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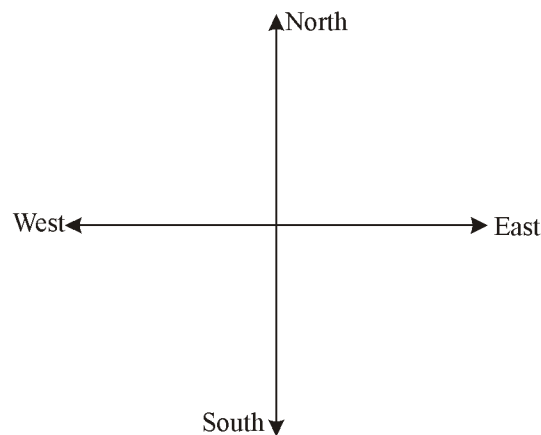
Unit I

Direction Test

Direction test consist of a sort of direction puzzle. A successive follow up of directions is formulated and the candidate is required to ascertain the find 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 directions and four sub directions are in the world and which can also be count as eight direction.

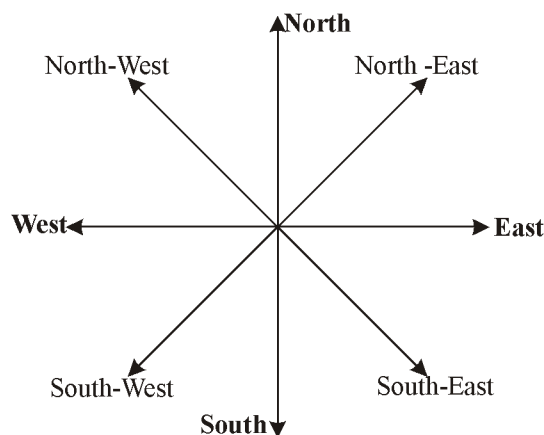
There are four main directions:

North, East, West, South



There are four subordinates direction:

North-East (NE), South-East (SE), South-West (SW) and North-West (NW) those are also called subdirection and these subdirections are between prime directions like NE is between north and East, SE is between south and East and So, on.....



Objective Questions**PRACTICE SHEET**

1. Sumit moves 21 km in North from his House. Then he take Right 17 km. Finally he take Right 10 km. What is respect direction of Sumit from his house?
(a) North (b) North-East
(c) South-West (d) West
(e) None of these
2. Ram went 10 km in North from his house. Then he take Left 4 km, again he take left 17 km. What is his direction from starting point ?
(a) South-West (b) North
(c) East (d) North-West
(e) None of these
3. Neeraj's school gate is in north of school. He move out side 200 m from the gate after seeing teacher he return back in just opposite side 300 m. Then he move left 400 m .What is starting point's direction from him ?
(a) North-West (b) North-East
(c) South-East (d) East
(e) None of these
4. Sunny moves 25 m in south & then he turn right 15 m. Again he turn left 25 m. What is his direction from origin point ?
(a) East-West (b) South-East
(c) South-West (d) North-South
(e) None of these
5. Rakhi facing towards north. She take right 25 m after this she take left 30 m. Again she move right 25 m, then right 55 m. Finally she take right 40 m. What is her direction from origin point ?
(a) South-West (b) South
(c) North-West (d) South-East
(e) None of these
6. A house faces towards south. A room is situated left after entering in house. A window is situated right after entering in room. What is my facing direction when I facing towards window ?
(a) East (b) West
(c) North (d) South
(e) None of these
7. A girl walks 30 m in north-west from his home & then 30 m in south-west. Finally she move 30 m south-east. In end she returns to her home. Now in which direction she is going?
(a) South-West (b) North-East
(c) North-West (d) South-East
(e) None of these
8. P, Q, R, S, T, U, V and W are sitting around a round table. They have equal distance in among them. They are arrange in clockwise rotation. If V's position is towards North then what is the position of S?
(a) East (b) South-East
(c) South (d) South-West
(e) None of these
9. Manisha turn right after leave school & then she turn left for some distance again she take a left, a right. Finally she move towards east. What is the starting direction of Manisha?
(a) North-West (b) East
(c) South (d) North-East
(e) None of these

Direction : 20 to 21

Read this information carefully and answer the following question :

Meghana walks 7 m towards west from point A & turn left for 2 m to point C. Then she walks 4 m right to point D. Then she turn right 2 m to point B. Finally she move 3 m right.

20. How far & in which direction is Meghana from point A?
- (a) 8 m East (b) 8 m West
(c) 10 m East (d) 10 m West
(e) Cannot be determine
21. If Meghana walks 2 m south from point A to point E. Then which of the following points are in straight line (including E)?
- (a) A, B (b) A, D
(c) B, C (d) C, D
(e) None of these

Direction : 22 to 23

Raju walks 5 m south from point P. Then he walks left 2 m to point Q. He walks left 3 m, right 1 m to point R. He moves 2 m left to point S. Finally he walks 2 m left to point T.

22. If Raju walks 2 m south from T and turn left. Then in which direction will his face be?
- (a) None (b) P
(c) Q (d) R
(e) S
23. How far and in which direction is the point T from point P?
- (a) 2 m East (b) 1 m West
(c) 1 m East (d) 2 m West
(e) Cannot be determine

24. One morning after sunrise, Nishant's shadow is in right of him when he walk. Then he turn left & then he turn just opposite side, which direction was Nishant facing?
- (a) West (b) East
(c) North-East (d) South-East
(e) None of these
25. After sunrise Rajsekhar standing on road side. He saw that Sheela is coming from opposite side. If Rajsekhar's shadow is in left of Sheela then which direction was Rajsekhar facing?
- (a) South (b) North
(c) North-East (d) South-West
(e) None of these
26. After sunrise Arun standing on road side. He saw his shadow behind him. Then which direction was Arun's right shows?
- (a) South (b) East
(c) West (d) North
(e) None of these
27. In evening, Apurva meet to Shikha. If Apurva's shadow falls exactly left of Shikha then which direction was Shikha facing?
- (a) East (b) West
(c) North (d) South
(e) None of these
28. A train is moving towards south to north. Air is blowing towards west to east. What is the resultant direction of smoke?
- (a) North-East (b) South-West
(c) South-East (d) North-West
(e) None of these
29. A train is moving towards west to east. Air is blowing towards south. What is the resultant direction of smoke?
- (a) North-West (b) South-West
(c) North (d) South

