



NUMBER SERIES, CODING DECODING AND ODD MAN OUT SERIES



LEARNING OBJECTIVES

- ◆ This Section deals with questions on which series or letters in some order, Coding and decoding
- ◆ These terms of the series or letters are follows certain pattern throughout

9.1 SERIES

Series Classified into Two Types, Namely

- Number Series
- Alphabet Series

A. NUMBER SERIES

Case 1: Missing terms of the series

In these type the questions we have to identify the missing term of the series 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.

Example 1: Find the missing term of the series 2, 7, 16, _____, 46, 67, 92

Explanation: Here the terms of the series are +5, +9, +13, +17, +21, +25...

Thus, $2 + 5 = 7$; and $7 + 9 = 16$...

So missing term = $16 + 13 = 29$

Example 2: Find the wrong terms of the series 9, 29, 65, 126, 217, 344

Explanation: 2^3+1 ; 3^3+1 ; 4^3+1 ; 5^3+1 ; 6^3+1 ; 7^3+1

Here 29 is wrong term of series

Example 3: Find the missing term of the series 1, 9, 25, 49, 81, 121,

Solution: The given terms of the series consists square of consecutive odd number $1^2, 3^2, 5^2, 7^2, \dots$

So missing value = $13^2 = 169$

B. ALPHABET SERIES

Alphabet series consists of letters of the alphabets placed in a specific pattern. For example, the series are in the following order of the numbers.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
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
26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1

Example 4: Find the next term of the series BKS, DJT, FIU, HHV?

Explanation: In each term, the first letter is moved two steps forward, the second letter one step backward and third letter one step forward to obtain the corresponding letter of the next term. So the missing term is JGW.

C. LETTER SERIES:

These 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.

Example 5: aab, _____, aaa, bba, _____

(a) baa (b) abb (c) bab (d) aab

- 1) The first blank space should be filled in by 'b' so that we have two a's by two b's.
- 2) The second blank place should be 'a', so that we have three a's followed by three b's.
- 3) The last space must be filled in by 'a'.
- 4) Thus we have two possible answers – 'baa' and 'bba'.
- 5) But only 'baa' appears in the alternatives.

So the answer (a) is correct.

9.2 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.

The Coding and Decoding is classified into the following types.

Type 1: Letter Coding

Type 2: Number Coding

Type 1: Letter Coding

In these 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.

Case1: To form the code for another word

Example 6: If in a certain language MYSTIFY is coded as NZTUJGZ, how is MENESIS coded in that language?

Explanation: Clearly, each letter in the word MYSTIFY is moved one step forward to obtain the corresponding letter of the code.

M Y S T I F Y
+1 ↓
N Z T U J G Z

So, in MENESIS, N will be coded as O, E as F, M as N and so on. Thus, the code becomes NFOFTJT.

Example 7: If TAP is coded as SZO, then how is FRIEND coded?

Explanation: Clearly each letter in the word TAP is moved one step backward to obtain the corresponding letter of the code.

S Z O
-1 ↑
T A P

Thus, in FRIEND, F will be coded as E, R as Q, I as H, E as D, N as M and D as C. So, the code becomes EQHDMC.

Example 8: In a certain code, MENTION is written as LNEITNO. How is PRESENT written in that code?

Explanation: Clearly, to obtain the code, the first letter of the word MENTION is moved one step backward and the remaining letters are Reversed in order, taking two at a time. So, in PRESENT, P will be coded as O, and the sequence of the remaining letter in the code would be ERESTN. Thus the code becomes OERESTN. Hence, The answer is OERESTN.

Case 2: To find the word by analysing the given code (DECODING)

Example 9: If in a certain language CARROM is coded as BZQQNL, which word will be coded as HORSE?

Explanation: Each letter of the word is one step ahead of the corresponding letter of the code

B Z Q Q N L	H O R S E
C A R R O M	I P S T F

So, H is coded as I, O as P, R as S, S as T and E as F. HORSE is coded as IPSTF.

Type 2: 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.

Case 1: When a numerical code values are assigned to words.

Example 10: If in a certain language A is coded as 1, B is coded as 2, and so on, how is AICCI is coded in that code?

Explanation: As given the letters are coded as

A	B	C	D	E	F	G	H	I
1	2	3	4	5	6	7	8	9

So in AICCI, A is coded as 1, I as 9, and C as 3. Thus, AICCI is coded as 19339.

Example 11: If PAINT is coded as 74128 and EXCEL is coded as 93596, then how would you encode ANCIENT ?

