# 9 NUMBER SERIES, CODING DECODING AND ODD MAN OUT SERIES

## THIS CHAPTER INCLUDES

- Number Series
- Coding and Decoding
- Odd man out

## CHAPTER AT A GLANCE

| Topic | Important Highlight |
|---|---|
| **Number Series** | **Missing terms of the series**<br>In this type the questions we have to identify the missing term of the series real according to a specific pattern of the series rule to form its code. The students are required to detect the missing number of the series and answer the questions accordingly. |
| **Alphabet Series** | Alphabet series consists of letters of the alphabet placed in a specific pattern. |
| **Letter Series** | This type of question usually consist of a series of small letters which follow a certain pattern. However, some letters are missing from the series. These missing letters are then given in a proper sequence as one of the alternatives. |
| **Coding and Decoding** | Before transmitting, the data is encoded and at receiver side encode data is decoded in order to obtain original data by determining common key in encoded data. |

| Letter Coding | In this type the real alphabets in a word are replaced by certain other alphabets according to a specific rule to form its code. The candidate is required to detect the common rule and answer the questions accordingly. |
|---|---|
| Number Coding | In these questions, either numerical code values are assigned to a word or alphabetical code letters are assigned to the numbers. The candidate is required to analyse the code as per the directions. |
| Odd Man Out | Classification means 'to assort the items' of a given group on the basis of a certain common quality they possess and then spot the stranger or 'odd one out'. These questions are based on words, letters and numerals. In these types of problems, we consider the defining quality of particular things. In these questions, four or five elements are given, out of which one does not belong to the group. You are required to find the 'odd one'. |

## TOPIC NOT YET ASKED BUT EQUALLY IMPORTANT FOR EXAMINATION

1.  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.
    In the alphabet given above, which is 13th letter to the left of 8th letter from your right?
    (a) E                                    (b) F
    (c) U                                    (d) H
    **Answer:** (b)
2.  There are two letters in the word 'SCIENTIFIC' such that the number of letters between them is the same as the number of letters between them in the alphabet. The letter which comes later in the alphabet is your answer. If no such pair of letters is possible, then your answer is 'X'.

(a) E            (b) C
(c) I            (d) X
**Answer:** (a)

3. How many pairs of two letters of the word 'INDUCTIVE' are there, which have as many letters between them in the given word as in the alphabet?
(a) None            (b) 3
(c) 1            (d) 4
**Answer:** (c)

4. If the following series is written in reverse order, then which will be 12$^{th}$ letter to the right of 10$^{th}$ letter from your right?
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
(a) X            (b) U
(c) V            (d) None of these
**Answer:** (a)

5. If in the following series all the letters at the even places are deleted and the order of deleting begins from B, then which will be the third letter to the left of 5$^{th}$ letter from your right?
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
(a) I            (b) W
(c) M            (d) None of these
**Answer:** (d)

6. If in the following series the letters at the even places are denoted by lower letters as b for B, d for D and so on then how will the next month of November be written?
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
(a) DECEMbEr            (b) deCeMber
(c) dEcEMbER            (d) dECEMbEr
**Answer:** (d)

7. In the following series which is the 9$^{th}$ letter to the left of 7$^{th}$ letter from your left?
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
(a) K            (b) O
(c) P            (d) None of these
**Answer:** (c)

8.  Which is the 7$^{th}$ letter to the right of 9$^{th}$ letter from your right in the following series?
    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
    (a)  Y                                        (b) L
    (c)  J                                        (d) None of these
    **Answer:** (d)
9.  Which is the 10$^{th}$ letter to the left of 15$^{th}$ letter from your right in the following series?
    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
    (a)  U                                        (b) B
    (c)  V                                        (d) None of these
    **Answer:** (b)
10. If the first and sixth letters of the word 'CREDENTIALS' were interchanged, also the second and seventh letters and so on, which of the following would be 8$^{th}$ letter from your right?
    (a)  A                                        (b) T
    (c)  D                                        (d) None of these
    **Answer:** (a)
11. If the first and 11$^{th}$ letters of the word 'DISTURBANCE' were interchanged, also the second and 10$^{th}$ letters and so on, which would be the 7$^{th}$ letter from your right?
    (a)  R                                        (b) B
    (c)  A                                        (d) None of these
    **Answer:** (b)
12. If with the first, fourth, fifth and eighth letters of the word 'LAUREATE' a meaningful word can be formed, which would be the first letter of that word? If no meaningful word is possible then X is the answer and if more than one, words are possible then M is the answer.
    (a)  X                                        (b) E
    (c)  M                                        (d) None of these
    **Answer:** (c)
13. If with the second, fourth, sixth and 10$^{th}$ letters of the word 'SHOPKEEPER' a meaningful word can be formed, which would be the last letter of that word? If no meaningful word is possible then 'X' is the answer and if more than one, words can be formed, then the answer is 'M'.