41. A child moves 90 m to east then 20 m towards right again 30 m right finally he moves 100 m towards north. Find the distance from starting point?
(a) 80 (b) 40
(c) 100 (d) 60
42. Length and breadth of a room are 8 and 6 m respectively. A cat complete a round of room and then move diagonally. Find the total distance moved by the cat ?
(a) 40 (b) 38
(c) 28 (d) 32
(e) None of these
43. A bus driver drive 2 km towards north from school. Then he turn left for 5 km again turn left for 8 km then left for 5 km finally turn left and walks for 1 km left. Find the distance from bus to school?
(a) 2 km North (b) 7 km East
(c) 6 km South (d) 6 km West
(e) 5 km North
44. Amit walks 5 m towards north-east for point B. Then he walks 8 m towards east for point C. from there he walks same distance from A to B towards south west for point D Finally he walks towards east for stating point A. Find the total distance travel by Amit and which of Geometerical image from by Amit ?
(a) 26 m Square (b) 26 m Prallalogram
(c) 26 m Tripesim (d) 16 m Tripesim
45. A and B walks in opposite side from a point. Each of them moves 3 km then A turn right for 4 km and B also turn right and moves 4 km. What distance is between A and B ?
(a) 8 km (b) 10 km
(c) 12 km (d) 14 km
46. Avantika walks 10 feet towards south-west. Then she walks towards north for 8 feet and turn right for 10 feet. What is the distance from the starting point?
(a) 20 feet (b) 18 feet
(c) 10 feet (d) 4 feet
47. Pankaj moves 10 m towards north. Then he turn right for 20 m, again right for 25 m then left for 15 m. Finally turn left for 15 m. Find the distance and respect direction from starting point ?
(a) 35 m East (b) 10 m West
(c) 25 m East (d) 5 m West
48. I am facing towards east then i turn left for 12 feet. Then turn right for 6 feet. From there turn towards south for 6 feet, finally towards west for 6 feet. Find the distance and respect direction from starting point ?
(a) 5 feet West (b) 6 feet East
(c) 6 feet South (d) 6 feet North
49. Gopal moves towards north direction from the center of a circle then he turn towards right and move $\frac{4}{8}$ part of circle's circumference. So he is in which direction from starting point?
(a) North-East (b) South
(c) West (d) South-West
50. One morning after sunrise Sonu and Monu were standing back to each other. Sonu's shadow felt exactly on his left towards which direction does Monu facing.
(a) South
(b) North
(c) West
(d) Cannot be determine
(e) None of these

51. In the morning Sachin covers 10 meter then he turn in his left and covers 4 meters. At this time his shadow is on his left then in which direction he started his Journey?
- (a) North-East (b) North
(c) South (d) East
(e) None of these
52. There is a ring road connections points A, B, C and D. The road is in a complete circular form but having several approach roads leading to the center. Exactly in the center of the ring road 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 some where 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?
- (a) 20 km (b) 15 km
(c) 80 km (d) None of these
53. Kailash starts walking straight towards east. After walking 75 meters, he turns to the left and walks 25 meters straight. Again he turns to the left, walk distance of 40 meters straight, again he turns to the left, walk distance of 40 meters straight, again he turns to the left and walks a distance of 25 meters. How far is he from the starting point?
- (a) 25 meters (b) 50 meters
(c) 115 meters (d) 140 meters
(e) None of these
54. Kishenkant walks 10 kilometers North. From there, he walks 6 kilometers towards South. Then, he walks 3 kilometers towards East. How far and in which directions is he with reference to his starting point?
- (a) 5 kilometers West
(b) 5 kilometers North-east
(c) 7 kilometers East
(d) 7 kilometers West
55. A man leaves for his office from his house. He walks towards East. After travelling distance of 20 m, he turns towards South and walks 10m. Then he walk 35 m towards the West and further 5m towards the North. He then turn towards East and walks 15m. What is the straight distance in meters between his initial and final positions?
- (a) 0 m (b) 5 m
(c) 10 m (d) Cannot be determined
(e) None of these
56. A girl leaves from her home. She first walks 30 meters in North-west directions and then 30 meters in South-west directions. Next, she walks 30 meters in South-east direction. Finally, she turns towards her house. In which direction is she moving?
- (a) North-east (b) North-west
(c) South-east (d) South-west
(e) None of these
57. Sanjeev walks 10 meters towards the South. Turning to the left, he walks 20 meters and then moves to his right. After moving a distance of 20 meters, he turns to the right and walks 20 meters. Finally, he turns to the right and moves a distance of 10 meters. How far and in which direction is he from the starting point?
- (a) 10 meters North (b) 20 meters South
(c) 20 meters North (d) 10 meters South
(e) None of these
58. Kashish goes 30 meters North then turns right and walks 40 meters, then again turns right and walks 20 meters, then again turns right and walks 40 meters is he from his original position?
- (a) 0 (b) 10
(c) 20 (d) 40
(e) None of these

