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STER IN

EASONING ABILITY

Vol-1

Mahendra Publication

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PREFACE.

...

We are now living in a world which is technology-driven. Day by day, the pattern of examination alongwith its criteria for selection is becoming tougher and tougher, with the demand for qualified professionals on a rise. With this increasing pressure, one has to be efficient but not at the cost of accuracy.

Now-a-days, an examinee is made to face an objective type or multiple choice questions. For a number of candidates preparing for competitive examinations like PO, Assistant and other exams, the subject of Reasoning is frightening.

In almost all competitive examinations there is a paper or section called Test of Reasoning or General Intelligence (TR/GI). In some of them like the PO or SSC, the test of Reasoning has the highest weightage can become the most scoring section for a candidate with rigorous practice in the right direction.

We have tried to provide short tricks so that student could learn techniques to solve the questions in less amount of time. By using these tricks students will be able to attempt more questions in examinations.

If this book will be able to guide the students to get his/her final selection in PO and other competitive examinations, we shall have the satisfaction of knowing that our labour has well been rewarded.

Any suggestion to improvement of this book qualitatively (including printing errors, if any) will be most welcomed and these will be incorporated in the next issues.

✪ Publishers

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Reasoning

Verbal

1. Alphabetical and Miscellaneous Series
2. Coding Decoding
3. Blood Relation
4. Direction
5. Order & Ranking
6. Sitting Arrangement
7. Puzzle
8. Data Sufficiency

Analytical

1. Machine Input
2. Inequalities
3. Decision Making
4. Syllogism

Logical

1. Statement & Course of Action
2. Statement & Assumption
3. Cause & Effect
4. Statement & Argument
5. Drawing Inference

Non-Verbal

1. Series
2. Analogy
3. Classification

Mahendra's

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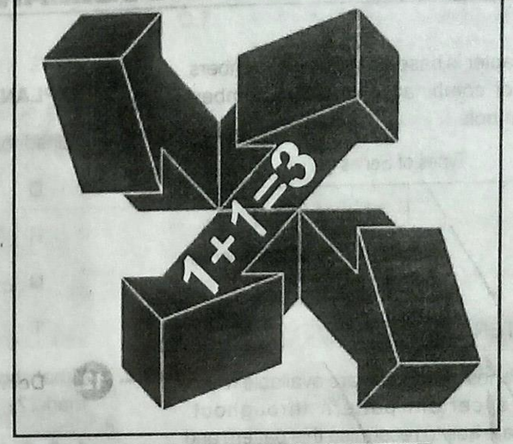
REASONING



Here we are using 3 characters i.e.
1 = 1 Character
+ = 1 Character
1 = 1 Character
Total are 3 Characters

INTRODUCTION

This book covers all the important topics of reasoning. The content covers the theory part in detail describing all the techniques, short tricks etc. Relevant examples have been given in each topics.

Have you ever thought about the relevance of the reasoning section in various competitive exams? **The idea is to check the mental and logical ability of the candidates.** The organization wants to check the thinking pattern of its future employees. The candidates are expected to have a broad mind having an ability to think deeply and logically.

Here we have described all the topics in such a way that every topics moves from the very basic to the toughest possible. We hope that our efforts contribute positively to your success.

BEST WISHES

CHAPTER-1

ALPHABETICAL AND MISCELLANEOUS SERIES

This chapter is based on series of numbers, letters or combination of letters,numbers and symbols.

Types of Series

- Letter Series
- Number Series
- Miscellaneous Series

1. LETTER SERIES -

In this series only letters are available which follow a certain pattern throughout. Candidate has to recognise this pattern and to give the required answer.

POSITION OF LETTERS : -

First of all, we should know the position of all letters from A to Z.

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

EXAMPLE :

Q.1-3. 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

Q.1. How many such vowels are there in the above arrangement each of which is immediately preceded as well as followed by a consonant?

(1) One (2) Two

(3) Three (4) Four

(5) None of these

Ans. (4)

EXPLANATION :

Consonant -	Vowel -	Consonant
D	E	F
H	I	J
N	O	P
T	U	V

Q.2. What should come in the place of question mark (?)

A, C, F, J, ?

(1) Q (2) O (3) T
(4) U (5) None of these

Ans. (2)

EXPLANATION :

A C F J (O)

$1 \xrightarrow[+2]{B} 3 \xrightarrow[+3]{DE} 6 \xrightarrow[+4]{GHI} 10 \xrightarrow[+5]{KLMN} 15$

Q.3. nd iy dt yo tj ?

(1) mp (2) nq
(3) of (4) oe
(5) me

Ans. (4)

EXPLANATION :

The first and second letters of each term are five steps ahead of the corresponding letters of the successive term.

cbaz xwvu srqp nmlk ihgf

nd iy dt yo tj oe

mlkj hgfe cbaz xwvu srqp

2. NUMBER SERIES

In this series questions are based on number series.

EXAMPLE-

Q.4. 1 2 6 5 3 2 1 8 9 6 5 3 2 1 2 3 1

How many 1's are there in the above arrangement each of which is followed by 2?

(1) One (2) Two

(3) Three (4) Four

(5) None of these

Ans.(2)

EXPLANATION :

[1 2] 6 5 3 2 1 8 9 6 5 3 2 [1 2] 3 1

3. MISCELLANEOUS PROBLEM

In this segment, questions are given related to (regarding) the position of letters, numbers and symbols

EXAMPLE-

Q.5-7. F @ 5 3 R $ J P E 1 H % I 8 4 B A W 2 U G 6 * 9 δ Z N M © V

Q.5. Which of the following element is 13th from the left end ?

(1) % (2) I (3) Q
(4) 1 (5) None of these

Ans.(2)

EXPLANATION :

→ ←

(left) F @ 5 3 R $ J P E 1 H % I 8 4 B A W 2 U G 6 * 9 δ Z N M © V (right)

1 2 3 4 5 6 7 8 9 10 11 12 13

Q.6. Which of the following is the 10th to the left of the 18th from the left end of the above arrangement?

(1) J (2) E (3) A
(4) P (5) None of these

Ans. (4)

EXPLANATION :

→ ←

(left) F @ 5 3 R $ J P E 1 H % I 8 4 B A W 2 U G 6 * 9 δ Z N M © V (right)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18

Q.7. If all the symbols are dropped from the above arrangement, which of the following will be the eleventh from the right end ?

(1) A (2) Q

(3) W (4) I

(5) None of these

Ans. (1)

EXPLANATION :

In case of dropping we count the element from the given side except the element which are said to be dropped.

→ ←

(left) F 5 3 R J P E 1 H I 8 4 B A W 2 U G 6 9 Z N M V (right)

11 10 9 8 7 6 5 4 3 2 1

Memorable Points :

- *You can easily solve the problems based on this chapter with the help of these shortricks -*
- *Starting points of the series is left end and ending point of the series is right end.*
- *To solve the question easily you should break the series in combination of five- five elements.*

We can easily understand the series problems by -

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13
N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

- *left element – left element = left element*
  13th element from left – 8th element from left = 5th element from left is E.
- *right element – right element = right element*
  13th element from right – 8th element from right = 5th element from right is V.

- left element + right element = left element

  13th element from left + 8th element from right = 21th element from left is U.

- right element + left element = right element

  13th element from right + 8th element from left = 21th element from right is F.

- all these situations are based on condition of left **end** or right **end**.

- Once the candidate knows the position of letters, he requires to learn time management. We don't have much time and hence all the letters can't be read thouroghly.

E	J	O	T	Y
5	10	15	20	25

Words given above are just the arrangement of the alphabets having position multiples of 5 from this word we can learn position of 26 letters. Above mentioned five letters have, 4 their followers, and 4 their precedessors.

- Here a new word is given below in which the arrangement of letters have occupied positions in the multiples of 3, with the help of this word we can get the position of total 26 letters.

C	F	I	L	O	R	U	X
3	6	9	12	15	18	21	24

Lets see some examples with the help of shortricks-

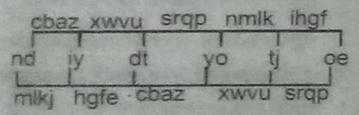
Q.1. nd iy dt yo tj ?

(1) mp (2) nq
(3) of (4) oe
(5) me

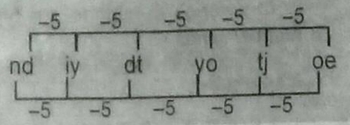
Ans. (4)

EXPLANATION :

GENERAL METHOD



Short trick :



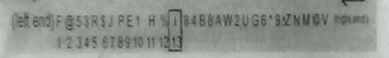
Q.2. Which of the following element is 13th from the left end ?

(1) % (2) I
(3) Q (4) 1
(5) None of these

Ans.(2)

EXPLANATION :

GENERAL METHOD



Short trick :

F @ 5 3 R / $ J P E 1 / H % I 8 4 / B 8 A
W 2 / U G 6 * 9 / δ Z N M © / V

13 from the left end is I.

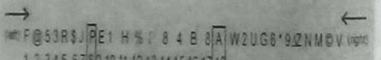
Q.3. Which of the following is the 10th to the left of the 18th from the left end of the above arrangement?

(1) J (2) E (3) A
(4) P (5) None of these

Ans. (4)

EXPLANATION :

GENERAL METHOD



Short trick :

F @ 5 3 R / $ J P E 1 / H % I 8 4 / B 8 A
W 2 / U G 6 * 9 / δ Z N M © / V

18th from the left –10th from the left = 8th from the left.

For more detail see the volume II.

EXERCISE

ALPHABETICAL AND MISCELLANEOUS SERIES

Q.1-2. Find the missing term in each of the following question.

Q.1. POQ, SRT, VUW, ?

(1) XYX (2) XZY (3) ZYX (4) YXZ (5) None of these

Q.2. AB, DEF, HIJK, ? , STUVWX

(1) MNOPQ (2) LMNOP (3) LMNO (4) QRSTV (5) None of these

Q.3-7. Study the following arrangement carefully and answer the question given below.

J Y 2 = S £ d E G M * 7 $ H P 9 K L b @ W Q 1 3 # C D ©

Q.3. How many such symbols are there in the above arrangement each of which is followed by a number or preceded by a letter but not both ?

(1) None (2) One (3) Two (4) Three (5) None of these

Q.4. How many such letter are there in the above arrangement each of which is either followed by a number or preceded by a number but not both ?

(1) Four (2) Five (3) Six (4) Seven (5) None of these

Q.5. How many such numbers are there in the above arrangement each of which is either preceded by a letter or followed by a symbol but not both ?

(1) Two (2) Four (3) Three (4) Five (5) None of these

Q.6. **'2 Y S'** is related to **'E d £'** in the same way as **'PHK'** is related to -

(1) @ bQ (2) WQ E (3) bQd (4) @ WK (5) None of these

Q.7. Four of the following five are alike in a certain way based on their position in the above arrangement hence form a group. Which is the one **does not** belong to that group ?

(1) 2 Y C D (2) £ S 13 (3) J Y © D (4) £ d 1 Q (5) = # 2 C

Q.8-13. Study the following arrangement carefully and answer the question given below.