(a) M
(b) X
(c) P
(d) None of these
**Answer:** (b)

14. If with the first, fifth, eighth and 10$^{th}$ letters of the word 'HOMOGENEOUS' a meaningful word can be formed, which would be the first letter of that word? If no meaningful word can be formed then the answer is 'X' and if more than one, words can be formed then 'M' is the answer.
(a) H
(b) X
(c) M
(d) None of these
**Answer:** (a)

15. Two letters of the word 'YESTERDAY' have as many letters between them in the word as in the alphabet. The letter which comes earlier in the alphabet. The letter which comes earlier in the alphabet is your answer. If no such pair is there, then your answer will be 'X'.
(a) R
(b) S
(c) X
(d) M
**Answer:** (a)

16. Which one of the following numbers is different from the rest?
(a) 13
(b) 21
(c) 17
(d) 19
**Answer:** (b)

17. Which one of the following groups of letters is different from the rest?
(a) NP
(b) PR
(c) US
(d) EG
**Answer:** (c)

**Directions —** In each of the questions from 18 to 29, which one of the alternatives is different from the rest?

18. (a) 4–7
(b) 7–16
(c) 17–36
(d) 16–32
**Answer:** (d)

19. (a) 51–28
(b) 37–62
(c) 81–104
(d) 99–76
**Answer:** (b)

20. (a) 111–11                     (b) 15–105
    (c) 7–91                       (d) 3–81
    **Answer:** (a)
21. (a) 63, 18                     (b) 29, 46
    (c) 47, 34                     (d) 28, 41
    **Answer:** (c)
22. (a) 9–27                       (b) 15–45
    (c) 10–30                      (d) 20–60
    **Answer:** (a)
23. (a) 10–45                      (b) 20–85
    (c) 40–180                     (d) 60–270
    **Answer:** (b)
24. (a) 2437                       (b) 2419
    (c) 5407                       (d) 1459
    **Answer:** (d)
25. (a) 2547                       (b) 3456
    (c) 3715                       (d) 5678
    **Answer:** (c)
26. (a) 15–40                      (b) 18–56
    (c) 24–76                      (d) 12–28
    **Answer:** (b)
27. (a) 6–36                       (b) 5–25
    (c) 7–49                       (d) 3–9
    **Answer:** (a)
28. (a) 9–40                       (b) 20–95
    (c) 17–80                      (d) 16–78
    **Answer:** (b)
29. (a) 200                        (b) 500
    (c) 700                        (d) 600
    **Answer:** (d)

**Directions—** In each of the questions from 30 to 41, which letters group is different from the rest?

30. (a) MNW                        (b) OPY
    (c) JKT                         (d) GHO
    **Answer:** (d)

31. (a) FRY                         (b) HAN
    (c) CUT                        (d) DOT
    **Answer:** (a)

32. (a) TEAM                      (b) THAN
    (c) TATA                      (d) TILE
    **Answer:** (c)

33. (a) KMPTZ                   (b) DFIMR
    (c) HJMQV                   (d) ACFJO
    **Answer:** (a)

34. (a) CROTON                  (b) CRUSH
    (c) CRIMP                   (d) CRINGE
    **Answer:** (a)

35. (a) CORDIAL                (b) CORIANDER
    (c) CORDATE                (d) CORNEA
    **Answer:** (c)

36. (a) CRY                         (b) JOY
    (c) FRY                         (d) TRY
    **Answer:** (b)

37. (a) FAMOUS                 (b) FRUCTUOUS
    (c) FANCIED                (d) FAVOUR
    **Answer:** (b)

38. (a) GLARY                   (b) GLAZE
    (c) GLARE                   (d) GLADE
    **Answer:** (a)

39. (a) GILD                      (b) GIFT
    (c) GIMP                    (d) GIBE
    **Answer:** (d)

40. (a) NOM                       (b) BCA
    (c) JIH                        (d) RSQ
    **Answer:** (c)

41. (a) MQT             (b) ADG
    (c) HKN            (d) RUX
    **Answer:** (a)

**Directions—** In each of the following questions find out the odd one.

42. (a) Flower            (b) Stem
    (c) Branch            (d) Roots
    **Answer:** (d)

43. (a) Day             (b) Week
    (c) Time             (d) Month
    **Answer:** (c)

44. (a) College-students      (b) Hospital-patient
    (c) Bus stand-driver      (d) Stadium-viewer
    **Answer:** (c)

45. Find the odd word out:
    (a) Cotton            (b) Terene
    (c) Silk             (d) Wool
    **Answer:** (b)

46. Which one is different from the rest?
    (a) Sparrow          (b) Chicken
    (c) Pigeon           (d) Owl
    **Answer:** (b)

**Directions—** (47-53) In each of the following questions find the word or pair of words which is different from the other three words or pairs of words.