ANSWERS SHEET

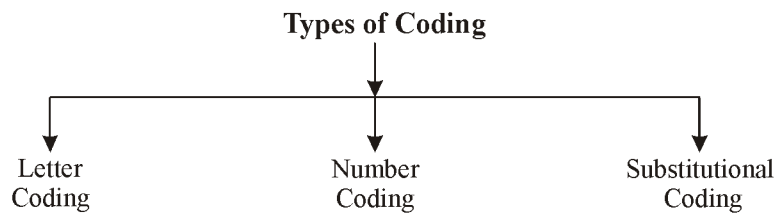
- | | | | |
|---------------------|---------------------|---------------------|---------------------|
| 1. <i>Ans. (b)</i> | 21. <i>Ans. (e)</i> | 41. <i>Ans. (c)</i> | 61. <i>Ans. (c)</i> |
| 2. <i>Ans. (a)</i> | 22. <i>Ans. (d)</i> | 42. <i>Ans. (b)</i> | 62. <i>Ans. (c)</i> |
| 3. <i>Ans. (a)</i> | 23. <i>Ans. (c)</i> | 43. <i>Ans. (e)</i> | 63. <i>Ans. (a)</i> |
| 4. <i>Ans. (c)</i> | 24. <i>Ans. (a)</i> | 44. <i>Ans. (b)</i> | 64. <i>Ans. (a)</i> |
| 5. <i>Ans. (d)</i> | 25. <i>Ans. (a)</i> | 45. <i>Ans. (b)</i> | 65. <i>Ans. (e)</i> |
| 6. <i>Ans. (c)</i> | 26. <i>Ans. (a)</i> | 46. <i>Ans. (d)</i> | 66. <i>Ans. (b)</i> |
| 7. <i>Ans. (b)</i> | 27. <i>Ans. (d)</i> | 47. <i>Ans. (a)</i> | 67. <i>Ans. (c)</i> |
| 8. <i>Ans. (d)</i> | 28. <i>Ans. (c)</i> | 48. <i>Ans. (d)</i> | 68. <i>Ans. (a)</i> |
| 9. <i>Ans. (b)</i> | 29. <i>Ans. (b)</i> | 49. <i>Ans. (b)</i> | 69. <i>Ans. (d)</i> |
| 10. <i>Ans. (a)</i> | 30. <i>Ans. (c)</i> | 50. <i>Ans. (a)</i> | 70. <i>Ans. (a)</i> |
| 11. <i>Ans. (a)</i> | 31. <i>Ans. (d)</i> | 51. <i>Ans. (d)</i> | 71. <i>Ans. (c)</i> |
| 12. <i>Ans. (d)</i> | 32. <i>Ans. (d)</i> | 52. <i>Ans. (a)</i> | 72. <i>Ans. (d)</i> |
| 13. <i>Ans. (c)</i> | 33. <i>Ans. (c)</i> | 53. <i>Ans. (e)</i> | 73. <i>Ans. (b)</i> |
| 14. <i>Ans. (d)</i> | 34. <i>Ans. (d)</i> | 54. <i>Ans. (b)</i> | |
| 15. <i>Ans. (a)</i> | 35. <i>Ans. (a)</i> | 55. <i>Ans. (b)</i> | |
| 16. <i>Ans. (a)</i> | 36. <i>Ans. (a)</i> | 56. <i>Ans. (a)</i> | |
| 17. <i>Ans. (d)</i> | 37. <i>Ans. (c)</i> | 57. <i>Ans. (b)</i> | |
| 18. <i>Ans. (a)</i> | 38. <i>Ans. (c)</i> | 58. <i>Ans. (b)</i> | |
| 19. <i>Ans. (c)</i> | 39. <i>Ans. (b)</i> | 59. <i>Ans. (d)</i> | |
| 20. <i>Ans. (b)</i> | 40. <i>Ans. (c)</i> | 60. <i>Ans. (a)</i> | |

Unit II

Coding and Decoding

A code means arrangement of symbols.

Therefore coding is a method of transforming any instruction from the given form to the required form.

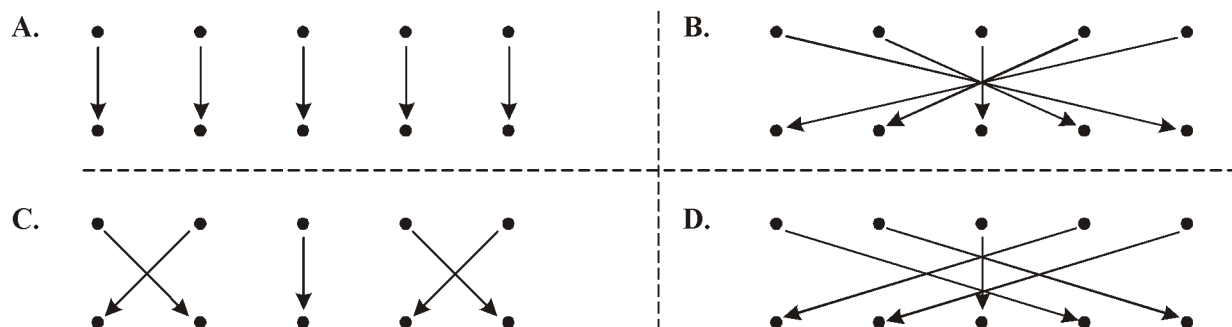
**1. LETTER CODING**

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

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

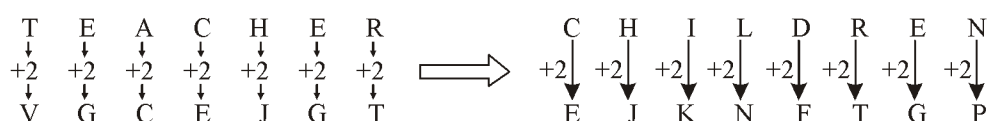
- (i) Take the given pair
- (ii) Write the position of all letters in given pair
- (iii) Try to find the relation between the letters of both part of pair.
- (iv) Relation may be related to forward or backward order.
- (v) Implement the same relation on the given word for required answer.

Possible relations on the basis of position of alphabets in the given words may be as follows :



Example : In a certain language, TEACHER is written as VGCEJGT then how is CHILDREN, written in same language?

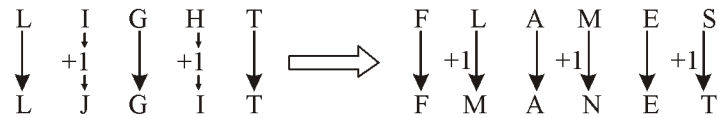
Solution: CHILDREN → EJKNFTGP



Example : If LIGHT is coded as LJGIT. How is FLAMES coded in that code?

Solution:

FLAMES → FMANET



2. | NUMBER CODING

In these question, 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.

Example: In a certain code SISTER is coded as 535201, UNCLE is coded as 78960. How is NEER is coded is that code?

