.....	99
<b>Chapter 15</b>	
Statement Course of Action .....	101
<b>Chapter 16</b>	
Statement Assumptions .....	102
<b>Chapter 17</b>	
Statement & Arguments.....	104
<b>Chapter 18</b>	
Inference .....	106
<b>Chapter 19</b>	
Critical Reasoning.....	107



# Series Completion

1. Here the pattern is regular order



∴ the missing term is G.

2. ab, ba, abc, cba, abcd, ?

In every pair, the second term is reverse of the first term. ∴ the missing term is 'dcba'.

3. \_\_\_\_\_, SIY, OEU, KAQ, GWM, CSI

Since the first term is missing we will start observing the pattern from last.

$$C \xrightarrow{+4} G \xrightarrow{+4} K \xrightarrow{+4} O \xrightarrow{+4} S \xrightarrow{+4} W$$

$$S \xrightarrow{+4} W \xrightarrow{+4} A \xrightarrow{+4} E \xrightarrow{+4} I \xrightarrow{+4} M$$

$$I \xrightarrow{+4} M \xrightarrow{+4} Q \xrightarrow{+4} U \xrightarrow{+4} y \xrightarrow{+4} C$$

Hence, the missing term is 'WMC'.

4. YXZ, XWY, ?, VUW, UTV, TSU

$$Y \xrightarrow{-1} X \xrightarrow{-1} \textcircled{W} \xrightarrow{-1} V \xrightarrow{-1} U \xrightarrow{-1} T$$

$$X \xrightarrow{-1} W \xrightarrow{-1} \textcircled{V} \xrightarrow{-1} U \xrightarrow{-1} T \xrightarrow{-1} S$$

$$Z \xrightarrow{-1} Y \xrightarrow{-1} \textcircled{X} \xrightarrow{-1} W \xrightarrow{-1} V \xrightarrow{-1} U$$

With the above pattern we will get the missing term i.e. WVX.

5. PTVX, AEGI, ....., WACE, HLNP ?

Here every term follows the same pattern i.e.

$$P \xrightarrow{+4} T \xrightarrow{+2} V \xrightarrow{+2} X$$

$$A \xrightarrow{+4} E \xrightarrow{+2} G \xrightarrow{+2} I$$

$$W \xrightarrow{+4} A \xrightarrow{+2} C \xrightarrow{+2} E$$

∴ the missing term will also follow the same pattern. Hence from options we will get the answer 'LPRT'.

$$L \xrightarrow{+4} P \xrightarrow{+2} R \xrightarrow{+2} T$$

6. Z  $\xrightarrow{-1}$  Y  $\xrightarrow{-1}$  X  $\xrightarrow{-3}$  U  $\xrightarrow{-1}$  T  $\xrightarrow{-1}$  S  $\xrightarrow{-3}$  P  $\xrightarrow{-1}$  O  $\xrightarrow{-1}$  N  $\xrightarrow{-3}$  ,

$$K \xrightarrow{-1} \textcircled{?} \xrightarrow{-1} \textcircled{?}$$

J                      I

∴ missing terms are J and I.

7. GH, JL, NQ, SW, YD, ?

$$G \xrightarrow{+3} J \xrightarrow{+4} N \xrightarrow{+5} S \xrightarrow{+6} Y \xrightarrow{+7} F$$

$$H \xrightarrow{+4} L \xrightarrow{+5} Q \xrightarrow{+6} W \xrightarrow{+7} D \xrightarrow{+8} L$$

∴ missing term is 'FL'.

8.  $a \xrightarrow{+6} g \xrightarrow{+6} \boxed{?} \xrightarrow{+6} D \xrightarrow{+6} Y$   
M

$$J \xrightarrow{+6} p \xrightarrow{+6} \boxed{?} \xrightarrow{+6} b \xrightarrow{+6} h$$

V

$$D \xrightarrow{+6} Y \xrightarrow{+6} \boxed{?} \xrightarrow{+6} K \xrightarrow{+6} q$$

E

∴ answer is *mve*.

9. The pattern is :

$$P \xrightarrow{-1} O \xrightarrow{-1} N \xrightarrow{-1} M \xrightarrow{-1} L$$

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

$$T \xrightarrow{-1} S \xrightarrow{-1} R \xrightarrow{-1} Q \xrightarrow{-1} P$$

Answer is LUP

10.  $B \xrightarrow{+2} D \xrightarrow{+2} F \xrightarrow{+2} \boxed{?} \xrightarrow{+2} J, \quad Z \xrightarrow{-1} Y \xrightarrow{-1} X \xrightarrow{-1} ? \xrightarrow{-1} V$   
H W

$$A \xrightarrow{+2} C \xrightarrow{+2} E \xrightarrow{+2} ? \xrightarrow{+2} I$$

G

Answer is HWG.

