

**LOGICAL REASONING  
NUMBER & ALPHABET SERIES – 1***(Answers on page 2)***NUMBER SERIES:**

- |                                    |           |           |           |           |
|------------------------------------|-----------|-----------|-----------|-----------|
| 1) 71, 76, 83, 94, 107, .....      | a) 124    | b) 121    | c) 125    | d) 132    |
| 2) 5, 24, 61, 122, 213, .....      | a) 382    | b) 294    | c) 340    | d) 280    |
| 3) 1800, 900, 300, 75, .....       | a) 15     | b) 20     | c) 25     | d) 30     |
| 4) 2, 9, 30, 93, 279, .....        | a) 683    | b) 692    | c) 689    | d) 840    |
| 5) 19, 23, 29, 31, 37, 41, .....   | a) 48     | b) 43     | c) 46     | d) 45     |
| 6) 18, 227, 364, 4125, 5216, ..... | a) 6729   | b) 7881   | c) 7497   | d) 6343   |
| 7) 4, 5, 12, 39, 160, ....         | a) 816    | b) 789    | c) 805    | d) 798    |
| 8) 38, 49, 62, 70, 77, 91, .....   | a) 99     | b) 101    | c) 112    | d) 106    |
| 9) 1, 1, 2, 3, 5, 8, 13, 21, ..... | a) 34     | b) 38     | c) 36     | d) 32     |
| 10) 43, 47, 56, 72, 97, .....      | a) 128    | b) 134    | c) 126    | d) 133    |
| 11) 8, 8, 12, 24, 60, 180, .....   | a) 752    | b) 550    | c) 630    | d) 820    |
| 12) 1025, 962, 901, 842, .....     | a) 785    | b) 746    | c) 694    | d) 675    |
| 13) 12, 211, 1122, 22111, .....    | a) 222111 | b) 111212 | c) 111222 | d) 221211 |
| 14) 81, 256, 625, 1296, .....      | a) 4096   | b) 2401   | c) 3125   | d) 2906   |

**ALPHABET SERIES:**

- |                               |        |        |        |        |
|-------------------------------|--------|--------|--------|--------|
| 15) B, F, J, N, R, .....      | a) W   | b) V   | c) Y   | d) X   |
| 16) A, D, I, P, Y, .....      | a) J   | b) Z   | c) H   | d) N   |
| 17) C, E, H, M, T, .....      | a) D   | b) Q   | c) E   | d) K   |
| 18) LG, MI, NK, OM, .....     | a) PQ  | b) PN  | c) PR  | d) PO  |
| 19) BC, FH, KN, QU, .....     | a) XC  | b) YB  | c) WC  | d) UB  |
| 20) YXW, UTS, PON, JIH, ..... | a) EDC | b) GFD | c) CBA | d) DCA |

- 21) Which letter is 4 places to the left of the letter, which is 9 places to the right of N?
- 22) Which letter is 7th to the right of the letter, which is the 10<sup>th</sup> to the left of the letter, which is 5th to the right of H?
- 23) How many letters are between C and Q (both letters are not inclusive), if the first half of the alphabets is reversed and the second half is not changed at all?

**Answers and Explanation:**

- 1) a (124) Pattern: Differences are consecutive prime numbers +5, +7, +11, +13, +17)
- 2) c (340) Pattern:  $2^3-3$ ,  $3^3-3$ ,  $4^3-3$ ,  $5^3-3$ ,  $6^3-3$ ,  $7^3-3$ )
- 3) a (15) Pattern: 1800/2, 900/3, 300/4, 75/5)
- 4) d (840) Pattern:  $2 \times 3 + 3$ ,  $9 \times 3 + 3$ ,  $30 \times 3 + 3$ ,  $93 \times 3 + 3$ ,  $279 \times 3 + 3$ )
- 5) b (43) Pattern: Consecutive prime number starting from 19 up to 43
- 6) d (6343) Pattern: 1|8(1&2<sup>3</sup>), 2|27(2&3<sup>3</sup>), 3|64(3&4<sup>3</sup>), 4|125(4&5<sup>3</sup>), 5|126(5&6<sup>3</sup>), 6|343 (6&7<sup>3</sup>)
- 7) c (805) Pattern:  $4 \times 1 + 1$ ,  $5 \times 2 + 2$ ,  $12 \times 3 + 3$ ,  $39 \times 4 + 4$ ,  $160 \times 5 + 5$ )
- 8) b (101) Pattern: Differences between the numbers are the sum of the digits of the number just before each difference. +11, +13, +8, +7, +14, +10  
(3+8) (4+9) (6+2) (7+0) (7+7) (9+1)  
38 49 62 70 77 91
- 9) a (34) Pattern: Fibonacci series
- 10) d (133) Pattern: Differences between the numbers are  $2^2$ ,  $3^2$ ,  $4^2$ ,  $5^2$ ,  $6^2$ )
- 11) c (630) Pattern:  $x1$ ,  $x1.5$ ,  $x2$ ,  $x2.5$ ,  $x3$ ,  $x3.5$ )
- 12) a (785) Pattern:  $32^2+1$ ,  $31^2+1$ ,  $30^2+1$ ,  $29^2+1$ ,  $28^2+1$ )
- 13) c (111222) Pattern: Observe the position changes of '1' and '2'
- 14) b (2401) Pattern: Numbers are  $3^4$ ,  $4^4$ ,  $5^4$ ,  $6^4$ ,  $7^4$ )

**Alphabet Series:**

(It is better to recall the position values of English Alphabets. A=1, B=2, C=3, D=4, E=5, F=6, G=7, ..... X=24, Y=25, Z=26, next A=27, B=28, C=29, D=30, E=31, F=32, G=33, H=34 etc)

- 15) b (V) Pattern: Differences of letters are +4, +4, +4, +4, +4, +4)
- 16) a (J) Pattern: Letters represents the position values  $1^2$ ,  $2^2$ ,  $3^2$ ,  $4^2$ ,  $5^2$ ,  $6^2$ )
- 17) c (E) Pattern: Differences of letters are prime numbers +2, +3, +5, +7, +11)
- 18) d (PO) Pattern: Consider first letters of each pair L (+1) M (+1) N (+1) O (+1) P second letters of each pair G (+2) I (+2) K (+2) M (+2) O
- 19) a (XC) Pattern: Consider first letters of each pair B (+4) F (+5) K (+6) Q (+7) X second letters of each pair C (+5) H (+6) N (+7) U (+8) C  
Note: Position value of C could be 29.
- 20) c (CBA) Pattern: Set of 3 consecutive letters, differ by -2, -3, -4, -5)
- 21) Ans: S
- 22) Ans: J
- 23) Ans: 5 Pattern: (M L K J ..... D C B A | N O P Q R ..... Z)  
Note: First half A to M is reversed and second half N to Z as it is)