Solution:

NEER → 8001

S I S T E R → 5 3 5 2 0 1

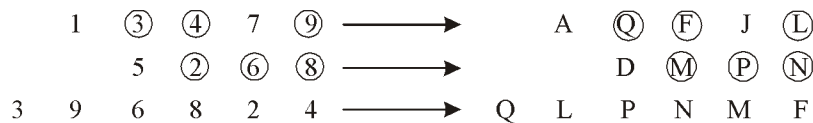
U N C L E → 7 8 9 6 0

N E E R → 8 0 0 1

Example: In a certain code, a number 13479 is written as AQFJL and 5268 is written as DMPN. How is 396824 written is that code?

Solution:

396824 → QLPNMF



3. | SUBSTITUTIONAL CODING

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

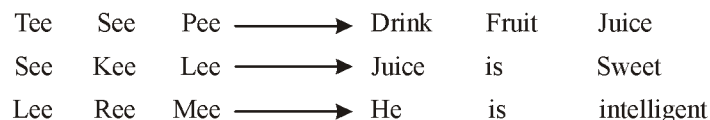
Example: If 'EYE' is called 'HAND', 'HAND' is called 'MOUTH', 'MOUTH' is called 'EAR', 'EAR' is called 'NOSE', and 'NOSE' is called 'TONGUE'. With which of the following would a person hear?

Solution: NOSE

Example: 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 is that language means 'sweet'?

Solution: So,

Sweet → Kee



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

Objective Questions

PRACTICE SHEET

1. In certain code TUBUIPO is written as VSDSLNQ. How is CSJOH written in that code?
(a) EQLMJ (b) DQLMJ
(c) EQMLJ (d) QELMJ
2. If DIAMOND is coded as VQYMKLV, then WEALTH is coded as :
(a) CUYNFR (b) HTLAEW
(c) YCONWJ (d) XFBMUI
3. If BEAUTY is coded as YVZFGB, then CHARM is coded as:
(a) XSINZ (b) XSZIN
(c) ZINSX (d) BGZQL
4. If in a certain code, 'TEARS' is written as 'UGDVX', then 'SMILE' would be written as :
(a) TOLPJ (b) TOLNG
(c) TOJPJ (d) TOKNH
5. In certain code, RITA is written as SJUB. How is CUBA written in that code?
(a) DAVB (b) DVCB
(c) CDQB (d) BCDQ
6. In a certain code language 35796 is written as 44887. How is 46823 written in that code?
(a) 57914 (b) 55914
(c) 55934 (d) 55714
7. If PALAM could be given the code number 43, what code number can be given to SANTACRUZ?
(a) 75 (b) 85
(c) 120 (d) 123
8. If Z = 52 and ACT = 48, then BAT will be equal to
(a) 39 (b) 41
(c) 44 (d) 46
9. If REASON is coded as 5 and BELIEVED as 7, what is the code number for GOVERNMENT?
(a) 6 (b) 8
(c) 9 (d) 10
10. If GO = 32, SHE = 49, then SOME will be equal to
(a) 56 (b) 58
(c) 62 (d) 64
11. In a certain code, MONKEY is written as XDJMNL. How is TIGER is written in that code?
(a) QDFHS (b) DSOESPI
(c) SHFDQ (d) UJHFS
12. If VICTORY is coded as YLFWRUB, SUCCESS will be written as :
(a) VXEEIVV (b) VXFFHVV
(c) VYEEHV V (d) VYEEIVV
13. If DELHI is coded as CCIDD, how is BOMBAY written in that code?
(a) AJMTVT (b) AMJXVS
(c) MJXVSU (d) WXYZAX
14. If CIGARETTE is coded as GICERAETT, then DIRECTION will be coded as :
(a) RIDTCENOI (b) NORTECDIL
(c) NOIETCRID (d) IRDCTIONE
15. In certain code, PAPER is written as SCTGW. How is MOTHER written in that code?
(a) ORVLGW (b) PQVJGT
(c) PQXJIT (d) PQXKJV

16. In a certain language, '734' means 'mangoes are good', '657' means 'eat good food' and '934' means 'mangoes are ripe' which digit means 'ripe' in that language?
(a) 9 (b) 4
(c) 5 (d) 7
17. In a certain code '247' means 'spread red carpet', '256' means 'dust one carpet' and '264' means 'one red carpet'. Which of the following represents 'dust' in that code?
(a) 2 (b) 3
(c) 5 (d) 6
18. 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
19. In a certain code, '467' means 'Leaves are green' '485' means 'green is good' and '639' means 'they are playing'. Which digit stands for 'leaves' in that code?
(a) 4 (b) 6
(c) 7 (d) 3
20. In a certain code language '851' means 'good sweet fruit' 783 means 'good red rose' and 341 means 'rose and fruit'. Which of the following digits stands for 'sweet' in that language?
(a) 8 (b) 5
(c) 1 (d) 3
21. If EJOTY is coded as 510152025. How would you encode SUNIL in that coding system.
(a) 181214913 (b) 192114912
(c) 192113912 (d) 191214912
22. If PAINT is coded as 74128 and EXCEL is coded as 93596, then how would you encode ACCEPT?
(a) 455978 (b) 547978
(c) 554978 (d) 735961
23. If D = 4 and COVER = 63 then BASIS = ?
(a) 49 (b) 50
(c) 54 (d) 55
24. If DELHI is coded as 73541 and CALCUTTA as 82589662, how can CALICUT be coded?
(a) 5279431 (b) 5978213
(c) 8251896 (d) 8543691
25. If ROSE is coded as 6821, CHAIR is coded as 73456 and PREACH is coded as 961473, what will be the code for SEARCH?
(a) 246173 (b) 214673
(c) 214763 (d) 216473
26. The word 'BODY' is represented by APCZ. What will represent 'DELHI'.
(a) CEKHI (b) EFMIJ
(c) CFKIH (d) CFKGH
27. In a certain code, ROME is coded as SUNI and BOMBAY as CUNCEZ. Then ASIA is coded as :
(a) BIJB (b) ETOE
(c) ESOE (d) ATIA
28. In a certain code, MEN is written as MIN and WOMEN is written as WUMIN. How will CHILD be written in the same code?
(a) CHOLD (b) CHELD
(c) CHILD (d) CHALD
29. If in a certain code, APRIL is written as BQSJM, what is the word whose code is HSFFO?
(a) INDIA (b) MARCH
(c) GREEN (d) TREES