11.  $A \xrightarrow{+3} D \xrightarrow{+4} H \xrightarrow{+5} M \xrightarrow{+6} S \xrightarrow{+7} Z$

$$B \xrightarrow{+5} G \xrightarrow{+6} M \xrightarrow{+7} T \xrightarrow{+8} B \xrightarrow{+9} K$$

$$D \xrightarrow{+7} K \xrightarrow{+8} S \xrightarrow{+9} B \xrightarrow{+10} L \xrightarrow{+11} W$$

∴ Answer is ZKW.

12.  $W \xrightarrow{-3} T \xrightarrow{-3} Q \xrightarrow{-3} N$

$$F \xrightarrow{+1} G \xrightarrow{+1} H \xrightarrow{+1} I$$

$$B \xrightarrow{+2} D \xrightarrow{+3} G \xrightarrow{+4} K$$

Answer is NIK.

13.  $U \longrightarrow ? \longrightarrow O \longrightarrow M \longrightarrow I$   
|            |            |            |  
-2        -4            -2           -4 ∴ missing term is S

$$A \longrightarrow B \longrightarrow D \longrightarrow ? \longrightarrow P$$

|            |            |            |

+1        +2            +4           +8

J

$$W \xrightarrow{-6} Q \xrightarrow{-1} P \xrightarrow{-6} \boxed{?} \xrightarrow{-1} I$$

∴ answer is SHJ.

14. ~~A~~TTRIBUTION ~~X~~ → ~~T~~TTRIBUTIO → ~~R~~RIBUTIØ  
↓  
UTI ← ~~Ø~~BUTI

Firstly, 1<sup>st</sup> and last term is cancelled. After that 2 first terms than 1<sup>st</sup> and last, and so on.  
∴ answer is UTI.

15. ~~A~~DVENTURE → DVENTUR ~~E~~ → ~~D~~D VENTUR  
↓  
VENTUR  
↑  
VENTU ←

∴ the missing term is "VENTUR".

**NUMBER SERIES****PRACTICE TEST-II**

1. 1, 9, 25, 49, ? 121

Every term is square of odd number i.e. (1, 3, 5, 7, 11). ∴ missing term will be square of 9 i.e. 81.  
Hence answer is 81.

2. 4, 7, 12, 19, 28, ?  
+3 +5 +7 +9 +11

∴ Answer is  $28 + 11 = 39$

3. 6, 12, 21, ?, 48  
 $3 \times 2$   $3 \times 4$   $3 \times 7$   $3 \times 11$   $3 \times 16$   
+2 +3 +4 +5

∴ missing term is  $3 \times 11 = 33$

4. 6, 11, 21, 36, 56, ?  
+5 +10 +15 +20 +25

Hence answer is  $56 + 25 = 81$

5. 120, 99, 80, 63, 48, ?  
-21 -19 -17 -15 -13

∴ Answer is  $48 - 13 = 35$

6. 0, 2, 8, 14, ?, 34  
+2 +6 +6 +10 +10

Here the difference between the terms is bower of 2 i.e.  $2^1, 2^2, 2^3, 2^4$  and  $2^5$ . Hence answer is  $28 + 8 = 36$ .

7. 
$$\begin{array}{cccccc} 0, & 2, & 8, & 14, & 7, & 34 \\ | & | & | & | & | & | \\ \hline & +2 & +6 & +6 & +10 & +10 \end{array}$$

Answer is  $14 + 10 = 24$

8. 28, 33, 31, 36, ?, 39

In this series following pattern is observed-

$$28 \xrightarrow{+5} 33 \xrightarrow{-2} 31 \xrightarrow{+5} 36 \xrightarrow{-2} 34 \xrightarrow{+5} 39$$

Hence the answer is 34.

9. 
$$\begin{array}{cccccc} 6, & 17, & 39, & 72, & ? \\ | & | & | & | & | \\ \hline & +11 & +22 & +33 & +44 \end{array}$$

In the above series, the difference between terms is multiple of 11 i.e. 11, 22, 33, 44. Hence, missing term is  $72 + 44 = 116$ .