B K 5 # M A 3 R % J 2 D E N @ 7 W 8 © 9 P T I V F 6 1 H Q * Y 4 $ L Z

Q.8. Which element will be Eighth to the right of Second from right end in the above arrangement ?

(1) W (2) © (3) 5 (4) $ (5) None of these

Q.9. How many such consonant are there in the above arrangement each of which is preceded by a symbol but not followed by a letter ?

(1) None (2) One (3) Two (4) Three (5) More than three

Q.10. If all the number in the above arrangement are removed, then which element will be Twelfth from left end ?

(1) @ (2) P (3) I (4) N (5) None of these

Q.11. How many such symbols are there in the above arrangement each of which is followed by a digit but not preceded by a digit ?

(1) None (2) One (3) Two (4) Three (5) More than three

Q.12. Based on above arrangement what will come at the place of question mark (?) in the following series ?

K # M, 3 % J, D N @, W © 9 ?

(1) TV 6 (2) TIF (3) F1* (4) F6Q (5) None of these

Q.13. Four of the following five are alike in a certain way based on their position in the above arrangement hence form a group. Which is the one **does not** belong to that group ?

(1) J 3 D (2) I 6 P (3) A 5 R (4) Y H $ (5) T © V

Q.14-18. Study the following arrangement carefully and answer the question given below.

M ? 2 D B 7 A 4 9 6 $ T ÷ N 5 @ V E W # U 8 F © 3

Q.14. How many such prime numbers are there in the above arrangement each of which is followed by a symbol and preceded by a consonant ?

(1) None (2) One (3) Two (4) Three (5) More than three

Q.15. In the above arrangement if symbols are interchanged by the successive number which element will be Eleventh from right ?

(1) V (2) @ (3) 5 (4) N (5) None of these

Q.16. Which element will be Seventh to the left of # ?

(1) A (2) N (3) T (4) B (5) None of these

Q.17. What will come at the place of question mark (?) in the following given series based in above arrangement ?

27B 4$6 ÷@5 ?

(1) @WE (2) 5EV (3) VU# (4) V#W (5) None of these

Q.18. If all the symbols and numbers are droped and then letters are arranged according to alphabetical order, which element will be Sixth from left end ?

(1) M (2) F (3) N (4) E (5) None of these

Q.19-23. Study the following arrangement carefully and answer the question given below.

4 K @ 1 E F © 2 H D % 3 8 B I M 6 * U W Y 5 $ 9 G J # 7 A

Q.19. Which element will be the Eighth to the left of Ninteenth from left end in the above arrangement ?

(1) % (2) U (3) D (4) # (5) None of these

Q.20. How many such consonants are there in the above arrangement each of which is preceded by a letter and followed by a number ?

(1) None (2) One (3) Two (4) Three (5) More than three

Q.21. Four of the following five are alike in a certain way based on their position in the above arrangement hence form a group. Which is the one **does not** belong to that group ?

(1) F2© (2) JG$ (3) W5Y (4) D3% (5) 59$

Q.22. If all the number in the above arrangement are removed then which element will be Fourteenth from left end ?

(1) M (2) % (3) D (4) W (5) None of these

Q.23. How many such symbols are there in the above arrangement each of which is immediately followed by a number and preceded by letter ?

(1) None (2) One (3) Two (4) Three (5) More than three

Q.24-27. Study the following arrangement carefully and answer the question given below.

E % 3 R 5 # A 6 B I J @ 2 9 H U 4 © M I * F 7 $ W 8 P N D

Q.24. What will come at the place of question mark (?) in the following series based on above arrangement?

35A, I @ 9, 4M*, ?

(1) 7WP (2) 7W8 (3) $8N (4) FWP (5) None of these

Q.25. Which of following element will be Eight from right to the Twentieth from right end in the above arrangement ?

(1) © (2) @ (3) 3 (4) P (5) None of these

Q.26. How many such consonant are there in the above arrangement each of which is immediately preceded by a letter and immediately followed by a symbol ?

(1) None (2) One (3) Two (4) Three (5) More than three

Q.27. How many such numbers are there in the above arrrangement each of which is immediately preceded by a consonant and immediately followed by a symbol ?

(1) None (2) One (3) Two (4) Three (5) None of these

CHAPTER-2

CODING-DECODING

A code means arrangement of letters. Therefore coding is a method of transforming any instruction from the given form to the required form. **The coding and decoding is an aid to check the candidate's ability to understand the logic that codes a particular message to read the message.**

Types of Coding

- Letter Coding
- Number Coding
- Substitutional Coding

1. LETTER CODING :

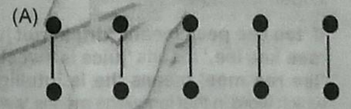
In these questions code values are given to a word in terms of letters.

In this type of question we have to analyze the pattern of the example and follow that pattern to find the answer.

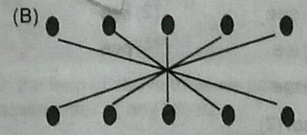
- Take the given pair
- Write the position of all letters in given pair
- Try to find the relation between the letters of both part of pair
- Relation may be related to forward or backward order
- Implement the same relation on the given word for required answer

Possible relations on the basis of position of letters in the given words may be-

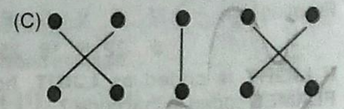
(A)



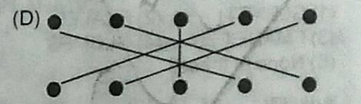
(B)



(C)



(D)



EXAMPLES-

Q.1. In a certain code language, **TEACHER** is written as **VGCEJGT**, then how is **CHILDREN** written in same code language?

(1) ENAGITEV (2) PGTFNKJE

(3) EJKNFTGP (4) MGAETVIE

(5) None of these

Ans. (3)

EXPLANATION :

T E A C H E R C H I L D R E N

+1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1

U F B D I F S D I J M E S F O

+1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1 +1

V G C E J G T E J K N F T G P

Q.2. If CHAIR is coded as XSZRI and ABOVE is coded as ZYLEV. How EVERY written in that code ?

(1) WEVIB (2) VEVIB

(3) VEBIB (4) VFVIB

(5) None of these

Ans .(2)

EXPLANATION :

From left	C	H	A	I	R
	3	8	1	9	18
From left	A	B	O	V	E
	1	2	15	21	5

From right	X	S	Z	R	I
	3	8	1	9	18
From right	Z	Y	L	E	V
	1	2	15	22	5
From left	E	V	E	R	Y
	5	22	5	18	25
From right	V	E	V	I	B
	5	22	5	18	25

Q.3. If **LIGHT** is coded as **LJGIT**, how is **FLAMES** coded in that code ?

(1) GLBNET (2) FKALER
(3) FMANET (4) GLBMFS
(5) None of these

Ans. (3)

EXPLANATION :

L I G H T
| +1 | | +1 | |
L J G I T

F L A M E S
| +1 | | +1 | | +1 |
F M A N E T

2. NUMBER CODING-

In these questions, numerical code values are given to a word or vice- versa. The candidate is required to find the code depending upon the given coding pattern.

Q.1. In a certain code **SISTER** is coded as **535201**, **UNCLE** is coded as **78960** How is **NEER** coded in that code ?

(1) 8001 (2) 8901
(3) 8210 (4) 8100
(5) None of these

Ans. (1)

EXPLANATION :

S I S T E R – 5 3 5 2 0 1
U N C L E – 7 8 9 6 0
N E E R – 8 0 0 1

Numbers are coded for words on the basis of respective position.

Q.2. In a certain code, a number **13479** is written as **AQFJL** and **5268** is written as **DMPN**. How is **396824** written in that code ?

(1) Q L P N K J (2) Q L P N M F
(3) Q L P M N F (4) Q L P N D F
(5) None of these

Ans. (2)

EXPLANATION :

1 3 4 7 9
↓ ↓ ↓ ↓ ↓
A Q F J L
5 2 6 8
↓ ↓ ↓ ↓
D M P N

Then,

3 9 6 8 2 4
↓ ↓ ↓ ↓ ↓ ↓
Q L P N M F

3. SUBSTITUTIONAL CODING

In this type of questions, some particular names are given to certain objects.

Q.1. If **'eye'** is called **'hand'**, **'hand'** is called **'mouth'**, **'mouth'** is called **'ear'**, **'ear'** is called **'nose'**, and **'nose'** is called **'tongue'**. With which of the following would a person hear ?

(1) eye (2) mouth
(3) nose (4) ear
(5) tongue

Ans. (3)

EXPLANATION :

Here answer should have been ear which is coded with nose.

Q.2. If **'tee see pee'**, means **'drink fruit juice.'** **'see kee lee,'** means **'juice is sweet'** and **'lee ree mee'** means **'he is intelligent'**, which word in that language means **'sweet'**?

(1) see (2) kee
(3) lee (4) pee
(5) tee

Ans. (2)

EXPLANATION :

tee see pee - Drink fruit juice
see kee lee - juice is sweet
lee ree mee - the is intelligent

lee - is

see - juice

Hence **'kee' - 'sweet'**. Hence **'kee'** is answer. Because in first and second step we get the code of **'see'** which is **'juice'** in the same manner from second and third step we get the code of **'lee'** which is **'is'** the remaining **'and'** is word coded as **'sweet'**.

KEY FACTORS:-

➢ E J O T Y
5 10 15 20 25

➢ C F I L O R U X
3 6 9 12 15 18 21 24

➢ With the help of above two words, we can find out the position of every letter with in a second.

A ↔ Z	(A Zad)
B ↔ Y	(B o Y)
C ↔ X	(CraX)
D ↔ W	(DeW)
E ↔ V	(E Ven)
F ↔ U	(FUll)
G ↔ T	(G T road)
H ↔ S	(High School)
I ↔ R	(Indian Railway)
J ↔ Q	(Jungle - Queen)
K ↔ P	(KanPur)
L ↔ O	(LOve)
M ↔ N	(MaN)

With the help of above trick, we can get the opposite letter of any letter.

Lets see some more examples with the help of shortricks-

Good Concept

Q.1. In a certain code language, **SOLEMN** is written as **HDAEBC**. How is **POTHER** written in same code language?

(1) EDBHEG (2) GFBHEI
(3) GFBHEN (4) KLGSVI
(5) None of these

Ans. (1)

EXPLANATION :

S O L E M N
↓ ↓ ↓ ↓ ↓ ↓
19 15 12 5 13 14
↓ ↓ ↓ ↓ ↓ ↓
1-9 1-5. 1-2 5-0 1-3 4-1
↓ ↓ ↓ ↓ ↓ ↓
H D A E B C

Similarly,

P O T H E R
↓ ↓ ↓ ↓ ↓ ↓
16 15 20 8 5 18
↓ ↓ ↓ ↓ ↓ ↓
1-6 1-5 2-0 8-0 5-0 1-8
↓ ↓ ↓ ↓ ↓ ↓
E D B H E G

Q.2. If EQUITY is coded as SOCWRG and OUTPUT is coded as RSMRSN. How NOTIFY written in that code ?