30. In a certain code, SUGAR is written as ARGSU. What is the word is TEAST when decoded?
 (a) FEAST (b) STATE
 (c) STEAT (d) ATEST
31. In a certain code language 479 means 'fruit is sweet' 248 means 'very sweet voice' and 637 means 'eat fruit daily'. Which digit stands for 'is' in that code?
 (a) 7 (b) 9
 (c) 4 (d) Can't determined
32. In a certain code 256 means 'red colour chalk' 589 means 'green colour flower' and 245 means 'white colour chalk'. Which digit in the code means 'white'?
 (a) 2 (b) 4
 (c) 5 (d) Cannot be determined
33. In a certain code 253 means 'books are old' 546 means 'man is old' and 378 means 'buy good books'. What stands for 'are' in that code?
 (a) 2 (b) 4
 (c) 5 (d) 6
34. In the correctly worked out multiplication problem at the below each letter represents a different digit. What is the value of T?
- $$\begin{array}{r} PQ \\ \times QP \\ \hline +PQ \\ TQR \\ \hline T6Q \end{array}$$
- (a) 5 (b) 4
 (c) 7 (d) 2
35. What is the value of A if each letter represents a different digit?
- $$\begin{array}{r} A3B \\ \times B \\ \hline 217B \end{array}$$
- (a) 3 (b) 4
 (c) 5 (d) 7
36. If TAP is coded as SZO, then how is FREEZE coded?
 (a) EQDFYG (b) ESDFYF
 (c) GOFDYF (d) EQDDYD
37. In a certain code, SIKKIM, is written as THLJLL. How is TRAINING written in that code?
 (a) SQBHOHOH (b) UQBHOHOF
 (c) UQBJOHHO (d) UQBJOHOH
38. In a certain code, MENTION is written as LNEITNO. How is PATTERN written in that code?
 (a) APTTREM (b) PTAETNR
 (c) OTAETNR (d) OTAETRN
39. In a certain code, FORGE is written as FPTJI. How is CULPRIT written in that code?
 (a) CSJNPGR (b) CVMQSTU
 (c) CVNSVNZ (d) CXOSULW
40. In a certain code, TRIPPLE is written as SQHOOKD. How is DISPOSE written in that code?
 (a) CHRONRD (b) DSOESPI
 (c) ESJTPTF (d) ESOPSID
41. If the letters in PRABA are coded as 27595 and THIKLAK are coded as 368451, how can BHARATHI be coded?
 (a) 37536689 (b) 57686535
 (c) 96575368 (d) 96855368
42. If ENGLAND is written as 1234526 and FRANCE is written as 785291, how is GREECE coded?
 (a) 381171 (b) 381191
 (c) 832252 (d) 835545
43. If SHARP is coded as 58034 and PUSH as 4658 than RUSH is coded as :
 (a) 3568 (b) 3658
 (c) 3685 (d) 3583

ANSWERS AND SOLUTIONS

1. *Ans.(a)*

$$\begin{array}{cccccc}
 T & U & B & U & J & P & O \\
 +2\downarrow & -2\downarrow & +2\downarrow & -2\downarrow & +2\downarrow & -2\downarrow & +2\downarrow \\
 V & S & D & S & L & N & Q
 \end{array}$$

$$\begin{array}{ccccc}
 C & S & J & O & H \\
 +2\downarrow & -2\downarrow & +2\downarrow & -2\downarrow & +2\downarrow \\
 E & Q & L & M & J
 \end{array}$$

2. *Ans.(a)*

$A \leftrightarrow Y, B \leftrightarrow X, C \leftrightarrow W, D \leftrightarrow V, E \leftrightarrow U, F \leftrightarrow T,$
 $G \leftrightarrow S, H \leftrightarrow R, I \leftrightarrow Q, J \leftrightarrow P, K \leftrightarrow O, L \leftrightarrow N,$
 $M \leftrightarrow M,$

3. *Ans.(b)*

$A \rightarrow Z, B \rightarrow Y, C \rightarrow X, D \rightarrow W, \dots$ and so on,
 $\therefore \text{CHARM} \rightarrow \text{XSZIN}$

4. *Ans.(a)*

$$\begin{array}{ccccc}
 T & E & A & R & S \\
 +1\downarrow & +2\downarrow & +3\downarrow & +4\downarrow & +5\downarrow \\
 U & G & D & V & X
 \end{array}
 \quad
 \begin{array}{ccccc}
 S & M & I & L & E \\
 +1\downarrow & +2\downarrow & +3\downarrow & +4\downarrow & +5\downarrow \\
 T & O & L & P & J
 \end{array}$$

5. *Ans.(b)*

$$\begin{array}{cccc}
 R & I & T & A \\
 +1\downarrow & +1\downarrow & +1\downarrow & +1\downarrow \\
 S & J & U & B
 \end{array}
 \quad
 \begin{array}{cccc}
 C & U & B & A \\
 \downarrow & \downarrow & \downarrow & \downarrow \\
 D & V & C & B
 \end{array}$$

6. *Ans.(b)*

The letters are coded as follows :

$$\begin{array}{cccccc}
 3 & 5 & 7 & 9 & 6 & 4 & 6 & 8 & 2 & 3 \\
 +1\downarrow & -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow & -1\downarrow & +1\downarrow \\
 4 & 4 & 8 & 8 & 7 & 5 & 5 & 9 & 1 & 4
 \end{array}$$

7. *Ans.(d)*

The letters are coded as follows :

Hence, $A = 1, L = 12, M = 13, P = 16$

$A = 1, B = 2, C = 3, \dots, Z = 26$

$\text{PALAM} = 16 + 1 + 12 + 1 + 13 = 43$

So, $\text{SANTACRUZ} = 19 + 1 + 14 + 20$

$+ 1 + 3 + 18 + 21 + 26 = 123$

8. *Ans.(d)*

The letters are coded as follows :