Explanation: Clearly, in the given code, the alphabets are coded as follows:

P	A	I	N	T	E	X	C	L
7	4	1	2	8	9	3	5	6

So, in ANCIENT, A is coded as 4, N is coded as 2, C as 5, I is coded as 1, E as 9, and T as 8. Hence, the correct code is 4251928.

Case 2: Number to letter coding.

Example 12: In a certain code, 2 is coded as P, 3 as N, 9 as Q, 5 as R, 4 as A and 6 as B. How is 423599 coded in that code?

Explanation: Clearly as given, 4 as A, 2 as P, 3 as N and 5 is coded as R, 9 as Q. So, 423599 is coded as APNRQQ.

**9.3 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'.

Example 13: January, May, July, November

- (a) January (b) May (c) July (d) November

Explanation: All the months above are 31 days, whereas, November 30 days

Answer: (d)

Example 14: 10, 14, 16, 18, 23, 24 and 26

- (a) 26 (b) 17 (c) 23 (d) 9

Explanation: Each of the above series are even number, except 23.

Answer: (c)

Example 15: 6, 9, 15, 21, 24, 26, 30

- (a) 9 (b) 26 (c) 24 (d) 30

Explanation: All are multiples of 3, except 26, answer (b)

Answer: (b)

Example 16: 1, 5, 14, 30, 51, 55, 91

(a) 5 (b) 55 (c) 51 (d) 91

Explanation: Each pattern is 1^2 , $1^2 + 2^2$, $1^2 + 2^2 + 3^2$, $1^2 + 2^2 + 3^2 + 4^2$, $1^2 + 2^2 + 3^2 + 4^2 + 5^2$, $1^2 + 2^2 + 3^2 + 4^2 + 5^2 + 6^2$

But 51, is not of the form.

Answer: (c)

Example 17: 16, 25, 36, 62, 144, 196, 225

(a) 36 (b) 62 (c) 196 (d) 144

Explanation:

Each of the number except 62, is a perfect square.

Answer: (b)

EXERCISE 9(A)

(Note: Questions are taken from previous exam questions papers of Competitive exams like SSC, RRB, MAT, UPSC etc.)

Choose the most appropriate answer (a) or (b) or (c) or (d).

1) 6, 11, 21, 36, 56 ?

(a) 42 (b) 51 (c) 81 (d) 91

2) 10, 100, 200, 310 ?

(a) 400 (b) 410 (c) 420 (d) 430

3) 11, 13, 17, 19, 23, 25, 29 ?

(a) 33 (b) 27 (c) 31 (d) 49

4) 6, 12, 21, 33 ?

(a) 33 (b) 38 (c) 40 (d) 48

5) 2, 5, 9, 14, ?, 27

(a) 20 (b) 16 (c) 18 (d) 24

6) 6, 11, 21, ?, 56, 81

(a) 42 (b) 36 (c) 91 (d) 51

7) 10, 18, 28, 40, 54, ?, 88

(a) 70 (b) 86 (c) 87 (d) 98

8) 120, 99, ?, 63, 48, 35

(a) 80 (b) 36 (c) 45 (d) 40

- 9) 22, 24, 28, 36, ?, 84
(a) 44 (b) 52 (c) 38 (d) 54
- 10) 4832, 5840, 6848, 7856 ?
(a) 8864 (b) 8815 (c) 8846 (d) 8887
- 11) 10, 100, 200, 310, 430 ?
(a) 560 (b) 540 (c) 550 (d) 590
- 12) 28, 33, 31, 36, 34 ?
(a) 38 (b) 39 (c) 40 (d) 42
- 13) 120, 80, 40, 45, ?, 15
(a) 15 (b) 20 (c) 25 (d) 30
- 14) 2, 15, 41, 80, 132 ?
(a) 184 (b) 144 (c) 186 (d) 197
- 15) 6, 17, 39, ?, 116
(a) 72 (b) 75 (c) 85 (d) 80
- 16) 1, 4, 10, 22, ?, 94
(a) 46 (b) 48 (c) 49 (d) 47
- 17) 4, 9, 25, 49, ?, 169, 289, 361
(a) 120 (b) 121 (c) 122 (d) 164
- 18) 4, 12, 36, ?, 324
(a) 107 (b) 109 (c) 108 (d) 110
- 19) 1, 1, 4, 8, 9, ?, 16, 64
(a) 27 (b) 28 (c) 32 (d) 40
- 20) 5760, 960, 192, ? 16, 8
(a) 47 (b) 48 (c) 52 (d) 50
- 21) 1, 2, 6, 7, 21, 22, 66, ?, 201
(a) 69 (b) 68 (c) 67 (d) 69
- 22) 48, 24, 96, ? 192
(a) 48 (b) 47 (c) 44 (d) 54
- 23) 165, 195, 255, 285, ?, 375
(a) 345 (b) 390 (c) 335 (d) 395
- 24) 2, 3, 3, 5, 10, 13, 39, ?, 172, 177
(a) 42 (b) 44 (c) 43 (d) 40