(1) LMRWDG (2) RMLGDW
(3) RMLWGD (4) RMLWDG
(5) None of these

Ans .(4)

EXPLANATION :

E Q U I T Y
↓ ↓ ↓ ↓ -2
S O C W R G

O U T P U T
↓ ↓ ↓ ↓ -2
R S M R S N

N O T I F Y
↓ ↓ ↓ ↓ -2
R M L W D G

For more detail see the volume II.

EXERCISE

CODING-DECODING

Q.1. In a certain code language " **MORALE**" is written as **"NPSBMF"**. How will **"CHARGE"** be wirtten in that code language ?
(1) CIBQHF (2) DIBSHF (3) DIBQHF (4) DEBQHF (5) None of these

Q.2. In a certain code language **"BETTER"** is written as **"CFUUFS"**. How will **"DUTIES"** be wirtten in that code language ?
(1) EVUJFT (2) EUUJFT (3) EVVJFT (4) EVUHFT (5) None of these

Q.3. In a certain code language **"RADIO"** is written as **"BSEPJ"**. How will **"WORLD"** be wirtten in that code language ?
(1) PXESM (2) XPESM (3) PXSEM (4) OPXSEM (5) None of these

Q.4. In a certain code language **"CODING"** is written as **"XLWRMT"**. How will **"QUIRKS"** be wirtten in that code language ?
(1) JFRIPH (2) RVJSPT (3) JVRIPH (4) NOPQRS (5) None of these

Q.5. In a certain code language **"RICHARD"** is written as **"WXRSIZI"** How will **"WICKETS"** be wirtten in that code language ?
(1) DXRPGVH (2) HXRPGVD (3) DRXPVGD (4) DXRVPDG (5) None of these

Q.6. In a certain code language **"INNOVATIVE"** is written as **"UNMMHFWJUB"**. How will **"MONOTONOUS"** be wirtten in that code language ?
(1) SNNMLVTPOP (2) NSMNLTVPOP (3) NSNMTLPVOP
(4) SNMLVTPOPN (5) None of these

Q.7. In a certain code language **"DANCER"** is written as **"DGEPSF"**. How will **"PUBLIC"** be wirtten in that code language ?
(1) XOSFEL (2) SXEOLF (3) XOELF (4) XSOEFL (5) None of these

Q.8. In a certain code language **"STUDIO"** is written as **"TVXHNU"**. How will **"BENGAL"** be wirtten in that code language ?
(1) GCKQRF (2) DCKQRF (3) CGQKFR (4) CDGQKR (5) None of these

Q.9. In a certain code language **"UNION"** is written as **"PLISO"**. How will **"BOARD"** be wirtten in that code language ?
(1) BSZAD (2) BSAPZ (3) ABSOP (4) SBAZP (5) None of these

Q.10. In a certain code language **"INVITED"** is written as **"LPWISCA"**. How will **"LETTERS"** be wirtten in that code language ?
(1) OUGTDPQ (2) OUGTPQ (3) OUGTPDQ (4) OGUTDPQ (5) None of these

Q.11. In a certain code language **"GREAT"** is written as **"79512"**. How will **"DOWRY"** be wirtten in that code language ?
(1) 41523 (2) 46897 (3) 46597 (4) 42315 (5) None of these

Q.12. In a certain code language **"ASKED"** is written as **"45211"**. How will **"EIGHT"** be wirtten in that code language ?
(1) 59782 (2) 28795 (3) 597820 (4) 95728 (5) None of these

Q.13. In a certain code language **"PERSON"** is written as **"957561"**. How will **"SHOULD"** be wirtten in that code language ?
(1) 186334 (2) 198152 (3) 681433 (4) 861334 (5) None of these

Q.14. In a certain code language **"TIMES"** is written as **"79548"**. How will **"INDIA"** be wirtten in that code language ?
(1) 18132 (2) 45989 (3) 94598 (4) 49589 (5) None of these

Q.15. In a certain code language **"SUPPORTERS"** is written as **"8780"**. How will **"INEVITABLE"** be wirtten in that code language ?
(1) 5940 (2) 5841 (3) 5742 (4) 5040 (5) None of these

Q.16. In a certain code language **"THIS"** is written as **"#$©@"** and **"CHIEF"** is written as **"d $ ©⊗8"**. How will **"HIS"** be wirtten in that code language ?
(1) ©@$ (2) ⊗©@ (3) @©⊗ (4) 8$© (5) None of these

Q.17. In a certain code language **"BOMBAY"** is written as **"£@#£ ₹ ≠"** and **"CLOTES"** is written as **" ∥ \\ @ + - ×"** How will **"COATS"** be wirtten in that code language ?
(1) ∥ \\ @ + (2) ₹@\\ + (3) ∥@₹ +× (4) ∥₹@+× (5) None of these

Q.18. In a certain code language **'FIRE'** is written as **"#%@$"** and **"DEAL"** is written as **"©$U*"**. How will **"FAIL"** be wirtten in that code language ?
(1) % *U# (2) #U%* (3) #U%# (4) U#*% (5) None of these

Q.19. In a certain code language **"FUEL"** is written as **"$ % # 6"** and **"KITE"** is written as **"@ •7#"**. How will **"LIFE"** be wirtten in that code language ?
(1) 6 • $ # (2) 6%#$ (3) 6$•# (4) #6$• (5) None of these

Q.20. In a certain code language **"MODERN"** is written as **"5%38#@"** and **"WIN"** is written as **"6©@"** How will **"RIDER"** be wirtten in that code language ?
(1) © #3#8 (2) #3©8# (3) #©38# (4) #3©8% (5) None of these

Q.21. In a certain code language **"Hot filtered coffee"** is written as **"123"**, **"Very hot day"** is written as **"356"** and **"Day and night"** is written as **"589'** . How will **"Very"** is written in that code language ?
(1) 3 (2) 6 (3) 5 (4) 1 (5) None of these

Q.22. In a certain code language **"Truth is eternal"** is written as **"3a, 2b, 7c"**, **"Enmity is not eternal"** is written as **"7c, 9a, 8b, 3a"** and **"Truth does not perish"** is written as **"9a, 4d, 2b, 8c"**. How will **"Enmity"** is written in that code language ?
(1) 8b (2) 9a (3) 3a (4) 7c (5) None of these

Q.23-27. Study the following information carefully and answer the questions given below

In a certain code language
"tell them young" means **" ke la pa"**
"wise young sharp tell" means **"na pa kup ke"**
"bring clever young them" means **" se to pa la"**
"clever sharp young tomorrow" means **"to kup pa jo"**

Q.23. What is the code for **"sharp"** ?
(1) pa (2) na (3) ke (4) kup (5) la

Q.24. What does **'to'** stand for ?
(1) clever (2) young (3) bring
(4) them (5) Can't be determind

Q.25. Which of the following represents, **'tell tomorrow'** ?
(1) la jo (2) in ke (3) ke jo (4) jo in (5) pa ke

Q.26. What is the code for' **'clever young girl'** ?
(1) be ve pa (2) to pa be (3) la na to (4) to pa jo (5) ke ni to

Q.27. Which of the following code represents **' kup la so na'** ?
(1) wise them sharp tell (2) young tell sharp them
(3) clever wise them sharp (4) some wise them and
(5) sharp them not wise

Q.28-32. Read the following information carefully and answer the question given below.

In a certain code **"her idea has merit"** is written as **" fa lu boo ma", "merit list has been displayed"** is written as **"go he lu si ma", "her name displayed there"** is written as **"ya si boo zo"**, and **"name in merit list"** is written as **"ma ya jho he".**

Q.28. What does **"he"** stand for ?
(1) name (2) in (3) there (4) list (5) None of these

Q.29. What is the code for **"been"** ?
(1) he (2) lu (3) go (4) si (5) None of these

Q.30. Which of the following code represent **"there name has in merit"** ?
(1) zo ya ma jho he (2) zo ya lu jho ma (3) zo si ma boo lu
(4) zo si ma lu boo (5) None of these

Q.31. What is the code for **"in"** ?
(1) jho (2) ma (3) zo (4) boo (5) None of these

Q.32. **"zo"** is represented by which word ?
(1) name (2) in (3) been (4) idea (5) there

Q.33. If **'P'** denotes 'multiplied by', **'R'** denotes 'added to', **'T'** denotes 'subtracted form' and **'W'** denotes 'divided by', then -
64 W 4 P 8 T 6 R 4 = ?
(1) 96 (2) 69 (3) 130 (4) 126 (5) None of these

Q.34. If **'P'** means 'divided by', **'R'** means 'multiplied by', **'T'** means 'added to' and **'W'** means 'subtracted from', then -
60 T 48 P 8 W 6 R 9 = ?
(1) 12 (2) 36 (3) 21 (4) 24 (5) None of these

Q.35. If **'Q'** means x, **'T'** means '-', **'R'** means '÷' and **'K'** means '+' then
24 R 4 Q 8 K 6 T 10 = ?
(1) 48 (2) 24 (3) 44 (4) 2/3 (5) None of these

Q.36-40. In each question below, is given a group of letters followed by four combinations of digits/ symbols numbered (1), (2), (3) and (4). You have to find out which of the combinations correctly represents the groups of letters based on the following coding system and the conditions and mark the number of that combination as your answer. If none of the combinations correctly represents the group of letters, mark (5) i.e. 'None of these' as your answer.

Letters :	M	I	K	T	A	B	E	J	W	F	H	U	D	P	Y
Digit/Symbol code :	6	*	5	©	7	8	@	1	2	3	4	%	9	#	$

Conditions :

(I) If the first letter is a vowel and the last letter is a consonant, the codes are to be interchanged.

(II) If the first letter is a consonant and the last letter is a vowel, both are to be coded as the code for the vowel.

(III) If both the first and the last letters are vowels, both are to be coded as 'd".

Q.36. **IPTWHY**
(1) $#©24* (2) *#©24$ (3) $#©24$ (4) *#©24* (5) None of these

Q.37. **HFIMED**
(1) 4*36@9 (2) 93*6@4 (3) 43*6@9 (4) 93*6@9 (5) None of these

Q.38. **EYBEJA**
(1) @$8@17 (2) 7$8@1d (3) d$8@1d (4) 7$8@1@ (5) None of these

Q.39. **BMJKPU**
(1) 8615#% (2) %615#% (3) %615#8 (4) 8615#8 (5) None of these

Q.40. **ABJFEP**
(1) 7813@7 (2) #813@7 (3) 7813@# (4) #183@7 (5) None of these

Q.41-45. In each of these questions a group of letters is given followed by four combinations of number/ symbol numbered (1), (2), (3) & (4). Letters are to be coded as per the scheme and conditions given below. You have to find out the serial number of the combination, which represents the letter group. Serial number of that combination is your answer. If none of the combinations is correct, your answer is (5) i.e. None of these.

Letters :	E	Q	B	K	N	P	L	I	T	C	S	F	H	W	A
Digit/Symbol Code :	5	*	$	2	©	#	4	9	@	6	1	8	%	7	3

Conditions :

(I) If the first letter is a consonant and the last letter is a vowel, both will be coded as the code for the vowel.

(II) If the first letter is a vowel and the last is a consonant, the codes for the two will be interchange.

(III) If both the first and the last letters are consonants, both will be coded as 'd'.

(IV) If there are more than two vowels in the group of letters, then all vowels will be coded as'£'.