47. (a) Shirt-Dress        (b) Boy-Girl
    (c) Book-Library      (d) Table-Furniture
    **Answer:** (b)

48. (a) Mango-Fruit       (b) Rice-Corn
    (c) Student-Class      (d) Tomato-Potato
    **Answer:** (d)

49. (a) Sweet-Sour        (b) Unhappy-Sad
    (c) In-Out           (d) Up-Down
    **Answer:** (b)

50. (a) Lake                        (b) Brook
    (c) Stream                  (d) River
    **Answer:** (a)

51. (a) Light-heavy            (b) Broad-Wide
    (c) Big-Large              (d) Tiny-Small
    **Answer:** (a)

52. (a) Unique                  (b) Peerless
    (c) Common place       (d) Unequalled
    **Answer:** (c)

53. (a) Cover-Page            (b) Circle-Radius
    (c) Chair-Leg             (d) Flower-Petal
    **Answer:** (a)

54. If in a certain code 'MANISH' is written as 'NZMRHS', then how will 'RANJITA' be written in the same code?
    (a) IZMQRGZ           (b) IZMPRGZ
    (c) IZMQRHZ           (d) IZMQRIZ
    **Answer:** (a)

55. If in a certain code 'CANDLE' is written as 'FDQGOH' then how will 'MINUTE' be written in the same code?
    (a) PQLHXW            (b) PHWQLX
    (c) PLQHWX            (d) PLOXWH
    **Answer:** (d)

56. If 'THRASH' is coded as 'UGSZTG', then how will 'HEAD' be coded?
    (a) IECD                   (b) GDZC
    (c) IDBC                   (d) GDBC
    **Answer:** (c)

57. If 'TOMB' is coded as 'MBOR', then how will 'GOAL' be coded?
    (a) ALOG                  (b) ALOE
    (c) LOAG                  (d) EALO
    **Answer:** (b)

58. If 'CAMERA' is coded as 'CMRCMR', then how will 'CHAPRA' be coded?
    (a) CARCAR           (b) CARHPA
    (c) HPACAR           (d) RACRAC
    **Answer:** (a)

59. If 'GOAL' is coded as 'HPBM' and 'FROCK' is coded as 'GSPTL' then how will 'LOFAR' be coded?
    (a) MPGZO                    (b) MNEBS
    (c) MPGBS                    (d) MPEBR
    **Answer:** (c)

60. If 'TORCH' is coded as 'SXILG' then how will 'MANUAL' be coded?
    (a) OBFMZN                   (b) OZEOZN
    (c) OZFMZN                   (d) NZFMZK
    **Answer:** (c)

61. If 'INSURE' is coded as 951395,  then how will 'PATRIOT' be coded?

    (a) 7129962                  (b) 7129962

    (c) 7129962                  (d) 7129962
    **Answer:** (c)

62. If 'TAME' is coded as 'SULA' and 'NIDUS' as 'MACOR' then how will EMOTIONS' be coded?
    (a) ALISEIMR                 (b) DLNSHNMR
    (c) ALISEIOR                 (d) ANIUEIOT
    **Answer:** (a)

63. If 'BEAR' is coded as 'FISH', 'FISH' as 'CROW', 'CROW' as 'DOG' 'DOG' as 'ELEPHANT' and 'ELEPHANT' as 'ASS', then who can not remain alive in other place than water?
    (a) FISH                     (b) ELEPHANT
    (c) DOG                      (d) CROW
    **Answer:** (d)

64. 'Vehicle' is coded as 'Book', 'Book' as 'Flower', 'Flower' as 'Sweet' 'Sweet' as 'House', 'House' as 'Mental Hospital', and 'Mental Hospital' as 'Temple', then where is treasure of huge amount of knowledge hidden?
    (a) Book                     (b) Sweet
    (c) Vehicle                  (d) Flower
    **Answer:** (d)

