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MENTAL ABILITY TEST (MAT)-VIII
BLOOD RELATIONS
BASIC CONCEPTS

Name: _____   Class: _____   Date: _____

Basic Relations:

1. Mother's/Father's- son/daughter   :   Brother/sister/you

2. Father's brother/sister   :   Uncle/aunt

3. Mother's brother/sister   :   Maternal uncle/maternal aunt

4. Father's father/mother   :   Grandfather/grand mother

5. Mother's father/mother   :   Maternal Grandfather/grand mother

6. Son's wife   :   Daughter-in-law

7. Daughter's husband   :   Son-in-law

8. Husband's/wife's-brother/sister   :   Brother-in-law/sister-in-law

9. Brother's/sister's-son/daughter   :   Nephew/niece

10. Uncle's/aunt's-son/daughter   :   Cousins

11. Grandson's/granddaughter's son   :   Great grandson

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MENTAL ABILITY TEST (MAT)-VIII
BLOOD RELATIONS
CLASS-VII
WORKSHEET-1

Name: _____   Class: _____   Date: _____

1. If A is the brother of the son of B's son. How is A related to B?
   a. Son   b. Brother   c. Cousin   d. Grandson   e. Uncle

2. Pointing to an old man, kailash said, "His son is my son's uncle". How is the old man related to Kailash?
   a. Mother   b. Sister   c. Aunt   d. Niece   e. None of these

3. Amit said, "This girl is the wife of the grandson of my mother". Who is Amit to the girl?
   a. Father   b. Grandfather   c. Husband

   d. Father-in-law   e. none of these

4. Pointing to a photograph, a person tells his friend, "She is the granddaughter of the elder brother of my father". How is the girl in the photograph related to this man?
   a. Niece   b. Sister   c. Aunt   d. Sister-in-law

   e. Maternal aunt

5. Showing the man receiving the prize, Seema said, "He is the brother of my uncle's daughter". Who is the man to Seema?
   a. Son   b. Brother-in-law   c. Nephew

   d. Uncle   e. None of these

6. A is B's sister. C is B's mother. D is C's father. E is D's mother. Then, how is A related to D?
   a. Grandfather   b. Grandmother   c. Daughter d. Granddaughter

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MENTAL ABILITY TEST (MAT)-VIII
BLOOD RELATIONS
WORKSHEET-2

Name: _____   Class: _____   Date: _____

1. Rahul's mother is the only daughter of Monika's father. How is Monika's husband related to Rahul?
a) Uncle   b) Father   c) Grandfather   d) Brother

2. Pointing to a man in a photograph. Asha said. "His mother's only daughter is my mother." How is Asha related to that man?
a) Nephew   b) Sister   c) Wife   d) Niece

3. If Neena says, "Anita's father Raman is the only son of my father-in-law Mahipal", then how is Bindu, who is the sister of Anita, related to Mahipal?
a) Daughter   b) Wife   c) Daughter-in-law d) None of these

4. P is the brother of Q and R. S is R's mother. T is P's father. Which of the following statements cannot be definitely true?
a) T is Q's father   b) S is P's mother   c) P is S's son   d) Q is T's son

5. Q's mother is sister of P and daughter of M. S is daughter of P and sister of T. How is M related to T?
a) Father   b) Grandfather   c) Grandmother

d) Either Maternal Grandmother or Grandfather

6. Rita told Mani, "The girl I met yesterday at the beach was the youngest daughter of the brother-in-law of my friend's mother." How is the girl related to Rita's friend?
a) Cousin   b) Daughter   c) Niece   d) Friend

7. When Anuj saw Manish, he recalled, "He is the father of the son of my daughter. "Who is Manish to Anuj?
a) Brother-in-law   b) Cousin   c) Uncle   d) Son-in-law

8. Pointing out to a lady, a girl said, "She is the daughter-in-law of the grandmother of my father's only son." How is the lady related to the girl?
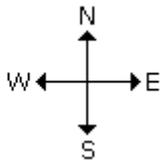a) Sister-in-law   b) Mother   c) Aunt   d) Can't be determined

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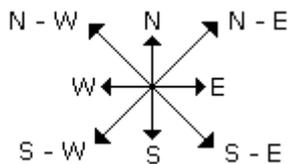
MENTAL ABILITY TEST - VIII
DIRECTION SENSE TEST
BASIC CONCEPTS

- Direction Sense Test is a sort of direction puzzle.

- A successive follow-up of directions is formulated and students are required to ascertain the final direction or the distance between two points.