Q.41. **IQCPWF**
(1) 9*6#78 (2) 9*6#79 (3) d*6#7d (4) 8*6#79 (5) None of these

Q.42. **KAWIPL**
(1) 2379#4 (2) d379#d (3) 4379#2 (4) 2379#2 (5) None of these

Q.43. **IKBQFA**
(1) 92$8*3 (2) 923$*8 (3) 92*83$ (4) £2$8*£ (5) None of these

Q.44. **IBTNAE**
(1) £$@©££ (2) $9@©35 (3) $@9©35 (4) £©$©££ (5) None of these

Q.45. **TCKAPE**
(1) @623#@ (2) @623#5 (3) 5623#5 (4) 5623#@ (5) None of these

Q.46-50. In each question below is given a group of letters followed by four combinations of digits/ symbols numbered (1), (2), (3) and (4). You have to find out which of the combinations correctly represents the group of letters based on the coding system and mark the number of that combination as your answer. If none of the combinations correctly represents the group of letters, mark (5) i.e. 'None of these as your answer.

Letter :	M	A	T	W	R	E	K	I	H	F	U	B	N	P
Digit/ symbol code :	4	@	3	7	©	2	8	%	1	#	$	6	9	5

Conditions :

(I) If both the first and the last letters are consonants, both are to be coded as the code for the first letter.

(II) If both the first and the last letters are vowels, both are to be coded as the code for the last letter.

(III) If the first letter is a vowel and the last letter is a consonant, the codes are to be interchanged.

(IV) If the first letter is a consonant and the last letter is a vowel, both are to be coded as *.

Q.46. **AEBRMH**
(1) @26©41 (2) 126©4@ (3) 126©41 (4) @26©4@ (5) None of these

Q.47. **HBEAFU**
(1) 162 @#$ (2) * 62@#* (3) 162@#1 (4) $62@#1 (5) None of these

Q.48. **BKNIRT**
(1) 689%©6 (2) 689%©3 (3) 698%©3 (4) 389%©3 (5) None of these

Q.49. **KFUBNA**
(1) *#$69* (2) 8#$69@ (3) 8#$698 (4) @#$69@ (5) None of these

Q.50. **IRFAME**
(1) 2©#@4% (2) 2©#@42 (3) %©#@4% (4) *©#@4* (5) None of these

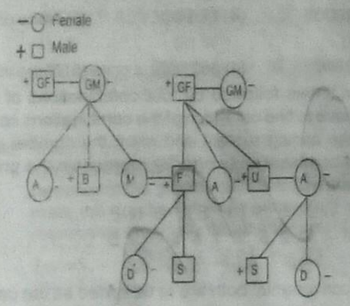
CHAPTER-3

BLOOD RELATION

In this segment candidates have to deal with the questions based on Blood Relation. Questions based on Blood-Relation can be of many types but in all the types of question candidates have to relate all the given relation one by one.

Relation on the **mother** side is called '**maternal**' and that on the **father** side is called '**paternal**' and if the relation is on the **spouse** side (Husband or wife) is called '**in-law**'

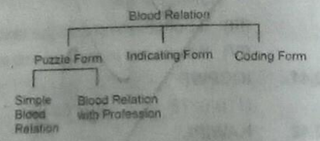
A method known as '**family tree**' is used to solve the questions regarding Blood Relation. which is just a flow chart method to show all the possible relation.



RELATION WHICH ARE REQUIRED -

Mother's or Father's Father	- Grand Father
Mother's or Father's Mother	- Grand Mother
Mother's or Father's Brother	- Uncle
Mother's or Father's Sister	- Aunt
Son's Wife	- Daughter-in-law
Daughter's Husband	- Son-in-law
Husband's or Wife's Borther	- Brother-in-law
Husband's or Wife's Sister	- Sister-in-law
Sister's/Brother's Son	- Nephew
Sister's/Brother's Daughter	- Niece
Brother's Wife	- Sister-in-law
Sister's Husband	- Brother-in-law

TYPE OF QUESTIONS-



1. PUZZLE FORM

In this type of question relations are written in a puzzled way.

Read the following information carefully and answer the questions-

Q.1-5. All the six members of a family A, B, C, D, E and F are travelling together. B is the son of C but C is not the mother of B. A and C are a married couple. E is the brother of C. D is the daugher of A. F is sister of B.

Q.1. How many children does C have ?

(1) 2 (2) 1
(3) 3 (4) Can't be determine
(5) None of these

Ans.(3)

Q.2. Which of the following represents a married couple ?

(1) C & A (2) C & E
(3) F & C (4) A & B
(5) None of these

Ans. (1)

Q.3. How is E related to F ?

(1) Niece (2) Nephew
(3) Uncle (4) Aunt
(5) None of these

Ans. (3)

Q.4. How many brothers does F have ?

(1) None (2) One
(3) Two (4) Three
(5) None of these

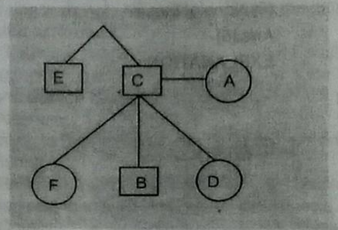
Ans. (2)

Q.5. Among following who is the son of A ?

(1) B (2) D (3) F
(4) E (5) None of these

Ans.(1)

EXPLANATION :



Q.6-10. Read the following information carefully and answer the questions-

P, Q, R, S, T and X are members of a family. There are two married couples. Q is an engineer and the father of T. X is the grandfather of R and is a lawyer. S is the grandmother of T and is housewife. There are one engineer, one laywer, one teacher one housewife and two student in the family.

6. How many male members are there in the family ?

(1) 4 (2) 2
(3) 6 (4) Can't be determined
(5) None of these

Ans. (4)

7. Among the following who is the spouse of Q ?

(1) P (2) S (3) X
(4) T (5) R

Ans. (1)

8. What is the profession of P ?

(1) Housewife (2) Lawyer
(3) Engineer (4) Teacher
(5) Student

Ans. (4)

9. Among the following who is the father of R?

(1) S (2) X
(3) Q (4) P
(5) T

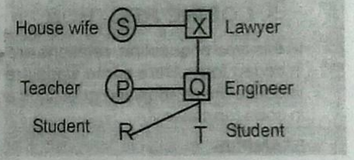
Ans. (3)

10. How is T related to X ?

(1) Grand Son
(2) Grand Daughter
(3) Either Grand Son or Grand Daughter
(4) Son
(5) Can't be determine

Ans. (3) Because Gender of T is not given.

EXPLANATION-



2. INDICATING FORM

In this type of question, a man/woman define a relationship to any other person to whom that man/woman indicate with the help of chain of relations.

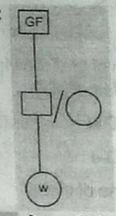
EXAMPLE-

Q.1. Pointing to a woman, Nirmal said, "She is the only dauther of my wife's grand father's only child." How is the woman related to Nirmal ?

(1) Father (2) Daughter
(3) Wife (4) Husband
(5) None of these

Ans. (3)

EXPLANATION :

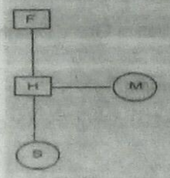


Q.2. Pointing to a boy, Madhu says, "He is the only son of my father-in-law's only son". How that lady is related to that boy ?

(1) Husband (2) Mother
(3) Wife (4) Son
(5) None of these

Ans. (2) Mother

EXPLANATION :



3. CODING RELATION

In this type of question, relations are given in coded form. Here some signs are used to define the relation and questions are put in code form also.

EXAMPLE-

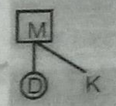
(A) A × B means 'A is mother of B'.
(B) A – B means 'A is father of B'.
(C) A ÷ B means 'A is brother of B'.
(D) A + B means 'A is sister of B'.

Q.1. In the expression **M–D+K.** How is **D** related to **M** ?

(1) Mother (2) Sister
(3) Daughter (4) Son
(5) None of these

Ans.(3) Daughter

EXPLANATION :



Q.2. Which of the following means K is maternal grandfather of I?

(1) K–D×I (2) K÷D×I
(3) K–D–I (4) K×D×I
(5) None of these

Ans. (1) (1) K–D×I

EXPLANATION:

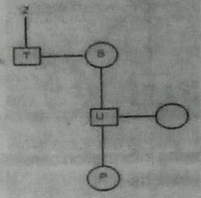
(A) A+B means 'B is the daughter of A.'
(B) A×B means 'B is the son of A'
(C) A–B means 'B is the wife of A'.

Q.3. If **'Z×T–S×U+P'**, what is **U** to **Z** ?

(1) Mother (2) Grand mother
(3) Father (4) Can't be determined
(5) None of these

Ans.(5)

EXPLANATION :



Candidates have to consider only the sign. of arrangement, ×, –, ×, + starting from left direction (If backward direction) son-wife - son-daughter means grand-daughter. Now candidates have to interchange the order of Z and U. Hence U will be subject and Z will be object. Hence U is grand-daughter of Z.

KEY FACTORS-

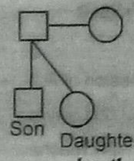
With the help of some points you can easily solve blood relation.

- *One should classify Male and Female as*

Male - + □ *Female* – ○

- *Husband Wife relation as* + □—○

- *Son and daugther as*



For more detail see the volume II.

EXERCISE

BLOOD RELATION

Q.1. A is mother of B but B is not son of A. Then how is B related to A ?
(1) Brother (2) Daughter (3) Son (4) Daughter in law (5) None of these

Q.2. Pointing towards a girl Raj said, "she is the daughter of my mother's daughter". Then how is girl related to Raj ?
(1) Daughter (2) Uncle (3) Niece (4) Nephew (5) None of these

Q.3. Pointing towards a man another man said, "he is the son of my father's sister". Then what is the relation between them ?
(1) Father - son (2) Brother (3) Cousin (4) Uncle-Nephew (5) None of these

Q.4. Pointing to a photo Nirmal said, "she is the daughter of only son of my grandfather". How is girl related to Nirmal ?
(1) Sister (2) Cousin (3) Daughter (4) Granddaughter (5) None of these

Q.5. Introducing a man woman said, that "he is the son of my mother's brother's father's son". Then how is woman related to that man ?
(1) Nephew (2) Brother (3) Son (4) Cousin (5) None of these

Q.6. Pointing to Sudha Rajan said, "her mother's only daughter is my mother". How is Rajan related to Sudha ?
(1) Brother (2) Nephew (3) Uncle (4) Son (5) None of these

Q.7. A man said to a lady, "your mother's husband's sister is my mother. How is man related to lady ?
(1) Cousin (2) Son (3) Nephew (4) Brother (5) None of these

Q.8. Anand is son of Prema. Rajeev is brother of Prema. Neha is daughter of Rashmi. Neha is sister of Rajeev. How is Anand related to Rashmi ?
(1) Son (2) Grand father (3) Grand son (4) Grand daughter (5) None of these

Q.9. Introducing a man woman said, that his father-in-law's father is my father-in-law. How the man related to the woman ?
(1) Son (2) Son - in - law (3) Mother (4) Mother-in -law (5) None of these

Q.10. Golu is son of Bhola, Sheetal is daughter of Golu. Chitra is daughter of Dilip and Dilip is brother of Bhola. How is Chitra related to Sheetal ?
(1) Aunt (2) Sister (3) Mother (4) Mother-in-law (5) None of these

Q.11. A is mother of B. C is son of A. D is Brother of E. E is daughter of B. Who is grand mother of E ?
(1) A (2) B (3) C (4) D (5) None of these

Q.12. M is brother of N. B is brother of N. M is brother of D but N is not brother of D. How is N related to D ?
(1) Sister (2) Brother (3) Cousin (4) Nephew (5) None of these

Q.13-14. Study the following blood relation information carefully and answer the given questions.
L is father of P who is father of S.
M is grand mother of R who is son of O.
N is paternal uncle of R who is brother of S.