$A = 2, C = 6, T = 40, Z = 52$

$A = 2, B = 4, C = 6 \dots Z = 52$

$\text{ACT} = 2 + 6 + 40 = 48$

$\text{BAT} = 4 + 2 + 40 = 46$

9. *Ans.(c)*

Given $\text{REASON} = 5$ and $\text{BELIEVED} = 7$

Hence, Required code = No. of letters in the word - 1

$\text{GOVERNMENT} = 10 - 1 = 9$

10. *Ans.(a)*

Given, The letters are coded as follows :

$A = 26, B = 25, C = 24 \dots Z = 1$

$\text{GO} = 20 + 12 = 32; \text{SHE} = 8 + 19 + 22 = 49$

$\text{SOME} = 8 + 12 + 14 + 22 = 56$

11. *Ans.(a)*

$$\text{MONKEY} \xrightarrow{\text{Reversing the word}} \begin{array}{cccccc} Y & E & K & N & O & M \\ -1\downarrow & -1\downarrow & -1\downarrow & -1\downarrow & -1\downarrow & -1\downarrow \\ X & D & J & M & N & L \end{array}$$

$$\text{TIGER} \xrightarrow{\text{Reversing the word}} \begin{array}{ccccc} R & E & G & I & T \\ -1\downarrow & -1\downarrow & -1\downarrow & -1\downarrow & -1\downarrow \\ Q & D & F & H & S \end{array}$$

12. *Ans.(b)*

$$\begin{array}{cccccc}
 V & I & C & T & O & R & Y \\
 +3\downarrow & +3\downarrow & +3\downarrow & +3\downarrow & +3\downarrow & +3\downarrow & +3\downarrow \\
 Y & L & F & W & R & U & B
 \end{array}$$

$$\begin{array}{cccccc}
 S & U & C & C & E & S & S \\
 +3\downarrow & +3\downarrow & +3\downarrow & +3\downarrow & +3\downarrow & +3\downarrow & +3\downarrow \\
 V & X & F & F & H & V & V
 \end{array}$$

13. *Ans.(b)*

$$\begin{array}{ccccc}
 D & E & L & H & I \\
 -1\downarrow & -2\downarrow & -3\downarrow & -4\downarrow & -5\downarrow \\
 C & C & I & D & D
 \end{array}$$

$$\begin{array}{ccccc}
 B & O & M & B & A & Y \\
 -1\downarrow & -2\downarrow & -3\downarrow & -4\downarrow & -5\downarrow & -6\downarrow \\
 A & M & J & X & V & S
 \end{array}$$

14. *Ans.(a)*

CTG	ARE	TTE	DIR	ECT	ION
X	X	X	X	X	X
GIC	ERA	ETT	RID	TCE	NOI

15. *Ans.(c)*

P	A	P	E	R	M	O	T	H	E	R
S	C	T	G	W	+3↓	+2↓	+4↓	+2↓	+5↓	+2↓
+3	+2	+4	+2	+5	P	Q	X	J	J	T

16. *Ans.(a)*

Give, Mangoes are good = '734'

'Eat good food' = '657'

'Mangoes are ripe' = '934'

From equations, good is coded as '7', From equations, 'Mangoes' and 'are' are coded as '4' and '3' or '3' and '4'.

From equation 'ripe' is coded as '9'

17. *Ans.(c)*

Given, 'Spread red Carpet' = '247'

'dust one carpet' = '256'

'one red carpet' = '264'

From equations, 'one' and 'carpet' are coded as '2' and '6' or '6' and '2'.

From equation 'dust' is coded as '5'.

18. *Ans.(c)* Given, 'You are good' = '256'

'We are bad' = '637'

'Good and Bad' = '358'

So, and is coded as 8.

19. *Ans.(c)*

Given, 'Leaves are green' = '467'

'Green is good' = '485'

and 'They are playing' = '639'

From equations 'are' is coded as '6'.

From equations, 'green' is coded as '4'.

From equation, 'Leaves is coded as '7'.

20. *Ans.(b)*

Given 'good sweet fruit' = '851'

'good red rose' = '783'

'Rose and fruit' = '341'

From equations 'good' is coded as '8'.

From equation 'fruit is coded as '1'.

From equation, 'Sweet' is coded as '5'.

21. *Ans.(b)*22. *Ans.(a)*

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

ACCEPT = 455978

23. *Ans.(b)*

D = 4

COVER = 63

 $\Rightarrow 3 + 15 + 22 + 5 + 18 = 63$

C = 3, O = 15, V = 22, E = 5 and R = 18

BASIS = 2 + 1 + 19 + 9 + 19 = 50

24. *Ans.(c)*

The alphabets are coded as follows :

D E L H I C A U T

7 3 5 4 18 2 9 6

CALICUT = 8251896

25. *Ans.(b)*

The alphabets are coded as follows :

R O S E C H A I P

6 8 21 7 3 4 5 9

SEARCH = 214673

26. *Ans.(c)*

B	O	D	Y	D	E	L	H	I
-1↓	+1↓	-1↓	+1↓	-1↓	+1↓	-1↓	+1↓	-1↓
A	P	C	Z	C	F	K	I	H

27. *Ans.(b)*

Vowel is coded by the next vowel and consonant is coded by the next consonant.

 $\therefore$ ASIA $\rightarrow$ ETOE

Unit III

Blood Relation

In this segment, candidates have to deal with the question based on Blood-Relation.

- Question based on blood-relation can be of many types but in all types of question candidates have to related 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 partner side (Husband or Wife) is called 'in-law'.
- The relationship can be shown by drawing a 'Family Tree'. The important aspect is that the diagram should always clearly depict the 'Generation' and reflect the 'Gender'. Hence; Horizontal lines are drawn to indicate marriage; vertical lines indicate children, broken lines for sibling relationship and for the gender we use 'm' for 'male' and 'f' for 'female' and 'x' for unknown.

Some generally used notations or symbols:

- (i) Put (+ive) positive sign before some one who is a male and (-ive) negative sign before someone who is a female.
- (ii) Double Horizontal line $\Leftrightarrow$ or Cross * = Marriage relationship or spouse.
- (iii) Dash Line----- = sibling relationship or same generation.
- (iv) Vertical or Diagonal lines (| or / or \) = parents & children or different generation.
- (v) m = Male, M = Mother
- (vi) f = Female, F = Father
- (vii) Whenever something is not known put a ? mark before it.