10. The pattern in this series is :

$$1 \xrightarrow{+3} 4 \xrightarrow{+6} 10 \xrightarrow{+12} 22 \xrightarrow{+24} 46 \xrightarrow{+48} ? \quad 46 + 48 = 94$$

Hence answer is 94.

11. 4, 9, 25, ?, 121, 169, 289, 361

In this series, every term is square of prime number starting from 2 (i.e. 2, 3, 5, 7, 11, 13, 17, 19).  $\therefore$  missing term will be  $7^2 = 49$ .

12. 
$$\begin{array}{cccccc} 1, & 1, & 2, & 6, & 24, & ?, & 720 \\ 0! & 1! & 2! & 3! & 4! & 5! & 6! \end{array}$$

In this series, every term is factorial of number starting from 0 to 6.  $\therefore$  the missing is  $5!$  i.e. 120.

13. 4, 6, 9,  $13\frac{1}{2}$ , ?

Here the following pattern can be observed :

$$4 \xrightarrow{\times 3/2} 6 \xrightarrow{\times 3/2} 9 \xrightarrow{\times 3/2} 27/2 \xrightarrow{\times 3/2} 81/4$$

$$\therefore \text{missing term will be } \frac{27}{2} \times \frac{3}{2} = \frac{81}{4}$$

14. The pattern followed in this series from last is  $\rightarrow \times 2, \times 3, \times 4$  and so on

$$8 \xrightarrow{\times 2} 16 \xrightarrow{\times 3} 48 \xrightarrow{\times 4} (?) \xrightarrow{\times 5} 960 \xrightarrow{\times 6} 5760$$

Hence, answer is 192.

15. 1, 2, 6, 7, 21, 22, 66, 67, ?

This is interlinked series i.e. there are two series. Which are -

I  $\rightarrow$  1, 6, 21, 66, ?

II  $\rightarrow$  2, 7, 22, 67

The pattern followed in both the series is -

$$+ 5, + 15, + 45, + 135$$

$\therefore$  missing term is  $66 + 135 = 201$

16. 48, 24, 96, 48, 192, ?

This is an interlinked series which contain 2 series  $\rightarrow$

I  $\rightarrow$  48, 96, 192

II  $\rightarrow$  24, 48, ?

The pattern followed in both the series is  $\times 2$ .

$\therefore$  missing term is  $48 \times 2 = 96$ .

17. 9, 27, 31, 155, 161, 1127, ?

In this series the following pattern can be observed –

$$\times 3, +4, \times 5, +6, \times 7, +8$$

$$9 \xrightarrow{\times 3} 27 \xrightarrow{+4} 31 \xrightarrow{\times 5} 155 \xrightarrow{+6} 161 \xrightarrow{\times 7} 1127 \xrightarrow{+8} 1135.$$

∴ answer is 1135.

18. 2, 3, 3, 5, 10, 13, ?, 43, 172, 177

In this series the pattern observed is –

$$+1, \times 1, +2, \times 2, +3, \times 3, +4, \times 4, +5$$

$$i.e. 2 \xrightarrow{+1} 3 \xrightarrow{\times 1} 3 \xrightarrow{+2} 5 \xrightarrow{\times 2} 10 \xrightarrow{+3} 13 \xrightarrow{\times 3} 39 \xrightarrow{+4} 43 \xrightarrow{\times 4} 172$$

Hence is  $13 \times 3 = 39$

19. 8, 28, 116, 584, ?

In the above series the terms are –

$$8, (8 \times 3) + 4, (28 \times 4) + 4, (116 \times 5) + 4$$

∴ missing term is  $(584 \times 6) + 4$  i.e. 3508

20. 3, 7, 23, 95, ?

The terms are  $\rightarrow 3, (3 \times 2) + 1, (7 \times 3) + 2, (23 \times 4) + 3$

∴ missing term =  $(95 \times 5) + 4 = 479$

21. 
$$\begin{array}{cccccc} 1 & 5 & 14 & 30 & 55 & 91 & 140 \\ \hline & +4 & +9 & +16 & +25 & +36 & +49 \end{array}$$

22. 
$$\begin{array}{cccc} 198 & 194 & 185 & 169 & 144 \\ \hline & -4 & -9 & -16 & -25 \end{array}$$

23. 
$$\begin{array}{cccccc} 24 & 60 & 120 & 210 & 210 & 336 \\ \hline & 3^3-3 & 4^3-4 & 5^3-5 & 6^3-6 & 7^3-7 \end{array}$$