Q.13. How many married couples are there ?
(1) One (2) Two (3) Three (4) None (5) None of these

Q.14. According to the above question how is M related to L ?
(1) Wife (2) Daughter (3) Daughter-in-law
(4) Can't be determined (5) None of these

Q.15. If A is son of Q. Q and Y are sisters. Y's mother is Z. P is son of Z. Then which one is definitely true ?
(1) A and P are cousin (2) A is uncle of P (3) A is maternal uncle of P
(4) P and Y are sisters (5) None of these

Q.16-20. Study the following blood relation information carefully and answer the given questions.
A, B, C, D, E and F are six members of a family.
→ Two couple and their children are in the family.
→ A is the son of C and E is the daughter of A.

→ D is the daughter of F who is the mother of E.
→ B is the spouse of C.

Q.16. How many male members in the family ?
(1) One (2) Two (3) Three
(4) Can't be determined (5) None of these

Q.17. Which of the following pairs represents the parents of the children ?
(1) BC (2) CF (3) BF
(4) Can't be determined (5) None of these

Q.18. How many children are there in the family ?
(1) One (2) Two (3) Three
(4) Can't be determined (5) None of these

Q.19. What relationship do D and E bear to each other ?
(1) Sister and Brother (2) Mother and Son (3) Grand mother and Grand daughter
(4) Can't be determined (5) None of these

Q.20. How many female members in the family ?
(1) Two (2) Three (3) Four
(4) Can't determined (5) None of these

Q.21-25. Study the following blood relation information carefully and answer the given questions.
A is the father of C and D. C and E are married couple and they have two daughters H and I. C is the brother of D. G is the sister of F and daughter of P, who is the mother of R. N is Grand Father of K who is not the son of D and G. B is mother in law of F who is wife of D.

Q.21. How many married couples in the group ?
(1) Four (2) Two (3) Three (4) None (5) None of these

Q.22. Who is mother of H ?
(1) E (2) C (3) C or E (4) None (5) None of these

Q.23. Who is married couple in the following ?
(1) NP (2) CD (3) FG (4) GR (5) RK

Q.24. Who is cousin of I ?
(1) R (2) G (3) D (4) K (5) None of these

Q.25. Who is sister in law of C ?
(1) F (2) E (3) R (4) P (5) None of these

Q.26. If P + Q means P is the husband of Q. P ÷ Q means P is sister of Q and P × Q means P is the son of Q, which of the following expression show A is the daughter of B ?
(1) C × B ÷ A (2) B ÷ C × A (3) D × B + C ÷ A (4) A ÷ D × B (5) None of these

Q.27. If X - Z means X is the mother of Z. X× Z means X is the father of Z and X + Z means X is the daughter of Z. Now , if M - N × T + Q, then which of the following relation is not true ?
(1) T is N's daughter (2) N is wife of Q (3) M is mother-in-law of Q
(4) Q is wife of N (5) T is granddaughter of M

Q.28. Study the following blood relation information carefully and answer the given questions.
'M × N' means 'M is the daughter of N'.
'M + N' means ' M is the father of N'.
'M ÷ N means 'M is the mother of N'.
'M - N' means 'M is the brother of N'.
In the expression P ÷ Q + R - T – K, how P is related to K ?
(1) Daughter-in-law (2) Sister-in-law (3) Aunt (4) Mother (5) None of these

Q.29-30. Study the following blood relation information carefully and answer the given questions.
'A Δ B' means 'A is mother of B'.
'A ● B' means 'A is sister of B'.
'A * B' means 'A is father of B'.
'A ß B' means 'A is brother of B'.

Q.29. Which of the following equation means 'Q is grandfather of P' ?
(1) P Δ N * M * Q (2) Q * N ● M Δ P (3) Q ß M ß N * P (4) Q * M ● N Δ P (5) None of these

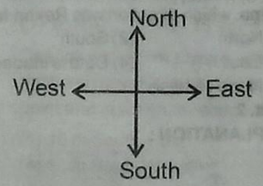
Q.30. Which of the following means N is uncle of M ?
(1) N ß P ● L Δ E ● M (2) N ● Y Δ A ß M (3) M ● Y * P ● N
(4) N ß C Δ F * M (5) None of these

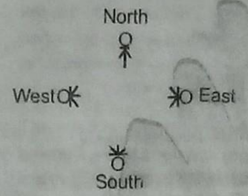
CHAPTER-4

DIRECTION AND DISTANCE

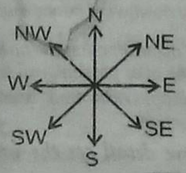
In this chapter. the questions consist of a sort of direction puzzle A successive follow-up of directions is formulated and the candidate is required to ascertain the final direction on the distance between two points. **This test is meant to judge the candidate's ability to trace and follow correctly and sense the direction correctly.**

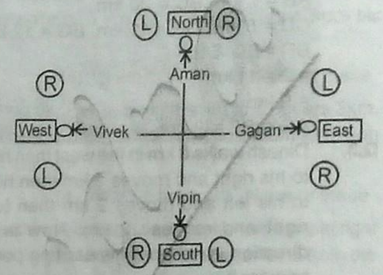
There are four main directions :
North, East, South, West





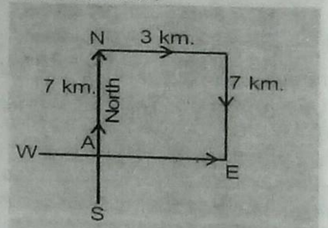
There are four subordinate directions:
North-East (N E), South - East (S-E), South-West (S-W) & North-West (N-W) those are also called subdirections and these subdirections are between prime directions like NE is between North and East, SE is between South & East & so on,.....





EXAMPLES:
TYPE - 1

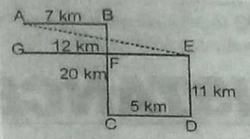
Q.1. Shyam travels 7 km. toward North, then he turn to his right and walks 3 km. He again turns to his right and moves 7 km forward. Now in which direction is he from his starting point?
(1) North (2) South
(3) East (4) West
(5) Can't be determined
Ans.3
EXPLANATION :



A = starting poiting

Q.2. Lucky walks 7 km. in the east. Then he turns to his right and moves 20 km, then he turns to his left and moves 5 km, then he turns to his left and moves 11 km. and then again he turned to his left and move 12 km. Now in which direction is he from his starting point and how far ?
(1) 9 km South (2) 64 km East
(3) 20 km west (4) 7 km south
(5) None of these

EXPLANATION :



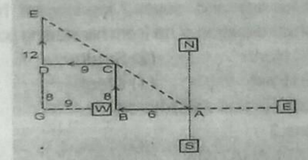
AB = 7 km, BC = 20 km
CD = 5 km, DE = 11 km, EG = 12 km
BF = BC–DE
= 20–11 km
= 9 km
AG = BF = 9 km, **Ans. 1**

Q.3. Dinesh walks 6 km in the west then he turns to his right and moves 8 km then he turns to his left and moves 9 km then turns to right and moves 12 km. Now in which direction is he from his starting point and how far ?

(1) 15NE (2) 35NE (3) 25NW
(4) 45 SE (5) None of these

Ans. 3

EXPLANATION :



∵ BC = 8 km., DG = 8 km.
GB = 9 km., DC = 9 km.
AB = 6 km, DC = 9 km
DE = 12 km, BC = 8 km
So, GE = 20 km, AG = 15 km

$\therefore$ EA = $\sqrt{(20)^2 + (15)^2}$

$= \sqrt{400 + 225}$

$= \sqrt{625}$

= 25 km.

Direction - North West (NW)

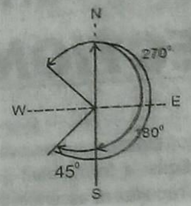
TYPE-2

Q.1. A man is facing North. He turns to 180° in clockwise direction and another 45° in the same direction and the 270° in the anticlockwise direction. Which direction is he facing now ?

(1) South-West (2) South-East
(3) North-East (4) North-West
(5) North

Ans. 4

EXPLANATION :



Final Direction North-West Degrees can only be judged towards the direction in which a person is facing instead of the path covered by him

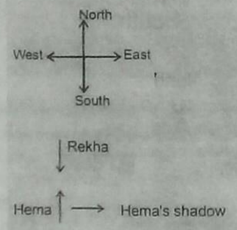
TYPE - 3

Q.1. One evening before sunset Rekha and Hema were talking to each other face to face. If Hema's shadow was exactly to the right of Hema, which direction was Rekha facing ?

(1) North (2) South
(3) East (4) Data is inadequate
(5) None of these

Ans. 2

EXPLANATION :



Shadow in the evening.

Key Factors:

- *At the time of sunrise shadow of an object will always be towards west.*
- *At the time of sunset the shadow of an object is always in the east.*
- *If a man is standing facing north at the time of sunrise his shadow will be towards his left and at the time of sunset it will be towards his right.*
- *At 12 : 00 noon, the rays of the sun are vertically downward hence there will be no shadow.*
- *Your left object or person is on left and your right's object or person is on right.*
- *Angle will always be made according to the face direction.*

For more detail see the volume II.

EXERCISE

DIRECTION AND DISTANCE

Q.1. Gaurav starts walking in the North direction and travels 5 km then he turns to his left and walks 10 km and then he turns to his left and covers the distance of 5 km. Now how far is he from his starting point ?

(1) 5 km (2) 20 km (3) 10 km (4) 15 km (5) None of these

Q.2. Moin started walking towards south and after covering 5km he turns to the left and covers 3km. After that he turns to the right and covers 5km. Now towards which direction Moin is facing now?

(1) North-East (2) South (3) North (4) South-East (5) None of these

Q.3. Hemant travels 10 km towards North then turns left and travels 4 km and then he turns to his right and covers another 5 km. He then turns to his right and travels another 4 km. How far is he from the point of starting his journey ?

(1) 10 km (2) 15 km (3) 5 km (4) 25 km (5) None of these

Q.4. Deepak walks 9 m towards south then he turns to his right and moved 5 m then he turns to his right and moves 4 m. at last he turns to his left and moves 7 m. Then how far is he from starting point and in which direction ?

(1) 15 m South-East (2) 7 m South-West (3) 15 m West
(4) 15 m North-West (5) None of these

Q.5. A taxi driver commenced his journey from a point and drive 10 km towards North and turned to his left and drive another 5 km, and where he meet with his friends, then he turned to his right and continued to drive another 10 km. He has covered a distance of 25 km then in which direction he is facing now ?