Blood relation can be asked in three types as follows:

- (a) Identification model.
- (b) Introduction model.
- (c) Symbolic relation model.

Relation which are required:-

- (1) Mother's or Father's Father $\rightarrow$ Grandfather
- (2) Mother's or Father's Mother $\rightarrow$ Grandmother
- (3) Mother's or Father's Brother $\rightarrow$ Uncle
- (4) Brother's or Father's Sister $\rightarrow$ Aunt
- (5) Son's Wife $\rightarrow$ Daughter-in-law

Objective Questions

PRACTICE SHEET

- Rahul told Anand, 'Yesterday I defeated the only brother of the grandmother's daughter. Whom did Rahul defeat?'
(a) Son (b) Father
(c) Brother (d) Father-in-law
(e) Cousin
- A man said to the lady, "Your mother's husband's sister is my aunt", How is the lady related to that man?
(a) Daughter (b) Grand Daughter
(c) Mother (d) Sister
(e) Aunt
- A girl introduced a boy as the son of the daughter of the father of her uncle. The boy is girl's
(a) Brother (b) Son
(c) Uncle (d) Son-in-law
(e) Nephew
- Deepak said to Nitin, "That boy playing with the football is the younger of two brothers of the daughter of my father's wife." How is the boy playing for related to Deepak?
(a) Son (b) Brother
(c) Cousin (d) Nephew
(e) Brother-in-law
- Pointing to a man on the stage, Rita said, "He is the brother of the daughter of the wife of my husband." How is the man on the stage related of Rita?
(a) Son (b) Husband
(c) Cousin (d) Nephew
(e) Brother-in-law
- Showing the man receiving the prize, Saroj said, "He is the brother of my uncle's daughter." Who is the man to Saroj?
(a) Son (b) Brother-in-law
(c) Nephew (d) Uncle
(e) Cousin
- Pointing to a man, a woman said, "His mother is the only daughter of my mother." How is the woman related to the man?
(a) Mother (b) Daughter
(c) Sister (d) Grandmother
(e) None of these

Directions : 8 & 9

Read the following information carefully and answer the questions given below it.

$A + B$ means A is the brother of B

$A - B$ means A is the sister of B

$A \times B$ means A is the father of B

$A \div B$ means A is the mother of B

- If $P \div Q - R \times S$, then P is S's
(a) Grandmother (b) Maternal grandmother
(c) Maternal aunt (d) Sister
(e) None of these
- Which of the following shows that T is the grandmother of W?
(a) $T \times U + V \div W$ (b) $T \times U - V \div W$
(c) $T + U \div V \times W$ (d) $T \div U \times V - W$
(e) None of these

Directions: 10 to 13

Read the following information carefully and answer the questions given below it.

$P \div Q$ means P is the father of Q

$P + Q$ means P is the mother of Q

$P - Q$ means P is the brother of Q

$P \times Q$ means P is the sister of Q

10. If $A + B \div C - D$, then A is D's
- (a) Sister (b) Grandfather
(c) Grandmother (d) Father
(e) None of these
11. If $A \times B \div C - D + E$, then A is E's
- (a) Great-Aunt (b) Brother
(c) Maternal Uncle (d) Mother
(e) None of these
12. Which of the following shows that A is aunt of E?
- (a) $A - B + C \div D \times E$ (b) $A \times B \div C \times D - E$
(c) $A \div B \times C + D - E$ (d) $A + B - C \times D \div E$
(e) None of these
13. $P - Q$ means Q is son of P and $P \times Q$ means P is brother of Q, $P \div Q$ means Q is sister of P, and $P + Q$ means P is mother of Q.
- Which of the following is definitely TRUE about $N \times K - M \div L$?
- (a) K is father of L and M
(b) L is the daughter of K and is the niece of her uncle N.
(c) K is the father of M and L—his son and daughter respectively
(d) M is the uncle of K's brother N.
(e) None of these
14. Pointing to a photograph, a person tells his friend, "She is the grand daughter of the elder brother of my father." How is the girl in the photograph related to his man?
- (a) Niece (b) Sister
(c) Aunt (d) Sister-in-law
(e) Maternal aunt
15. Pointing to a photograph, Vipul said, "She is the daughter of my grandfather's only son." How is Vipul related to the girl in the photograph?
- (a) Father
(b) Brother
(c) Cousin
(d) Data inadequate
(e) None of these
16. A woman introduces a man as the son of the brother of her mother. How is the man related to the woman?
- (a) Nephew (b) Son
(c) Cousin (d) Uncle
(e) Grandson
17. Looking at a portrait of a man, Harsh said, "His mother is the wife of my father's only son. Brothers and sisters I have none." At whose portrait was Harsh looking?
- (a) His son (b) His cousin
(c) His uncle (d) His nephew
(e) None of these
18. A man said to a lady, "Your mother's husband's sister is my aunt." How is the lady related to the man?
- (a) Daughter (b) Grand daughter
(c) Mother (d) Sister
(e) Aunt

Directions : 19 to 21

Read the following information to answer the questions.

- (i) $P \# Q$ means Q is father of P
 (ii) $P * Q$ means Q is mother of P
 (iii) $P \leq Q$ means Q is brother of P
 (iv) $P \$ Q$ means Q is sister of P
19. Which of the following means X is grandmother of Y?
 (a) $Z \$ X * K \# L \leq Y$ (b) $Y \leq L \# K * X \leq Z$
 (c) $X * K \# L \leq Y$ (d) Can't be determined
 (e) None of these
20. Which of the following means A is nephew of D?
 (a) $D \leq C \# B \leq A$ (b) $A \leq B \# D \leq C$
 (c) $C \leq D \# B \leq A$ (d) Can't be determined
 (e) None of these
21. Which of the following means C is aunt of F?
 (a) $E \leq F \# D \$ C * B$ (b) $F \leq E \# D \$ C * B$
 (c) $B * C \$ D \# E \leq F$ (d) Can't be determined
 (e) None of these

Directions : 22 & 23

Read the following information to answer these questions.