- 25) 7, 26, 63, 124, 215, ?, 511
(a) 342 (b) 343 (c) 441 (d) 421
- 26) 3, 7, 15, 31, ? 127
(a) 62 (b) 63 (c) 64 (d) 65
- 27) 8, 28, 116, 584, ?
(a) 1752 (b) 3502 (c) 3504 (d) 3508
- 28) 6, 13, 28, 59, ?
(a) 122 (b) 114 (c) 113 (d) 112
- 29) 2, 7, 27, 107, 427, ?
(a) 1707 (b) 4027 (c) 4207 (d) 1207
- 30) 5, 2, 7, 9, 16, 25, 41, ?
(a) 65 (b) 66 (c) 67 (d) 68
- 31) In a certain language, MADRAS is coded NBESBT, how DELHI is coded in that code?
(a) EMMJI (b) EFMIJ (c) EMFIJ (d) JIFEM
- 32) If RAMAN is written as 12325 and DINESH as 675489 how HAMAM is written?
(a) 92323 (b) 92233 (c) 93233 (d) 93292
- 33) If RED is coded as 6720 then GREEN would be coded as
(a) 9207716 (b) 167129 (c) 1677209 (d) 1672091
- 34) If A = 1, FAT = 27, FAITH = ?
(a) 44 (b) 45 (c) 46 (d) 36
- 35) If BROTHER is coded 2456784, SISTER coded as 919684, what is coded for BORBERS?
(a) 2542849 (b) 2542898 (c) 2454889 (d) 2524889
- 36) If DELHI is coded 73541 and CALCUTTA as 82589662, How can CALICUT be coded?
(a) 5279431 (b) 5978213 (c) 8251896 (d) 8543962
- 37) If CLOCK is coded 34235 and TIME is 8679, what will be code of MOTEL?
(a) 72894 (b) 77684 (c) 72964 (d) 27894
- 38) If PALE is coded as 2134 and EARTH is coded as 41590, how is PEARL is coded ?
(a) 29530 (b) 24153 (c) 25430 (d) 254313
- 39) If LOSE is coded as 1357 and GAIN is coded as 2468, what do figure 82146 stands for?
(a) NGLAI (b) NGLIA (c) GNLIA (d) GNLIA
- 40) If MEKLF is coded as 91782 and LLLJK as 88867, how can IHJED is coded as?
(a) 97854 (b) 64512 (c) 54610 (d) 75632

41) If in a certain code language NAME is written as 4258 then what is coded as MEAN ?

- (a) 2458 (b) 5842 (c) 8524 (d) 5824

42) If GOLD is written as IQNF, how WIND can be written as code?

- (a) YKPF (b) VHCM (c) XJOE (d) DNIW

43) If ROSE is written as TQUG, how BISCUIT can be written in that code?

- (a) DKUEWKV (b) CJTDVJU (c) DKVEWKV (d) DKUEWKY

LETTER: C Z N V R S W F D

CODE DIGIT: 8 6 4 7 2 9 3 5 1

(Q. No. 44-46) In each of the following questions find out the correctly coded alternative from amongst the given four alternatives (a), (b), (c), (d).

44) ZDRCVF

- (a) 612875 (b) 619875 (c) 612845 (d) 612835

45) WNCSZV

- (a) 348267 (b) 318267 (c) 348957 (d) 348967

46) RDNFVS

- (a) 21679 (b) 216549 (c) 214579 (d) 218579

47) If DELHI is coded as CCIDD, how would you encode BOMBAY?

- (a) AJMTVT (b) AMJXVS (c) MJXVSU (d) WXYZAX

48) In a certain code, RIPPLE is written as 613382 and LIFE is written as 8192. How is PILLER written in that code?

- (a) 318826 (b) 318286 (c) 618826 (d) 338816

49) If PALAM could be given the code number 43, what code number can be given to SANTACRUZ?