(1) North (2) East (3) West (4) South (5) None of these

Q.6. There is a ring road connecting points A, B, C and D. The road is in a complete circular form but having several approach roads leading to the centre. Exactly in the centre of the ringroad there is a tree which is 20 km from point A and point A is on the circular road. You have taken a round of circular road starting from A and finish at the same point after touching points B, C and D. you then drive 20 km interior towards the tree from point A and from there reach somewhere in between B and C on the ring road. How much distance you have to travel from the tree to reach the point between B and C on the ring road?

(1) 20 km (2) 15 km (3) 80 km (4) 40 km (5) None of these

Q.7. A tourist drives 10 km towards East and turns to his right and takes a drive of another 3 km. He then turns to his left and walks another 2 km. After that, he turns to his right and travels 7 km. How far is he from his starting point and in which direction ?

(1) 10 km East (2) 9 km North (3) 8 km West (4) 5 km South (5) None of these

Q.8. Four friends M, N O and P are playing cards, M and N are partners. P faces towards North. If M faces towards West, then who faces towards South ?

(1) O (2) N (3) P
(4) Data inadequate (5) None of these

Q.9. Sam starts walking from a point 'P' towards south. After walking 40 meters, he took a left turn. He then walked 30 meters and reached a point Q. What is the length of straight line distance between P and Q, and Q is towards which direction of 'P' ?

(1) 60 metres, South-East (2) 50 metres, South-West
(3) 50 metres, South-East (4) 60 metres, South-West
(5) None of these

Q.10. Gautam was facing North. He walked 40 metres and turned left to cover 20 metres. He again turned left and walked 40 metres. How far is he from his original position ?

(1) 20 metres (2) 40 metres (3) 60 metres (4) 80 metres (5) None of these

Q.11. Shally travelled 9 km to the west, then turned right and travelled 7 km. then turned left and travelled 8 km, then turned back and travelled 11 km, then turned right and travelled 7 km. How far is he from the starting point ?

(1) 3 km (2) 6 km (3) 7 km (4) 9 km (5) None of these

Q.12. Inspector jatin travelled from his police station for 400 km. He then turned left and travelled 500 km. straight after which he turned left again and travelled for 400 km. straight. He then turned right and walked for another 600 km. straight. How far is he from the Police post ?

(1) 1.0 km. (2) 1.1 km. (3) 1.4 km. (4) 1.8 km. (5) None of these

Q.13. A puppy was trying to find its mother. She was facing east and walked for 10 metres. It turned south and walked another 10 metres. and moved west for 10 metres. In which direction is it from the original position and how far ?

(1) 60 metres North-East (2) 10 metres North-West (3) 8 metres North
(4) can't be determined (5) None of these

Q.14. Ram walks 10 metres towards east, then turns towards north and walked 15metres and then after turning to the west he walks 10 metres and he turns towards south walks 15metres. How far is he from starting point ?

(1) 0 metres (2) 2 metres (3) 4 metres (4) 5 metres (5) None of these

Q.15. A man starts walking from his office and goes 5 km towards East. Then, he turns to the left and again walks for 3 km. Again, he turns left and walk 5 km. At what distance is he from the starting point ?

(1) 3 km (2) 4 km (3) 6 km (4) 7 km (5) None of these

Q.16. A girl leaves from her home. She first walks 30 metres in North - West direction and then 30 metres in South - West direction. Next, she walks 30 metres in South - East direction. Finally, she turns towards her house. In which direction is she facing ?

(1) South - East (2) South - West (3) North - East (4) North - West (5) None of these

Q.17. Neeta started walking from point X and walked straight 5 km west, then turned left and walked 2 km and again turned left and walked straight 7 km. In which direction is she from X.

(1) North-East (2) South-West (3) South-East (4) North-West (5) None of these

Q.18. Starting from a point 'M', Hari walked 18 metres towards south. He turned to his left and walked 25 metres. He then turned to his left and walked 18 metres. He again turned to his left and walked 35 metres and reached a point 'P'. How far Hari is from the point 'M' and in which direction ?

(1) 10 m east (2) 10 m west (3) 35 m west (4) 10 m south (5) None of these

Q.19. Anuradha walks 3 km toward North and then she turns left and moves 2 km. She again turns left and covers 3 km and turns to her right and starts walking straight. In which direction is she walking now ?

(1) North (2) East (3) South (4) West (5) None of these

Q.20-22. Study the following information carefully and answer the given question :

(I) There are 6 check - posts A, B, C, D, E and F.
(II) Check - post F is 25 kms to the Norht of D which is 35 kms to the North-East of B.
(III) Check - post A is 15 kms west of E and 35 kms to the south - west of 'C'.
(IV) B, A and E are in straight line.
(V) The check posts B and E are 70 kms apart from each other.

Q.20. Which check post is the farthest to the south-westn of D ?

(1) A (2) B (3) C (4) D (5) E

Q.21. Which port is the nearest to the north - west of E ?

(1) A (2) B (3) C (4) D (5) E

Q.22. If a jeep moves from E to F via A, B and D, how much distance it will have to cover ?

(1) 130 (2) 120 (3) 100 (4) 90 (5) 160

Q.23. Sunil was facing east. He turns 100° in the clockwise direction and then 145° in the anticlock wise direction. Which direction is he facing now ?

(1) East (2) North (3) South west (4) North east (5) None of these

Q.24. If North is called South - East and North - West is called East and South - West is called North. Then how east will be called as ?

(1) South (2) West (3) South -West (4) Norht - West (5) None of these

Q.25. In an evening when Suraj started walking from his house, his shadow was exactly towards his right. He walked 6 km . Then he turnes to his left and moved 4 km. A gain he turns to his right and walked 6 km. Then he turned to his right and moved 13 km. How far is he and in which direction from the starting point ?

(1) 15 km North-East (2) 15 km Noth (3) 15 km South-East (4) 16 km South (5) None of these

Q.26. Ramesh cover 5metres then he turn to his left and cover 10 metres than he turn his right and cover 4 metres. If this time his shadow in his right then, In which direction he started his journey ?

(1) East (2) West (3) North
(4) Can't be determined (5) None of these

Q.27. In morning Sobhit cover 10 metres then he turn in his left and covers 4 metres. At this time his shadow in his left. Then in which direction he started his journey ?

(1) North-East (2) North (3) South (4) East (5) None of these

Q.28. Ram started walking from his office and covers 5 km then he turn to his left and covers 8 km and then turns to his right 45° and covers 8 km. Finaly turns to his left and covers 3 km and observe that at last he was going towards south direction. Find out towards which direction he started walking ?

(1) North (2) South (3) East
(4) Can't be determined (5) None of these

CHAPTER-5

ORDER AND RANKING

In this chapter generally the ranks of a person from both sides left or right or from top and from bottom are mentioned and total number of persons are asked. Some times the question are based on their interchanged positions.

There are three types of questions -

1. Position of one person is given.
2. Positioin more than one person is given.
3. Over laping condition: Ascending/ Descendin order accordin age, height, marks etc.

We have to find out :

1. Total number of persons
2. Position from other side
3. Number of persons in between
4. Minimum/maximum number of person in the row.
5. Number of persons on either side of a particular person.

Q.2. Manik is fourteenth from the right end in a row of 40 boys. What is his position from the left end?

(1) 24th (2) 25th (3) 26th
(4) 27th (5) None of these

EXPLANATION :

Clearly, number of boys towards the left of Manik = (40 - 14) = 26.

So, Manik is 27th from the left end.

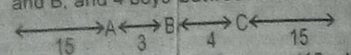
Ans. (4)

Q.3. In a row of boys facing towards North, A is sixteenth from the left end and C is sixteenth from the right end. B, who is fourth to the right of A, is fifth to the left of C then. How many boys are there in the row?

(1) 39 (2) 40 (3) 41
(4) 42 (5) None of these

EXPLANATION :

Clearly, according to the given conditions, there are 15 boys to the left of A, as well as to the right of C. Also, B lies between A and C such that there are 3 boys between A and B, and 4 boys between B and C.



So, number of boys in the row = (15 + 1 + 3 + 1+4 +1+15) = 40

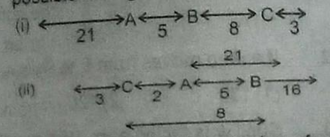
Ans. (2)

Q.4. Three persons A, B and C are standing in a queue. There are five persons between A and B and eight persons between B and C. If there are three persons ahead of C and 21 behind A, then what could be the minimum number of persons in the queue ?

(1) 27 (2) 28 (3) 40
(4) 41 (5) None of these

EXPLANATION :

As per the given conditions, there are two possible arrangements as shown below :



Clearly, for the minimum number of persons we shall consider arrangement (ii).

In (ii), number of persons in the queue = (3 + 1 + 2 + 1 + 21) = 28.

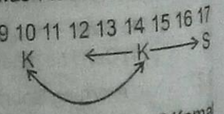
Ans.(2)

Q.5. In a row of 40 girls, when Komal was shifted to her left by 4 places her number from the left end of the row became 10. What was the place of Swati from the right end of the row if Swati was three places to the right of Komal's original position?

(1) 22 (2) 23 (3) 25
(4) 26 (5) None of these

EXPLANATION :

On shifting 4 places to the left, Komal becomes 10th from the left end of the row. Thus, Komal's original position was 14th from the left end.



Swati is 3 places to the right of Komal's original position.

Clearly, Swati is 17th from the left end.

Number of girls to the right of Swati = (40 - 17) = 23.

Thus, Swati is 24th from the right end of the row.

Ans.(5)

EXERCISE

ORDER AND RANKING

Q.1. Ravi is eighteenth from left and nineteenth from right in a row. How many students are their in the row ?

(1) 36 (2) 37 (3) 35 (4) 38 (5) None of these

Q.2. In a row of 50 students Renu is fifteenth from left and Raju is eighteenth from right. How many students are between them ?

(1) 17 (2) 16 (3) 7 (4) 8 (5) None of these

Q.3. Amit is twenty five from left. Sumit is nineteenth from right and is sixth to the left of Amit. How many students in a row ?

(1) 40 (2) 36 (3) 34 (4) 38 (5) None of these

Q.4. Shamita is eighth to the right of Nikita who is twentyone from right. Ravi is tenth to the left of shamita and is 23rd from left. Then how many students are there in the row ?

(1) 42 (2) 45 (3) 48 (4) 50 (5) None of these

Q.5. Mohan is twenty-fourth from left and is sixth to right of Rohan who is thirty-third from right and he is just between Mohan and Sohan. Then what will be Sohan's position from left ?

(1) 12 (2) 14 (3) 8 (4) 9 (5) None of these

Q.6. Raju is seventh from left and Rohan is nineth from right. if there are six student between them then how many students in a row ?

(1) 8 (2) 10 (3) 22 (4) 21 (5) None of these

Q.7. Ram is eighth from left he is fourth to the left of Shyam who is eighth from right. Then how many students in a row ?

(1) 12 (2) 21 (3) 24 (4) 20 (5) None of these

Q.8. Ram is seventhto the left of Shyam who is thirtyfirst from left in the row 50 students then what will be the Ram's position from right ?