65. If in a certain code '493' means 'Friendship difficult challenge', '961', means, 'Struggle difficult Exam., and '178' means 'Exam believable subject', then which digit is used for 'believable'?
    (a) 7 or 8
    (b) 7 or 9
    (c) 8
    (d) 8 or 1
    **Answer:** (a)

66. How many M's are there in the following letter series which are not immediately preceded by H but immediately followed by R?
    H P M X T M R H M R C K M H P T L M R N U S
    (a) 3
    (b) 5
    (c) 1
    (d) 2
    **Answer:** (d)

67. In the following number series how many times have 2, 3 and 8 come together in such a way that 2 is in the middle and 3 and 8 are at extreme positions?
    2 4 5 2 3 8 2 3 4 6 7 3 2 8 8 2 3 4 5 6 8 2 3 6 2 8 3 2 8
    (a) 3
    (b) 2
    (c) More than 4
    (d) 4
    **Answer:** (c)

68. In the following series how many times an odd number is followed by two consecutive even numbers?
    4 2 3 2 5 4 2 5 3 2 6 4 3 5 7 2 8 6 7 9 4 5 4 2 9 6 1 3 2
    (a) 4
    (b) More than 4
    (c) 2
    (d) 3
    **Answer:** (a)

69. In the following number series, how many such 8's are there which are divisible by its just preceding number but not divisible by its just following number?
    2 8 4 3 2 8 5 4 8 2 6 7 8 5 8 2 4 8 2 6 8 2 4 8 6 7 8 2
    (a) 2
    (b) 3
    (c) 1
    (d) None of these
    **Answer:** (a)

70. In the following number series how many such 5's are there which are neither preceded by 3 nor followed by 7?
    2 7 5 3 4 5 7 6 3 5 2 1 2 5 4 6 5 9 3 5 7 5
    (a) 4                                    (b) 5
    (c) 3                                    (d) 2
    **Answer:** (c)

71. How many such odd digits are there in the given series which are followed by an odd digit?
    (a) 4                                    (b) 6
    (c) More than 6                          (d) 3
    **Answer:** (b)

72. How many such even digits are there in the given series which are preceded by an odd number and followed by an even number?
    (a) 1                                    (b) 2
    (c) 4                                    (d) 3
    **Answer:** (d)

73. How many such odd digits are there in the given series which are preceded and followed by any even digit?
    (a) 4                                    (b) 2
    (c) 5                                    (d) 3
    **Answer:** (a)

74. How many such groups of 3 digits are there in the following number series in which middle digit is an even number while atleast one of the two remaining digits is an odd number?
    3 4 3 2 4 2 3 5 1 7 2 5 9 6 4 3 5 8 2 1 4 6 5 6 7 4
    (a) 6                                    (b) 5
    (c) 4                                    (d) More than 6
    **Answer:** (d)

75. In the following number series how many such groups of 4, 5 and 9 are there in which prime number of these three digits must be in the middle?
    4 5 9 6 9 4 5 7 4 9 5 6 7 4 9 5 4 3 5 9 4 4 9 5 5 4 9
    (a) 3                                    (b) 4
    (c) 2                                    (d) More than 4
    **Answer:** (c)

76. In the following letter series how many such groups of L, S and W are there in which W should be the middle of the group?
    M L W S A L S W N B Q W S L W P L S N O L W T R W S L
    (a) 2                                      (b) 3
    (c) 4                                      (d) None of these
    **Answer:** (d)
77. How many such H's are in the series, which are preceded by P and followed by E?
    P H C R Q P H E T P H L H C P E H P S R Q E H P H C P H
    (a) 2                                      (b) 3
    (c) 1                                      (d) 4
    **Answer:** (c)
78. How many X's are in the following series which are preceded by E and followed by N?
    P E X R T N E X L R E N X U P E X T A X F E X L N E X
    (a) 2                                      (b) 3
    (c) 1                                      (d) None of these
    **Answer:** (d)
79. In the following series which number will replace the question mark:
    4, 32, 16, 128, 64, ?
    (a) 612                                    (b) 512
    (c) 362                                    (d) 412
    **Answer:** (b)
80. In the following series, which number will replace the question mark:
    2, 5, 12, 39, 160, 805, ?
    (a) 4936                                   (b) 4930
    (c) 4830                                   (d) 4836
    **Answer:** (d)
81. In the following series, which number will replace the question mark:
    23, 29, 31, 37, 41, 43, ?
    (a) 45                                     (b) 53
    (c) 47                                     (d) 49
    **Answer:** (c)
82. In the following series which number will replace the question mark?
    0, 6, 24, 60, 120, 210, ?
    (a) 336                                    (b) 343
    (c) 300                                    (d) 332
    **Answer:** (a)