- (a) 123 (b) 85 (c) 120 (d) 125

Directions: The number in each question below is to be codified in the following code:

Digit	7	2	1	5	3	9	8	6	4
Letter	W	L	M	S	I	N	D	J	B

50) 184632

- (a) MDJBSI (b) MDJBIL (c) MDJBWL (d) MDBJIL

51) In a certain code '256' means 'you are good', '637' means 'we are bad' and '358' means 'good and bad'. Which of the following represents 'and' in that code?

- (a) 2 (b) 5 (c) 8 (d) 3

Directions: Find odd man out of the following (52-61):

52) 3, 5, 7, 15, 17, 19

- (a) 15 (b) 17 (c) 19 (d) 7

53) 10, 14, 16, 18, 23, 24, 26

- (a) 26 (b) 23 (c) 24 (d) 18

54) 1, 4, 9, 16, 24, 25, 36

- (a) 9 (b) 24 (c) 25 (d) 36

55) 41, 43, 47, 53, 61, 71, 83, 75

- (a) 75 (b) 73 (c) 71 (d) 53

56) 16, 25, 36, 73, 144, 196, 225

- (a) 36 (b) 73 (c) 196 (d) 225

57) 1, 4, 9, 16, 19, 36, 49

- (a) 19 (b) 9 (c) 49 (d) 16

58) 1, 5, 14, 30, 49, 55, 91

- (a) 49 (b) 30 (c) 55 (d) 91

59) 835, 734, 642, 751, 853, 981, 532

- (a) 751 (b) 853 (c) 981 (d) 532

60) 4, 5, 7, 10, 14, 18, 25, 32

- (a) 7 (b) 14 (c) 18 (d) 33

61) 52, 51, 48, 43, 34, 27, 16

- (a) 27 (b) 34 (c) 43 (d) 48

ANSWERS

EXERCISE-9 A

1. (c)	2. (d)	3. (c)	4. (d)	5. (a)	6. (b)	7. (a)	8. (a)	9. (b)	10. (a)
11. (a)	12. (b)	13. (d)	14. (d)	15. (a)	16. (a)	17. (b)	18. (c)	19. (a)	20. (b)
21. (c)	22. (a)	23. (a)	24. (c)	25. (a)	26. (b)	27. (d)	28. (a)	29. (a)	30. (b)
31. (b)	32. (a)	33. (c)	34. (a)	35. (a)	36. (c)	37. (a)	38. (b)	39. (a)	40. (c)
41. (d)	42. (a)	43. (a)	44. (a)	45. (d)	46. (c)	47. (b)	48. (a)	49. (a)	50. (d)
51. (c)	52. (a)	53. (b)	54. (b)	55. (a)	56. (b)	57. (a)	58. (a)	59. (a)	60. (c)
61. (b)									