24. 
$$\begin{array}{cccc} 563 & 647 & 479 & 815 & 143 \\ \hline & +84 & +168 & +336 & +672 \end{array}$$

25. 
$$\begin{array}{cccccc} & +2 & & +2 & & +2 \\ & \curvearrowright & & \curvearrowright & & \curvearrowright \\ 45 & 54 & 47 & 55 & 49 & 56 & 51 \end{array}$$

**WRONG NUMBER SERIES**

**PRACTICE TEST-III**

1. 
$$\begin{array}{cccc} 1788 & 892 & 444 & 220 & 108 & 112 \\ \hline & +2-2 & +2-2 & +2-2 & +2-2 & \end{array}$$

2. 
$$\begin{array}{ccccccc} 225, & 289, & 338, & 374, & 397, & 415, & 424 \\ \hline & +64 & +49 & +36 & +25 & +16 & +9 \end{array}$$

∴ Wrong term in the series is 397

3. I. 5, 7.5, 11.25, 17.5, 29.75, 50, 91.25  
II. 2.5, 3.75, 6.25, 12.25, 20.25, 41.25  
11.25, 21.25



Pattern in Series II is

$$(2.5 \times 2) - 1.25 = 3.75$$

$$(3.75 \times 2) - 1.25 = 6.25$$

$$(6.25 \times 2) - 1.25 = 11.25$$

$$(11.25 \times 2) - 1.25 = 21.25$$

∴ In series I 29.75 is wrong term.

4. 35, 118, 280, 600, 1238, 2504, 5036

35	118	280	600	1238	2504	5036
+ 83		+ 162		+ 320		638
(83 × 2)		(162 × 2)				
- 4		- 4				

The pattern observed in series II is –

$$(83 \times 2) - 4, (162 \times 2) - 4$$

∴ 1238 is wrong term as the difference should be  $(320 \times 2) - 4 = 636$  and term should be 1236.

5. 10, 12, 28, 90, 368, 1840, 11112

(10 × 1)	(12 × 2)	28 × 3	(90 × 4)	368 × 5	
+ 2	+ 4	+ 6	+ 8	+ 10	

Since, the term 1840 is not obtained with the above pattern. ∴ it is wrong term in the series.

6. 1, 2, 5, 14, 41, 124

1	3	9	27	81
$3^0$	$3^1$	$3^2$	$3^3$	$3^4$

With the above pattern we can observe that 124 is the wrong term. The term in place of 124 should be 122.

7. 62

8. 1, 2, 6, 24, 120, 620, 5040

Every term in the series is factorial of number starting from 1 ∴ 620 is wrong from as  $6! = 720$ .

9. 4, 10, 22, 40, 84, 94, 130

The term in the series are –

$2 \times 2$	$2 \times 5$	$2 \times 11$	$2 \times 20$	$2 \times 32$
+ 3		+ 6		+ 9
+ 12		+ 9		+ 12

∴ With the above pattern, 84 is the wrong term. The term must be 64.

10. 1, 4, 8, 16, 31, 64, 127, 256

The given term in the series are –

$$2^1 - 1, 2^2 - 1, 2^3 - 1, 2^4 - 1, 2^5 - 1, 2^6 - 1, 2^7 - 1, 2^8 - 1$$

∴ the term in place of 8 must be 7.

∴ 8 is the wrong term of the series.

11. 49, 56, 64, 71, 81, 90, 100, 110

The term of the series are –

$$7 \times 7, 7 \times 8, 8 \times 8, 8 \times 9, 9 \times 9, 9 \times 10, 10 \times 10, 10 \times 11$$

With the above pattern 71 is the wrong term.

12. 9, 13, 21, 37, 69, 132, 261

9	13	21	37	69	132	261
+ 4		+ 8		+ 16		+ 32
+ 64		+ 32		+ 16		+ 8

With the above pattern the term 132 is the wrong term as  $69 + 64 = 133$ .

13. 9, 15, 24, 34, 51, 69, 90

In this series every term is multiple of 3 except 34. ∴ it is the wrong term in the series.

14. 1, 3, 8, 19, 42, 88, 184

The term in the series are –

$$1, (1 \times 2) + 1, (3 \times 2) + 2, (8 \times 2) + 3, (19 \times 2) + 4, (42 \times 2) + 5$$

∴ With the above pattern 88 is the wrong term and the correct term is 89.