83. Q1F, S2E, U6D, W21C, ?
    (a) Y66B                         (b) Y88B
    (c) Z88B                         (d) Y44B
    **Answer:** (b)
84. 3F, 6G, 11I, 18L,?
    (a) 21O                          (b) 25N
    (c) 27Q                          (d) 27P
    **Answer:** (d)
85. CFL, EIK, GLJ, IOI, ?
    (a) KRH                          (b) KRJ
    (c) JRH                          (d) KQH
    **Answer:** (a)
86. BF, CH, ?, HO, LT.
    (a) EM                           (b) EK
    (c) FJ                           (d) EL
    **Answer:** (b)
87. XDA, WED, VFG, UGJ, THM, ?
    (a) JRQ                          (b) QKN
    (c) PLO                          (d) SIP
    **Answer:** (d)
88. In the following letter-series some letters are missing. The missing letters are given in the proper sequence as one of the alternatives. Find the correct alternative.
    ab—abcab—abc—bca—c
    (a) abac                         (b) bcac
    (c) ccab                         (d) bbac
    **Answer:** (c)

**Directions:** (89 - 96) In each of the questions find out the group of letters in place of question in the letter series.
89. EIO, IOU, OUA,?
    (a) UAI                          (b) UAE
    (c) AEI                          (d) EIO
    **Answer:** (b)
90. EFI, FGJ, GHK, ?, IJM

(a) HIL                                                  (b) HIM
(c) HIK                                                  (d) GHL
**Answer:** (a)

91. PNR, QKQ, SHO, VEL, ZBH, ?
    (a) EZC                                              (b) EYC
    (c) DYB                                              (d) FZB
    **Answer:** (b)

92. ISR, 2UO, 5WL, 16YI, ?
    (a) 49AF                                             (b) 33BG
    (c) 65AF                                             (d) 65AG
    **Answer:** (c)

93. A2E, B7D, D17B, G37Y, ?
    (a) K87V                                             (b) K67U
    (c) R57U                                             (d) K77U
    **Answer:** (d)

94. B0M, D1L, G1J, K2G, ?
    (a) Q4C                                              (b) P5C
    (c) P3C                                              (d) P3B
    **Answer:** (c)

95. $\dfrac{1}{R}$, $\dfrac{3}{O}$, $\dfrac{5}{K}$, $\dfrac{9}{F}$, $\dfrac{13}{Z}$, ?

    (a) $\dfrac{19}{S}$                                  (b) $\dfrac{20}{T}$

    (c) $\dfrac{19}{T}$                                  (d) $\dfrac{21}{R}$

    **Answer:** (a)

96. $\dfrac{4}{Z}$, $\dfrac{11}{W}$, $\dfrac{25}{Q}$, $\dfrac{46}{H}$, ?

    (a) $\dfrac{67}{W}$                                  (b) $\dfrac{74}{V}$

    (c) $\dfrac{60}{U}$                                  (d) $\dfrac{81}{V}$

    **Answer:** (b)

**Directions:** (97-104) In the following series find the number in place of

question mark?

97. 25, 22, 30, ?, 35.
    (a) 27                                    (b) 26
    (c) 28                                    (d) 29
    **Answer:** (a)

98. 8, 13, 18, 11, 16, 21, 16, 21, 26, ?, ?, ?
    (a) 28, 33, 38                            (b) 23, 28, 33
    (c) 22, 27, 32                            (d) 21, 26, 31
    **Answer:** (b)

99. 3, 5, 6, 8, 11, 13, ?
    (a) 17                                     (b) 18
    (c) 15                                     (d) 20
    **Answer:** (b)

100. 2, 4, 12, 6, 12, 36, 18, 36, 108, ?
    (a) 72                                     (b) 54
    (c) 90                                     (d) 108
    **Answer:** (b)

101. 2, 7, 15, 26, 40, 57, ?
    (a) 80                                     (b) 81
    (c) 75                                     (d) 77
    **Answer:** (d)

102. 11, 5, 20, 12, ? , 26, 74, 54.
    (a) 30                                     (b) 38
    (c) 48                                     (d) 28
    **Answer:** (b)

103. 1, 4, 7, 10, ?, 16, 19, ?
    (a) 13, 22                                 (b) 11, 22
    (c) 13, 21                                 (d) 13, 23
    **Answer:** (a)

104. 5, 13, ?, 109, 325, 973.
    (a) 39                                     (b) 36
    (c) 37                                     (d) 35
    **Answer:** (c)