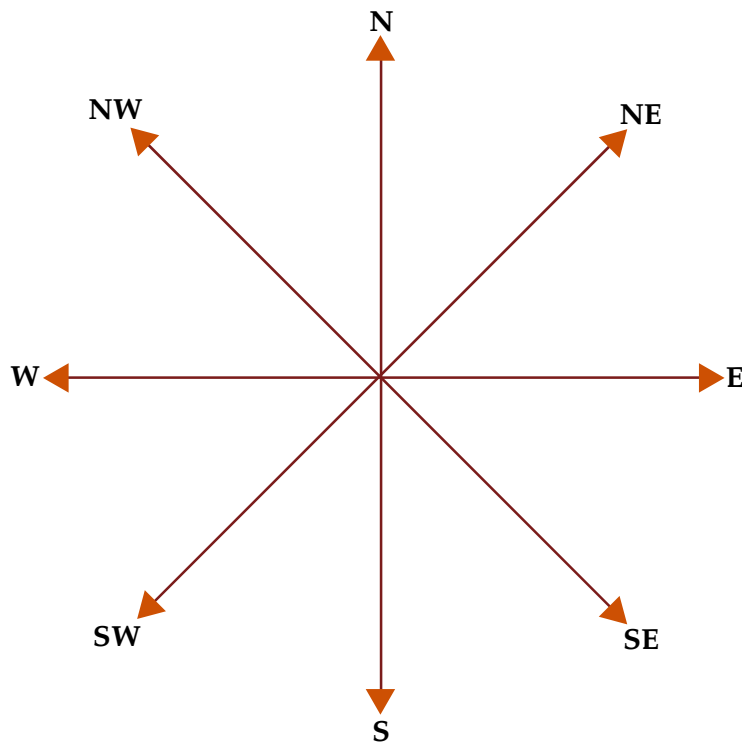
DIRECTION SENSE TEST



INTRODUCTION

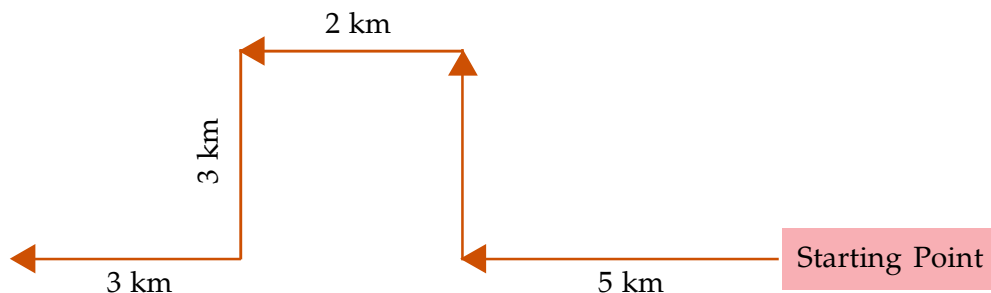
After reading this chapter, students will be able to understand:

- ◆ In this test, the questions consist of a sort of direction puzzle. A successive follow-up of direction is formulated and the student is required to ascertain the final direction. The test is meant to judge the ability to trace and follow correctly and sense the direction correctly.
- ◆ The adjoining figure shows the four main directions (North N, South S, East E, and West W) and four cardinal directions (North East (NE), North West (NW), South East (SE), South West (SW)) to help the students know the directions.



2. Ramu walks 5 kms starting from his house towards west then turns right and walks 3 km. Thereafter she takes left turn and walks 2 km. Further, he turn left and walks 3 km. Finally, he turns right and walks 3 kms. In what direction he is now from his house?
- (a) West (b) North
(c) South (d) East

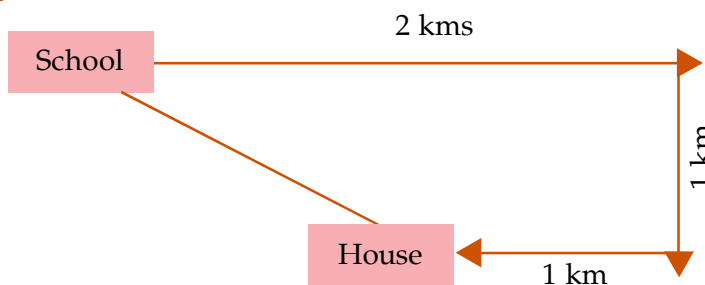
Explanation



It's clear from the diagram Ramu is to the West of his house.

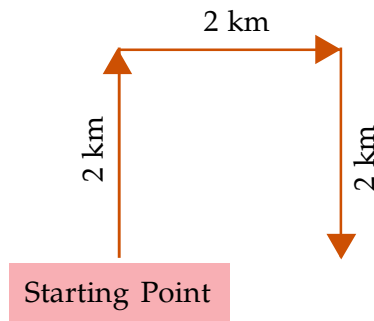
3. Gopal started walking 2 kms straight from his school. Then he turned right and walked 1 km. Again he turned right and walked 1 km to reach his house. If his house is south-east from his school, then in which direction did Gopal start walking from the school?
- (a) East (b) West
(c) South (d) North

Explanation



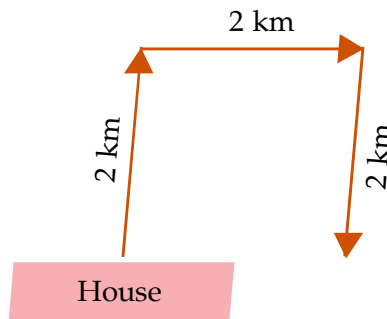
From the diagram that Gopal Started walking towards East from the school.

4. A man starts from a point, walks 2 kms towards north, turns towards his right and walks 2 kms, turns right again and walks. What is the direction now he is facing?
- (a) South (b) East
(c) North (d) West

Explanation:

Based on the diagram the person facing towards south.

5. Janki started from her house and walked 2 km towards North. Then she took a right turn and covered one kilometre. Then she took again a right turn and walked for 2 kms. In what direction is she going?
- (a) North (b) East
(c) South (d) West

Explanation:

Based on the diagram; it's clear that Janki is going towards South.