- This topic will improve your ability to trace and follow the target, and sense the direction correctly.

- The figure below shows four main directions (North N, South S, East E and West W) and four cardinal directions (North East NE, North West NW, South East SE, South West SW) which will help you to solve the question of direction sense in context of direction.

- There are four main directions - **East**, **West**, **North** and **South** as shown below:

- There are four cardinal directions - **North-East (N-E)**, **North-West (N-W)**, **South-East (S-E)**, and **South-West (S-W)** as shown below:

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MENTAL ABILITY TEST-VIII
DIRECTION SENSE TEST
WORKSHEET-1

1. A and B started from a fixed place. A moved towards north and after walking 3 km turns to his right and covers 4 Km. B moves towards west and walks 5 Km and then turns to his right and walks 3 Km. Now how far A and B are from each other?

   a. 5km   **b. 9km**   **c. 8km**   **d. 4km**   **e.1km**

2. I am facing North-West. I turn 90° in the clockwise direction, then 180° in anticlockwise direction and then another 90° in the same direction. Which direction am I facing now?

   a. West   **b. South**   **c. South-west**   **d. South-east**

3. A man walks 1km to East and then he turns to South and walks 5km. Again he turns to East and walks 2km. After this he turns to North and walks 9km. Now how far is he from his starting point?

   a. 3km   **b. 4km**   **c. 5km**   **d. 7km**   **e. None of these**

4. Deepa moved a distance of 75metres towards the north. She then turned to the left and walked for about 25 metres, turned left again and walked 80 metres. Finally, she turned to the right at an angle of 45°. In which direction was she moving finally?

   a. North-east   **b. North-west**   **c. South-east**   **d. South-west**

5. If South-east becomes North and North-east becomes West and all the rest directions are changed in the same manner, then what will be the direction for West?
6.
   a. North-east   **b. South**   **c. South-east**   **d. South-west**

6. Rahim started from point X and walked straight 5kms west, then turned left and walked straight 2kms and again turned left and walked straight 7kms. In which direction is he from point X?
7.
   a. North-east   **b. South-west**   **c. South-east**   **d. North-west**

   8. A direction pole was situated on the crossing. Due an accident the pole turned in such a manner that the pointer which was showing East, started showing South. One traveller went to the wrong direction thinking it to be West. In what direction actually he was travelling?
   9.
   a. South-west   **b. East**   **c. West**   **d. North**   **e. South**

8. One day, Ravi left home and cycled 10km southwards, turned right and cycled 5km and turned right and cycled 10km and turned left and cycled 10km. How many kilometres will he have to cycle to reach his home straight?

   a. 10km   **b. 15km**   **c. 20km**   **d. 25km**

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MENTAL ABILITY TEST-VIII
DIRECTION SENSE TEST
WORKSHEET-2

1. Mohan was facing East. He walked 4km forward and then after turning to his right walked 3km. Again he turned to his right and walked 4km. After this he turned back. Which direction was he facing at that time?
   a. East   **b. West**   **c. North**   **d. South**   **e. North-East**

2. Vijay starts walking straight towards East. After walking 75 metres he turns to the left and walks 25 metres straight. Again he turns to the left and walks a distance of 40 metres straight. Again he turns to the left and walks a distance of 25 metres. How far is he from the starting point?
   a. 140m   **b. 50m**   **c. 35m**   **d. 115m**   **e. None of these**

3. A man starts walking towards South. After walking 10m, he turns left at right angles, then after 15m he again turns left at right angles. In what direction is he finally walking?
   a. North   **b. South**   **c. East**   **d. West**

4. The post office is in the East of the school while my house is in the South of the school. The market is in the North of the post office. If the distance of the market from the post office is equal to the distance of my house from the school, in which direction is the market with respect to my house?
   a. North   **b. East**   **c. North-East**   **d. South-West**

5. Deepak starts walking straight towards East. After walking 75 metres, he turns to the left and walks 25 metres straight. Again he turns to the left, walks a distance of 40metres straight, again he turns to the left and walks a distance of 25metres. How far is he from the starting point?
   a. 25m   **b 50m**   **c. 140m**   **d. None of these**

6. I am facing South. I turn right and walks 20m. Then I turn right again and walk 10m. Then I turn left and walk 10m and then turning right walk 20m. Then I turn right again and walk 60m. In which direction am I from the starting point?
   a. North   **b. North-west**   **c. East**   **d. North-east**

7. Shalloo ran 20m to the East, then he turned left and walked for 15m, then turned right and went 25m and then turned right again and went 15m. How far was Shalloo from the starting point?
   a. 45m   **b. 35m**   **c. 25m**   **d. 15m**