(1) 27 (2) 26 (3) 29 (4) 28 (5) None of these

Q.9. In the row of 40 students Mahesh is twentyeight from left and Suresh is twentyfifth from right. If Dinesh is sitting just exactly in between them what will be Dinesh's position from left ?

(1) 24 (2) 22 (3) 28 (4) 23 (5) None of these

Q.10. Jai is twenty-first from left and Vijay is twentyfourth from right. When they interchange their position respectively. Then Vijay becomes thirty-first from right end. Then what will be Jai's position from left after interchanging ?

(1) 25 (2) 26 (3) 27
(4) 28 (5) None of these

Q.11. Students line up in a queue in which Ashish stands fifteenth from the left and Sachin is seventh from the right. If they interchange their places, Sachin would be fifteenth from the right. How many students are there in the queue ?

(1) 21 (2) 22 (3) 29
(4) 30 (5) None of these

Q.12. In a row of girls, Rita and Monika occupy the ninth place from the right end and tenth place from the left end, respectively. If they interchange their places, then Rita and Monika occupy seventeenth place from the right and eighteenth place from the left respectively. How many girls are there in the row ?

(1) 25 (2) 26 (3) 27
(4) Data inadequate (5) None of these

Q.13. Rohan rank 25 from the top & Sohan rank 30 from bottom if three student in between Rohan and Sohan then find out the total number of student ?

(1) 52 (2) 62 (3) 72
(4) Can't be determined (5) None of these

Q.14. Manoj is 24th from the right in a row of 40 boys. What is his position from the left end ?

(1) 18 (2) 16 (3) 17
(4) Can't be determined (5) None of these

Q.15. In a row of girls facing to the North, A is sixteenth from the left and C is sixteenth from the right. B who is fourth to the right of A, is fifth to the left of C in the row. How many girls are there in the row ?

(1) 39 (2) 40 (3) 41
(4) Can't be determined (5) None of these

Q.16. Kamal Remembers that his brother Deepak's birthday falls after 20th may but before 28th may. While Geeta remember that Deepka's birthday falls before 22nd may but after 12th may. On what date Deepak's birthday falls ?

(1) 20th may (2) 21st may (3) 22nd may
(4) Can't be determined (5) None of these

Q.17. Ashok is 20th from top and 25th from bottom then find out the total number of students in this row ?

(1) 40 (2) 44 (3) 35
(4) Can't be determined (5) None of these

Q.18. A number is greater than 3 but less than 9 also it is greater than 6 but less than 9.

(1) 7 (2) 8 (3) 7 and 8
(4) Can't be determined (5) None of these

Q.19. What is the position of Ravi from the right side ?

(1) 19 (2) 20 (3) 21
(4) Can't be determined (5) None of these

Q.20. Ravi is 2nd to the right of Sumit. Sumit is 29th from back side then what is the position of Ravi from left side ?

(1) 15 (2) 14 (3) 16
(4) Can't be determined (5) None of these

Q.21. How many student in between Sumit and Amit ?

(1) 9 (2) 10 (3) 11
(4) Can't be determined (5) None of these

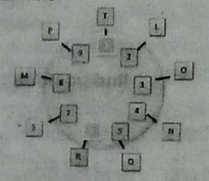
Q.22. In a class of 63 students Nilogar's rank is 20th from the upper. If moin is 9th place before her then what is the position of Moin from the bottom ?

(1) 63 (2) 65 (3) 64
(4) Can't be determined (5) None of these

CHAPTER-6

SITTING ARRANGEMENT

Sitting Arrangement questions involve arrangement of persons in a circular table, rectangular table or line arrangement with some given conditions. In order to solve these type of questions, best strategy is to develop a rough pictorial diagram.



Once diagram is complete, questions that follow can be answered easily.

Sitting Arrangment questions can be asked in four ways.

Sitting Arrangement
- Circular form
- Row/Column
- Rectangular form
- Square form

Types of questions

(A) FACING CENTRE-

RIGHT-ANTI-CLOCKWISE DIRECTION

LEFT-CLOCKWISE DIRECTOIN

(B) FACING OUTSIDE OF CENTRE-

LEFT -ANTI-CLOCKWISE DIRECTION

RIGHT -CLOCKWISE DIRECTION

Here some Conjunction is also used instead of name of candidate.

In that case

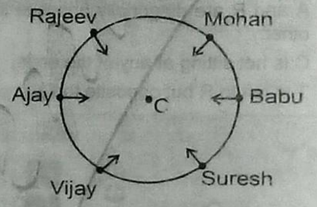
- If AND/BUT/THAT is used then subject of the previous sentence (name of first candidate) will be used.
- If WHO/WHOM/WHOSE is used then object of the previous sentence (name of second candidate) will be used.
- Left or right of any candidate can only be judged if it is given that towards which direction he is facing means you have to focus upon the candidate towards which he is facing.

1. Circular Form

In this type of question some persons (6, 8, 10 etc.) are made to sit around the circle facing the centre or facing opposite the centre.

EXAMPLE :-

6 Boys are sitting in a circle and facing towards the centre of the circle. Rajeev is sitting to the right of Mohan, but he is not just to the left of Vijay. Suresh is between Babu and Vijav. Ajay is sitting to the left of Vijay.



2. Row / Columns -

In this type of the question people are made to sit in a sequential manner in a particular direction.

EXAMPLE -

Eleven students A, B, C, D, E, F, G, H, I, J and K are sitting in first row facing the teacher. D who is just to the left of F, is at second place to the right of C. A is second to the right of E who is at one end. J is the nearest neighbour of A and B and is to the left of G at third place. H is to the left of D and is at the third place to the right of I.

Teacher

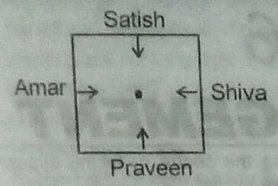
E K A J B I G C H D F

3. Rectangular Form -

In this type of question some persons are made to sit around a rectangle facing the centre or facing in four directions.

EXAMPLE-

Shiva, Satish, Amar and Praveen are playing cards. Amar is to the right of Satish, who is to the right of Shiva.



4. Square Form-

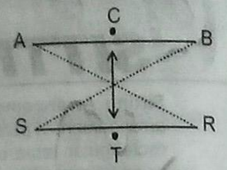
In this type of questions people are made to sit in square form

EXAMPLE-

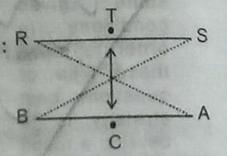
1. A, B and C are three boys while R, S and T are three girls. They are sitting such that the boys are facing the girls.
2. A and R are diagonally opposite to each other.
3. C is not sitting at any of the ends.
4. T is left to R but opposite to C.

(A) Who is sitting opposite to B ?
(B) Who is sitting diagonally opposite to B?

Ist position :



IInd position :



(A) Hence, R is sitting opposite to B.
(B) Hence, S is sitting diagonally opposite to B.

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EXERCISE

SITTING ARRANGEMENT

Q.1-4. Study the following sitting arrangement carefully and answer the given questions.
P, Q, R, S, T, U, V and W are sitting around the circle and are facing the centre.
(1) P is second to the right of T who is the neighbour of R and V.
(2) S is not the neighbour of P.
(3) V is the neighbour of U.
(4) W is sitting between U and S.

Q.1. Which two of the following are not neighbours ?
(1) RV (2) UV (3) RP (4) QS (5) None of these

Q.2. Who is an immediate right of V ?
(1) P (2) U (3) R (4) T (5) None of these

Q.3. Which of the following statement is correct ?
(1) P is to the immediate right of Q (2) R is between U and V
(3) S is to the immediate left of W (4) U is between W and S
(5) None of these

Q.4. What is the position of S ?
(1) Between U and V (2) Second to the right of P
(3) To the immediate right of W (4) Data inadequate.
(5) None of these

Q.5-9. Study the following sitting arrangement carefully and answer the given questions.
(1) A ,B, C, D and E are five person are sitting in a line facing to South - while M, N, O, P and Q are five ladies sitting in a second line parallel to the first line and are facing to North.
(2) B who is just next to the left of D, is opposite to Q.
(3) C and N are diagonally opposite to each other.
(4) E is opposite to O who is just next right of M.
(5) P who is just to the left of Q, is sitting opposite to D.
(6) M is at one end of the line.

Q.5. Who is sitting third to the right of O ?
(1) Q (2) N (3) M
(4) Data inadequate (5) None of these

Q.6. If B shifts to the place of E, E shifts to the place of Q, and Q shifts to the place of B, then who will be the second to the left of the person opposite to O ?
(1) Q (2) P (3) E (4) D (5) None of these

Q.7. Which of the following pair is diagonally opposite to each other ?
(1) EQ (2) BO (3) AN (4) AM (5) EN

Q.8. If O and P, A and E and N and Q interchange their positions, then who will be the second person to the right of the person who is opposite to the person second of the right of P ?
(1) D (2) A (3) E (4) O (5) None of these

Q.9. In the original arrangement who is sitting just opposite to N ?
(1) B (2) A (3) C (4) D (5) None of these

Q.10-11. Study the following sitting arrangement carefully and answer the given questions.
V, U and T are seated in a circle facing the centre. A, B and C are aslo seated in the same circle but two of them are not facing at the centre (facing opposite direction to the centre). V is second to the left of C. U is second to the right of A. B is third to the left of T. C is second to the right of T. A is seated next to V.

Q.10. Which of the following are not facing the centre ?
(1) BA (2) CA (3) BC
(4) Can't be determined (5) None of these

Q.11. Which of the following is T's position with respect to B ?
(1) Third to the right (2) Second to the right (3) Third to the left
(4) immediate left (5) None of these

Q.12-16. Study the following sitting arrangement carefully and answer the given questions.
J, P, Q, R, S, T, U and V are sitting in a circle facing the centre in which four are married couples. The profession of the males within the group are lecturer, lawyer, doctor and scientist. Among the males, only R (the lawyer) and V (the scientist) are sitting together. Each man is seated besides his wife. U's the wife of the Lecturer is seated second to the right of V. T is seated between U and V. P is the wife of the Doctor. Q is not the doctor. S is a male.

Q.12. Which of the following is P's position with respect to S ?
(1) Second to the right (2) Second to the left (3) Immediate right
(4) Immediate left (5) Third to the left

Q.13. Which of the following is J's position with respect to T ?
(1) Third to the left (2) Fourth to the right (3) Third to the right
(4) Opposite of T (5) Second to the right

Q.14. Which of the following is **not true** regarding the couples ?
(1) P is the wife of S (2) T is the wife of Q
(3) R is the husband of J (4) J and S are seated adjacent to each other
(5) All are true

Q.15. The wives of which two husbands are immediate neighbours ?
(1) UT (2)SR (3) VQ (4) RV (5) None ot these

Q.16. Four of the following are. alike in a certain way based on their sitting position in the above arrangement and so form a group. Which is the one that **does not** belong to the group ?
(1) RSJ (2) TRV (3) U TV (4) SQP (5) UPQ

Q.17-21. Study the following sitting arrangement carefully and answer the given questions.
Eight people K R, N, P, M, T, O and L are sitting in a circle facing the centre. All eight belong to different professions - reporter, doctor, cricketer, teacher, accountant, shopkeeper, painter and supervisor. They are not necessarily seated in the mentioned order. M is sitting third to the left of O. The doctor is to the immediate right of M and M is not a reporter. K is sitting fourth to the right of P. Neither R nor P is an immediate neighbour of M. T is a teacher and is sitting third to the right of the doctor. The shopkeeper is sitting second to the left of the teacher. The painter is sitting second to the left of M. R the cricketer is sitting exactly between T and P. The accountant is sitting second to the right of the cricketer. N is sitting third to the left of T.