 ... **EXERCISE – 10(A)**

(Note: Questions are taken from previous exam questions papers of Competitive exams like SSC, RRB, MAT, UPSC etc.)

Choose the appropriate answer (a) or (b) or (c) or (d)

- Mohan starts from point A and walks 1 km towards south, turns left and walks 1km. Then he turns left again and walks 1 km. Now he is facing.
(a) East (b) West (c) North (d) South-West
- Suresh starts from a point, walks 2 miles towards south, turns right and walks $1\frac{1}{2}$ miles, turns left and walks $\frac{1}{2}$ miles and then he turns back. What is the direction he is facing now?
(a) East (b) West (c) South (d) North
- A man starts from a point, walks 4 miles towards north and turns left and walks 6 miles, turns right and walks for 3 miles and again turns right and walks 4 miles and takes rest for 30 minutes. He gets up and walks straight 2 miles in the same direction and turns right and walks one mile. What is the direction he is facing?
(a) North (b) South (c) South-East (d) West
- Arun started from point A and walked 10 kms East to point B, then turned to North and walked 3 kms to point C and then turned West and walked 12 kms to point D, then again turned South and walked 3 kms to point E. In which direction is he from his start point?
(a) East (b) South (c) West (d) North
- A starts from a point and walks 5 kms north, then turns left and walks 3 kms. Then again turns left and walks 5 km. Point out the direction in which he is going now.
(a) North (b) South (c) East (d) West
- A rat run 20 kms towards East and turns to right runs 10 kms and turns to right runs 9 kms and again turns to left runs 5 kms and then turns to left runs 12 kms and finally turns to left and runs 6 kms. Now what direction is the rat facing?
(a) East (b) North (c) West (d) South
- A driver left his village and drove North for 20 kms, after which he stopped for breakfast. Then he turned left and drove another 30 kms, when he stopped for lunch. After some rest, he again turned left and drove 20 kms before stopping for evening tea. Once more he turned left and drove 30 kms to reach the town where he had supper. After evening tea in which direction did he drive?
(a) West (b) East (c) North (d) South
- A man is facing East, then he turns left and goes 10 m, then turns right and goes 5 meters then goes 5 meters to the South and from there 5 meters to West. In which direction is he from his original place?
(a) East (b) West (c) North (d) South

9. From her home Perna wishes to go to school. From home she goes towards North and then turns left and then turns right, and finally she turns left and reaches school. In which direction her school is situated with respect to her home?
- (a) North-East (b) North-West (c) South-East (d) South-West
10. A child walks 25 feet towards North, turns right and walks 40 feet, turns right again and walks 45 feet. He then turns left and walks 20 feet. He turns left again walks 20 feet. Finally, he turns to his left to walks another 20 feet. In which direction is the child from his starting point?
- (a) North (b) South (c) West (d) East
11. Raju facing North and moves 20 kms, then he turned to his right and moves 20 kms and then he moves 10 kms in North-East, then he turned to his right and moves 20 kms and then he turned to his right and moves 20 kms and again he turned to his left and moves 20 kms. Now in which direction Raju is facing?
- (a) South-East (b) North-East (c) South-West (d) North-West
12. K is a place which is located 2 kms away in the north-west direction from the capital P. R is another place that is located 2 kms away in the south-west direction from K. M is another place and that is located 2 kms away in the north-west direction from R. T is yet another place that is located 2 kms away in the south-west direction from M. In which direction is T located in relation to P?
- (a) South-West (b) North-West (c) West (d) North
13. Babu is Rahim's neighbour and his house is 200 meters away in the north-west direction. Joseph is Rahim's neighbour and his house is located 200 meter away in the south-west direction. Gopal is Joseph's neighbour and he stays 200 meters away in the south-east direction. Roy is Gopal's neighbour and his house is located 200 meters away in the north-east direction. Then where is the position of Roys' house in relation to Babu's ?
- (a) South-East (b) South-West (c) North (d) North-East
14. A tourist drives 10 km towards west and turns to left and takes a drive of another 4 km. He then drives towards east another 4 km and then turns to his right and drives 5 km . Afterwards he turns to his left and travels 6 km. In which direction is he from the starting point?
- (a) North (b) East (c) West (d) South
15. A man started walking West. He turned right, then right again and finally turned left. Towards which direction was he walking now?
- (a) North (b) South (c) West (4) East
16. One evening, Raja started to walk toward the Sun. After walking a while, he turned to

his right and again to his right. After walking a while, he again turned right. In which direction is he facing?