- (i) $A \Delta B$ means A is mother of B.
 (ii) $A \odot B$ means A is sister of B.
 (iii) $A * B$ means A is father of B
 (iv) $A \beta B$ means A is brother of B.
22. Which of the following means X is uncle of Y?
 (a) $X \beta Z \odot K \Delta J \odot Y$
 (b) $X \odot N \Delta A \beta Y$
 (c) $Y \odot N * L \odot X$
 (d) $X \odot C \Delta K * Y$
 (e) None of these

23. Which of the following means R is grandfather of Q?

- (a) $Q \Delta F * E * R$ (b) $R * S \odot T \Delta Q$
 (c) $R \beta L \beta M * Q$ (d) $R * G * H \Delta Q$
 (e) None of these

Direction : 24 & 25

Six members of a family are A, B, C, D, E, F are walking with each other. B is son of C who is not mother of B. A and C are married couple. C is brother of E. D is daughter of A and F is brother B.

24. How D is related to E?

- (a) Uncle (b) Nephew
 (c) Niece (d) Father
 (e) None of these

25. Who is wife of E?

- (a) B (b) A
 (c) D (d) C
 (e) None of these

26. $P + Q$ means P is the brother of Q, $P - Q$ means P is the mother of Q and $P \times Q$ means P is the sister of Q. Which of the following means M is the maternal uncle of R?

- (a) $M + K + R$ (b) $M - R + K$
 (c) $M + K - R$ (d) $M + K \times R$
 (e) None of these

Directions : 27 & 28

Read the following informations carefully and answer the questions given below it.

$A - B$ means A is the sister of B

$A \times B$ means A is the husband of B

$A \div B$ means B is the brother of A

$A + B$ means B is the mother of A

27. If $P + Q - R \div S \times T$, then R is T's

- (a) Brother-in-law
 (b) Sister-in-law
 (c) Either Brother-in-law or Sister-in-law
 (d) Can't be determined
 (e) None of these

57. How many members of the group are male?
(a) 2 (b) 3
(c) 4 (d) None of the above

Direction : 58 to 60

Read the following passage and answer the 3 (three) items that follow :

A, B, C, D and E are members of the same family. There are two fathers, two sons, two wives, three males and two females. The teacher was the wife of a lawyer who was the son of a doctor. E is not a male, neither also a wife of a professional. C is the youngest person in the family and D is the eldest. B is a male

58. How is D related to E ?
(a) Husband (b) Son
(c) Father (d) Wife
59. Who are the females in the group ?
(a) C and E (b) C and D
(c) E and A (d) D and E
60. Whose wife is the teacher ?
(a) C (b) D
(c) A (d) B

Directions : 61 to 63

Read the passage given below and answer the items that follow.

A, B, C, D, E, F are members of a family. They are engineer, stenographer, doctor, draughtsman, lawyer and judge (not in order). A, the engineer is married to the lady stenographer. The judge is married to the lawyer. F, the draughtsman is the son of B and brother of E. C, the lawyer is the daughter-in-law of D. E is the unmarried doctor. D is the grandmother of F. There are two married couples in the family.

61. What is the profession of B?
(a) Judge
(b) Lawyer
(c) Draughtsman
(d) Cannot be determined
62. Which of the following is/are a couple/couples?
(a) AD only
(b) BC only
(c) Both AD and BC
(d) Both AC and BD
63. What is the profession of D?
(a) Judge
(b) Stenographer
(c) Doctor
(d) Cannot be determined

○○○

ANSWERS SHEET

- | | | | |
|---------------------|---------------------|---------------------|---------------------|
| 1. <i>Ans. (b)</i> | 17. <i>Ans. (a)</i> | 33. <i>Ans. (a)</i> | 49. <i>Ans. (b)</i> |
| 2. <i>Ans. (d)</i> | 18. <i>Ans. (d)</i> | 34. <i>Ans. (a)</i> | 50. <i>Ans. (e)</i> |
| 3. <i>Ans. (a)</i> | 19. <i>Ans. (b)</i> | 35. <i>Ans. (c)</i> | 51. <i>Ans. (b)</i> |
| 4. <i>Ans. (b)</i> | 20. <i>Ans. (e)</i> | 36. <i>Ans. (a)</i> | 52. <i>Ans. (a)</i> |
| 5. <i>Ans. (a)</i> | 21. <i>Ans. (b)</i> | 37. <i>Ans. (e)</i> | 53. <i>Ans. (c)</i> |
| 6. <i>Ans. (e)</i> | 22. <i>Ans. (a)</i> | 38. <i>Ans. (c)</i> | 54. <i>Ans. (d)</i> |
| 7. <i>Ans. (a)</i> | 23. <i>Ans. (b)</i> | 39. <i>Ans. (d)</i> | 55. <i>Ans. (d)</i> |
| 8. <i>Ans. (a)</i> | 24. <i>Ans. (c)</i> | 40. <i>Ans. (d)</i> | 56. <i>Ans. (b)</i> |
| 9. <i>Ans. (d)</i> | 25. <i>Ans. (e)</i> | 41. <i>Ans. (d)</i> | 57. <i>Ans. (b)</i> |
| 10. <i>Ans. (c)</i> | 26. <i>Ans. (c)</i> | 42. <i>Ans. (c)</i> | 58. <i>Ans. (a)</i> |
| 11. <i>Ans. (a)</i> | 27. <i>Ans. (c)</i> | 43. <i>Ans. (d)</i> | 59. <i>Ans. (c)</i> |
| 12. <i>Ans. (b)</i> | 28. <i>Ans. (b)</i> | 44. <i>Ans. (b)</i> | 60. <i>Ans. (d)</i> |
| 13. <i>Ans. (b)</i> | 29. <i>Ans. (d)</i> | 45. <i>Ans. (b)</i> | 61. <i>Ans. (a)</i> |
| 14. <i>Ans. (a)</i> | 30. <i>Ans. (d)</i> | 46. <i>Ans. (e)</i> | 62. <i>Ans. (c)</i> |
| 15. <i>Ans. (b)</i> | 31. <i>Ans. (c)</i> | 47. <i>Ans. (d)</i> | 63. <i>Ans. (b)</i> |
| 16. <i>Ans. (c)</i> | 32. <i>Ans. (b)</i> | 48. <i>Ans. (d)</i> | |