Q.17. Who amongst the following is a reporter ?
(1) O (2) L (3)N (4) R (5) None of these

Q.18. What is K's position with respect to R ?
(1) Third to the right (2) Second to the right (3) Third to the left
(4) Second to the left (5) Fourth to the right

Q.19. How many people are sitting between P and N when counted in an anti clockwise direction from N.
(1) One (2) Two (3) Three (4) Four (5) None of these

Q.20. Four of the following five pairs are alike in a certain way based on the above arrangement and so form a group. Which is the one **does not** belong to the group ?
(1) Teacher - Painter (2) Supervisor - Shopkeeper
(3) Cricketer - Reporter (4) Doctor - Accountant
(5) Shopkeeper - Doctor

Q.21. Which one of the following statements is **false** according to the above mentioned arrangement ?
(1) N is to the immediate right of the supervisor.
(2) The cricketer is third to the right of the shopkeeper.
(3) The doctor is sitting exactly between the supervisor and the accountant.
(4) P is neither a teacher nor a supervisor.
(5) There are only three people between R and N.

Q.22-26. Study the following seating arrangement carefully and answer the given questions.
Eight friends, P, Q, R, S, T, V, W and Y are sitting around a square table in such a way that four of them sit at four corners of the square while four sit in the middle of each of the four sides. The ones who sit at the four corners faces the centre while those who sit in the middle of the sides faces outside. P who faces the centre sits third to the right of V. T, who faces the centre, is not an immediate neighbour of V. Only one person sits between V and W. S sits second to right of Q. Q faces the centre. R is not an immediate neighbour of P.

Q.22. Who sits second to the left of Q ?
(1) V (2) P (3) T
(4)Y (5) Cannot be determined

Q.23. What is the position of T with respect to V ?
(1) Fourth to the left (2) Second to the left (3) Third to the left
(4) Third to the right (5) Second to the right

Q.24. Four of the following five are alike in a certain way based on the above arrangement and so form a group. Which is the one that **does not** belong to that group ?
(1) R (2) W (3) V (4) S (5)Y

Q.25 Which of the following will come in place of the question mark (?) based upon the given seating arrangement?
WP TR QW RS ?
(I) YT (2) VY (3) VQ (4) PY (5) QV

Q.26. Which of the following statement is true regarding R ?
(1) R is an immediate neighbour of V (2) R faces the centre
(3) R sits exactly between T and S (4) Q sits third to left of R
(5) None is true

Q.27-32. Study the following sitting arrangement carefully and answer the given questions.
Twelve people are sitting in two parallel rows containing six people each, in such way that there is an equal distance between adjacent persons. In row -1 P, Q, R, S, T and V are seated and all of them are facing south. In row - 2 A, B, C, D, E and F are seated and all of them are facing north. Therefore, in the given sitting arrangement each member seated in a row faces another member of the other row.
A sits on the third position to right of D. Neither A nor D sits at extreme ends. T faces D. V does not face towards A and V does not sit at any of the extreme ends. V is not an immediate neighbour of T. B sits at one of the extreme ends. Only two people sit between B and E. E does not face V. Two persons sit between R and Q. R is not an immediate neighbour of T. C does not face V. P is not an immediate neighbour of R.

Q.27. Who amongst the following sit at extreme ends of the rows ?
(1) B, E (2) S,T (3) P, R (4) B, F (5) TQ

Q.28. Who amongst the following faces A ?
(1) R (2) T (3) P (4) Q (5) S

Q.29. How many persons are seated between T and S ?
(I) One (2) Two (3) Three (4) Four (5) None

Q.30. P is related to V in the same way as C is related to F. Then which of the following is related to E in the same pattern ?
(1) B (2) D (3) C (4) A (5) None of these

Q.31. Which of the following is true regarding F ?
(1) F sits second right of C (2) F is not an immediate nighbour of A
(3)F sits third to left of D (4) F sits at one of the extreme ends of the line
(5) None of these

Q.32. Who amongst the following sits exactly between P and Q ?
(1) R (2) V (3) S
(4) T (5) Cannot be determined

Q.33-35. Study the following seating arrangement carefully and answer the given questions.
Seven friends Kamla, Manish, Rohit, Amit, Gaurav, Pritam and Priya are sitting in a Circle facing toward the centre. Kamla, Manish, Rohit, Amit, Pritam and Priya are sitting at equal distances from each other. Rohit is sitting three places right of Pritam, who is sitting one place right of Amit. Kamla sits at an angle of 90° degrees from Gaurav and at an angle of 120° degrees from Manish. Manish is sitting opposite to Priya and is sitting immediate left of Gaurav.

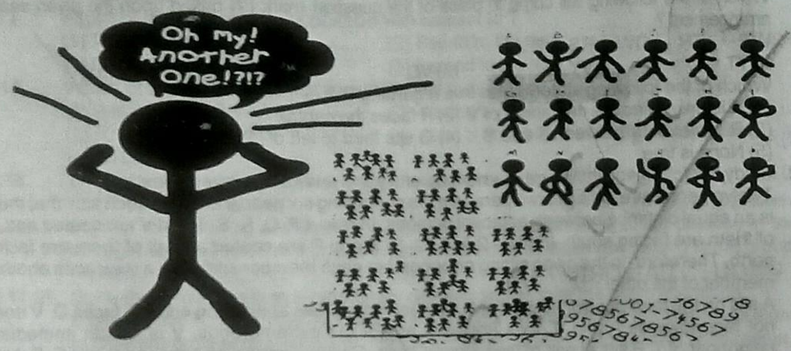
Q.33. Who is the only person sitting between Rohit and Manish ?
(1) Pritam (2) Amit (3) Gaurav (4) Kamla (5) None of these

Q.34. Gaurav is not sitting at equal distances from _____.
(1) Rohit and Pritam (2) Amit and Kamla (3) Manish and Pritam
(4) All of the above (5) None of these

Q.35. Gaurav is sitting _____of Priya..
(1) to the left (2) to the right (3) two places right
(4) Can't be determined (5) None of these

CHAPTER-7

PUZZLE



Puzzle are problems intentionally designed to stimulate the brain into devising solution. The candidate is required to analyze the given information, convert it into a suitable form and answer the question asked. The extent to which puzzles have become a part of daily life can be gauged from the popularity of crosswords, jigsaw puzzles and sudoku.

Types of Puzzle

Classification Puzzle | Comparison Puzzle | Sequential Puzzle | Selection Based | Family Based | Jumbled Form

1. CLASSIFICATION PUZZLE -

This type of puzzle consists of question in which certain items belonging to different groups, qualities are given along with clues.

EXAMPLE -

Q.1-3. Five friends P, Q, R, S and T travelled to five different cities as Chennai, Kolkata, Delhi, Bangalore and Hyderabad by different modes of transports as Bus, Train, Aeroplane, Car and Boat from Mumbai. The person who travelled to Delhi did not travel by Boat. R went to Bangalore by car and Q went to Kolkata by aeroplane. S travelled by boat where as T travelled by train. Mumbai is not connected by bus to Delhi and Chennai.

EXPLANATION-

Person	Place	Mode
P	Hyderabad	Bus
Q	Kolkata	Aeroplane
R	Bangalore	Car
S	Chennai	Boat
T	Delhi	Train

Q.1. Where does S go ?

(1) Hyderabad (2) Kolkata
(3) Bangalore (4) Delhi
(5) Chennai

Ans. (5)

Q.2. By which transport does S go to Chennai ?

(1) Aeroplane (2) Car
(3) Bus (4) Boat
(5) None of these

Ans. (4)

Q.3. Who among them goes to Delhi ?

(1) P (2) Q
(3) R (4) S
(5) T

Ans. (5)

2. COMPARISON PUZZLE-

In such type of questions information is given regarding the comparison amongst person or things.

EXAMPLE -

Q.1-2. A is older than M. G is older than M but younger than A. K is younger than R and M. M is older than R.

EXPLANATION -

A>G > M>R>K

Q.1. Who is the youngest ?

(1) A (2) M (3) R
(4) K (5) None of these

Ans. (4) K

Q.2. Who is the oldest ?

(1) A (2) G
(3) M (4) K
(5) None of these

Ans. (1) A

3. SEQUENTIAL ORDER-

In this type of question some information is given regarding the order of occurrence of certain events.

EXAMPLE-

Q.1-3. Six plays A, B, C, D, E and F are to be staged starting from Monday and ending on Sunday with one of the days being an off day, not necessarily in the same order. Each of the plays has different time duration : $\frac{1}{2}$ hour, 1 hour, $1\frac{1}{2}$ hours, 2 hours, $2\frac{1}{2}$ hours and 3 hours, again not necessarily in the same order.

Sunday is not an off day and a Play of $\frac{1}{2}$ hour duration is staged on that day. Play A is staged immediately before Play E. There are two plays staged between Play F which is for 3 hours and Play C which is for $1\frac{1}{2}$ hours. The off day is after the staging of Play E and there are two days between the off day and Play A. Play D which is for 2 hours is not staged on Monday. The play staged immediately before the off day is of 3 hours. Play A is for less than $2\frac{1}{2}$ hours.

EXPLANATION :

Q.1-3.

Plays	Hours	Days
C	$1\frac{1}{2}$ hours	Monday
A	1 hour	Tuesday
E	$2\frac{1}{2}$ hour	Wednesday
F	3 hour	Thursday
	Holiday	Friday
D	2 hour	Saturday
B	$\frac{1}{2}$ hour	Sunday

Q.1. What is the time duration of Play B ?

(1) $2\frac{1}{2}$ hours (2) 2 hours
(3) 1 hour (4) $\frac{1}{2}$ hour
(5) None of these

Ans.(4)

Q.2. Which day is the off day ?

(1) Tuesday (2) Monday
(3) Friday (4) Saturday
(5) Cannot be determined

Ans.(3)

Q.3. Which of the following combinations of Play - Day - Time Duration is **correct ?**

(1) E - Wednesday - 2 hours
(2) A - Tuesday -1 hour
(3) C - Thursday -$1\frac{1}{2}$ hours
(4) F - Tuesday - 3 hours
(5) None is correct

Ans.(2)

4. SELECTION BASED -

In such type of questions a few essential criteria for selection of group of items are given.

EXAMPLE-

Q.1-2. Eight students A, B, C, D, E, F, G and H are planning to enjoy car racing. There are only two cars and following are the conditions :

(i) One car can accommodate maximum five and minimum four students.
(ii) A will sit in the same car in which D is sitting but H is not in the same car.
(iii) B and C can't sit in the same car in which D is sitting.
(iv) F will sit in the car of four people only along with A and E but certainly not with G.