- (a) South (b) East (c) West (d) North

17. Five boys A, B, C, D and E are sitting in a park in a circle. A is facing South-West, D is facing South-East, B and E are right opposite A and D respectively and C is equidistant between D and B. Which direction is C facing?

- (a) West (b) South (c) North (d) East

18. If a man on a moped starts from a point and rides 4 kms South then turns left and rides 2 kms and turn again to the right to ride to go more towards which direction is he moving ?

- (a) North (b) West (c) East (d) South

19. A man starts from a point, walk 8 kms towards North, turns right and walks 12 kms, turns left and walks 7 km turns and walks 20 kms towards South, turns right and walks 12 kms. In which direction is he from the starting point?

- (a) North (b) South (c) West (d) East

20. Daily in the morning the shadow of Gol Gumbaz falls on Bara Kaman and in the evening the shadow of Bara Kaman falls on Gol Gumbaz exactly. So in which direction is Gol Gumbaz to Bara Kaman?

- (a) Eastern side (b) Western side (c) Northern side (d) Southern side

21. Ashok went 8 kms South and turned West and walked 3 kms again he turned North and walked 5 kms. He took a final turn to East and walked 3 kms. In which direction was Ashok from the starting point?

- (a) East (b) North (c) West (d) South

22. If X stands on his head with his face towards south, to which direction will his left hand point ?

- (a) East (b) West (c) North (d) South

23. I drove East for 5 miles then drove North 3 miles, then turned to my left and drove for 2 miles and again turned to my left. Which direction am I going now?

- (a) South (b) North (c) West (d) North-west

24. If A stands on his head with his face towards north. In which direction will his left hand point ?

- (a) North-East (b) North (c) East (d) North-West

25. A car travelling from south covers a distance of 8 kms, then turns right and runs another 9 kms and again turns to the right and was stopped. Which direction does it face now?

- (a) South (b) North (c) West (d) East

26. A taxi driver commenced his journey from a point and drove 10 kms toward north and turned to his left and drove another 5 kms. After waiting to meet a friend here, he turned to his right and continued to drive another 10 km. He has covered a distance of 25 kms so far, but in which direction would he be now?
- (a) South (b) North (c) East (d) South-east
27. A walks 3 kms northward and then he turns left and goes 2 kms. He again turns left and goes 3 kms. He turns right and walks straight. In which direction is he walking now?
- (a) East (b) West (c) North (d) South
28. Áwaks southwards, then turns right, then left and then right. In which direction is he from the starting point?
- (a) South (b) East (c) West (d) North
29. A man starts from a point, walks 15 metres towards East, turns left and walks 10 metres, turns right again and walks. Towards which direction is he now waking?
- (a) North (b) East (c) West (d) South
30. 30. A boy starts walking towards west, after a while walking he turns right and after walking for 20 minutes. Towards which direction he is walking now ?
- (a) West (b) North (c) South (d) East
31. I stand with my right hand extended side-ways towards South. Towards which direction will his back be ?
- (a) North (b) West (c) East (d) South
32. If a person moves 4 kms towards west, then turns right and moves 3 kms and then turns right and moves 6 kms, which is the directions in which he is now moving ?
- (a) East (b) West (c) North (d) South
33. If Mohan sees the rising sun behind the temple and the setting sun behind the railway station from his house, what is the direction of the temple from the railway station?
- (a) South (b) North (c) East (d) West
34. Laxman went 15 kms to North then he turned West and covered 10 kms. Then he turned south and covered 5 kms. Finally turning to East he covered 10 kms. In which direction he is from his house?
- (a) East (b) West (c) North (d) South
35. A man starts from a point, walks 4 miles North, turns to his right and walks 2 miles, again turns to his right and walks 2 miles, again turns to his right and walks 2 miles. In

- which direction would he be now from into starting point.
- (a) North (b) South (c) East (d) West
36. I started walking down a road in the morning facing the Sun. After walking for sometime I turned to my left. Then I turned to my right. In which direction was I going then ?
- (a) East (b) West (c) North (d) South
37. Lakshmi walked 2 kms north from her house and took a turn to left and continued to walk another one kilometre and finally she turned left and reached the school. Which direction is she facing now?
- (a) West (b) North (c) South (d) North
38. You are going straight, first eastwards, then turn to the right, then right again, then left. In which direction would you be going now?
- (a) East (b) West (c) South (d) North
39. If Ahmed travels towards North from his house, then to left, then to South covering equal distances in each direction to reach Sohan's house, in which direction is Ahmed's house now?
- (a) East (b) South (c) North (d) West
40. Raja comes towards North, turn right, then right again and then go to the left. In which direction is Raja now?
- (a) South (b) East (c) West (d) North
41. Roopa starts from a point and walks 15 metres towards west, turns left and walks 12 metres, turns right again and walks. What is the direction she is now facing?
- (a) South (b) West (c) East (d) North
42. A man starts his journey facing the sun early morning. He then turns right and walks 2 kms. He then walks 3 kms after turning right again. Which is the direction he is facing now?
- (a) North-East (b) North (c) West (d) South
43. Roy walks 2 kms to East, then turns North-West and walks 3 kms. Then he turns South and walks 5 kms. Then again he turns West and walks 2 kms. Finally he turns North and walks 6 kms. In which direction, is he from the starting point?
- (a) South-West (b) South-East (c) North-West (d) North-East
44. Seeta starts from a point, walks 2 kms towards north, turns towards her right and walks 2 kms, turns right again and walks. What is the direction she is facing now?
- (a) East (b) West (c) South (d) North

45. Shyam was facing East. He walked 5 kms forward and then after turning to his right walked 3 kms. Again he turned to his right and walked 4 km. After this he turned back. Which direction was he facing at that time?
- (a) East (b) West (c) North (d) South
46. Raju is standing facing north. He goes 30 metres ahead and turns left and goes for 15 metres. Now he turns right and goes for 50 metres and finally turns to his right and walks. In which direction is he heading?
- (a) North (b) East (c) South (d) West
47. Sanmitra starts from his house and walks 3 kms towards north. Then he turns right and walks 2 kms and then turns right and walks 5 kms, then turns right and walks 2 kms and then again turns right and walks 2 kms. Which direction is he facing now?
- (a) North (b) South (c) West (d) East
48. Raju is Ramu's neighbour and he stays 100 metres away towards southeast. Venu is Raju's neighbour and he stays 100 metres away towards southwest. Khader is Venu's neighbour and he stays 100 metres away towards, north-west. Then where is the position of Khader's home in relation to Ramu's?
- (a) South-East (b) South-West (c) North-West (d) East
49. Ramesh walked 3 kms, towards West and turned to his left and walked 2 kms. He, then turned to his right and walked 3 kms. Finally, he turned to his right again and walked another 2 kms. In which direction is Ramesh from his starting point now?
- (a) East (b) West (c) North (d) South
50. Deepa starts walking north towards and after a while she turns to her right. After walking some distance, she turns to his left and walks a distance of 1 km. She then urns to her left again. In which direction she moving now?
- (a) North (b) West (c) East (d) South
51. Raman starts walking in the morning facing the Sun. After sometime, he turned to the left later again he turned to his left. At what direction is Raman moving now?
- (a) East (b) West (c) South (d) North
52. Kamal starts walking towards North, then turns left and cover some distnace, then he turns towards right and walks. After some time he turns to his right and then turns left. In which direction Kamal is walking now
- (a) East (b) South (c) North (d) South-East
53. X walks southwards and then turns right, then left and then right,. In which direction is he moving now?
- (a) South (b) North (c) West (d) South-West

54. A man started to walk East. After moving a distance, he turned to his right. After moving a distance, he turned to his right again. After moving a little he turned in the end to his left. In which direction was he going now.?

(a) North

(b) South

(c) East

(d) West

ANSWERS: EXERCISE 10(A)

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|---------|---------|---------|---------|---------|
| 1. (c) | 2. (d) | 3. (b) | 4. (c) | 5. (b) |
| 6. (b) | 7. (b) | 8. (c) | 9. (b) | 10. (d) |
| 11. (a) | 12. (c) | 13. (a) | 14. (d) | 15. (a) |
| 16. (d) | 17. (a) | 18. (d) | 19. (b) | 20. (a) |
| 21. (d) | 22. (b) | 23. (a) | 24. (c) | 25. (a) |
| 26. (b) | 27. (b) | 28. (a) | 29. (b) | 30. (b) |
| 31. (b) | 32. (a) | 33. (c) | 34. (c) | 35. (a) |
| 36. (a) | 37. (c) | 38. (c) | 39. (a) | 40. (b) |
| 41. (b) | 42. (c) | 43. (c) | 44. (c) | 45. (a) |
| 46. (b) | 47. (a) | 48. (b) | 49. (b) | 50. (b) |
| 51. (b) | 52. (c) | 53. (c) | 54. (b) | |