8. Starting from a point P, Sachin walked 20m towards South. He turned left and walked 30m. He then turned left and walked 20m. He again turned left and walked 40m and reached a point Q. How far and in which direction is the point Q from the point P?
   a. 20m West   **b. 10m East**   **c. 10m West**   **d. None of these**

9. A walks 10m in front and 10m to the right. Then every time turning to his left, he walks 5, 15 and 15m respectively. How far is he now from his starting point?
   a. 5m   **b. 10m**   **c. 15m**   **d. 20m**   **e.23m**

10. There are four towns P, Q, R, and T. Q is to the south-west of P, R is to the east of Q and south east of P, and T is to the north of R in line with Q. In which direction of P is T located?
    a. South-east   **b. North**   **c. North-east**   **d. East**

MENTAL ABILITY TEST (MAT) -VIII
NUMBER SERIES
BASIC CONCEPTS

1. What is number series?

   It is an arrangement of numbers in a certain order, where some numbers may be wrongly put into the series of numbers and some number may be missing in that series.

2. Number series consist of sequence of some numbers which follow a set pattern.

3. The topic consists of questions in which series of numbers are given and these numbers are called the 'terms of series'.

4. The terms of series follow a certain pattern throughout the series.

5. Students are required to study the given series, identify the pattern followed by the terms in the series and either complete the given series with the most suitable alternative or find the wrong term in the series.

6. Series may be based on addition, subtraction, squares, cubes, roots, combination of two series etc.

   For eg.

   Complete the series:

   - 3, 9, 27, (.....), 243

   a. 96   b. 143   c. 243   d. 162

   The series is of pattern = a, a x 3 and so on.

   Find the wrong term:

   - 7, 28, 63, 124, 215, 342

   a. 7   b. 28   c. 124   d. 215

   Correct sequence: 2^3-1, 3^3-1, 4^3-1 and so on. So 28 is wrong answer should be replaced by (3^3-1) i.e. 26.

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MENTAL ABILITY TEST (MAT) -VIII
NUMBER SERIES
WORKSHEET-1

Name: _____   Class: _____   Date: _____

Type I: Directions: Find the missing term.

1. 4, 9, 16, 25, (…….)
   a. 32   b. 42   c. 55   d. 36
2. 4, 9, 19, 34, 54, (……), 109
   a. 89   b. 84   c. 74   d. 79
3. 4, 11, 7, 14, 10, 17, (…….)
   a. 24   b. 13   c. 20   d. 21
4. 1, 6, 13, 22, 33, (…….)
   a. 44   b. 45   c. 46   d. 47
5. 3, 15, 35, 63, 99, (……..)
   a. 144   b. 143   c. 121   d. 169
6. 3, 6, 15, (……..), 123, 366
   a. 34   b. 59   c. 42   d. 60
7. 96, 90, 78, (…….), 36, 6
   a. 60   b. 54   c. 72   d. 48
8. -1, 0, 3, 8, (……)
   a. 13   b. 12   c. 11   d. 15
9. 11,10, (…), 100, 1001, 1000, 10001
   a. 101   b. 110   c. 111   d. None of these
10. 1, ½, ¼, 1/8, (……)
    a. 1/32   b. 1/16   c. 1/6   d. None of these

Type II: Directions: Find the missing term of the pair.

11. ¼: 1/8:: 2/3:?
    a. ¼   b. 1/3   c. ½   d. 1/7   e. 1/9
12. 09: 25:: 49:?
    a. 63   b. 36   c. 64   d. 81   e. 100
13. 12: 35:: 16: ?
    a. 32   b. 48   c. 49   d. 63   e. 45
14. 3: 11 :: 7: ?
    a. 22   b. 29   c. 18   d. 51   e. 21
15. 7: 11 :: 31: ?
    a. 36   b. 39   c. 37   d. 43   e. 45

Type III

Directions: In each of the following questions, one term in the number series is wrong. Find outthe wrong term.

16. 49, 48, 45, 42, 33, 24

    a.   48   b. 45   c. 42   d. 33   e. 24

17. 3, 10, 27, 4, 16, 64, 5, 25, 125

    a.   3   b. 4   c. 10   d. 27

18. 25, 36, 49, 81, 121, 169, 225

    a.   36   b. 49   c. 169   d. 225

19. 2, 5, 10, 17, 26, 37, 50, 64

    a. 17   b. 26   c. 37   d. 64

20.. 5, 27, 61, 122, 213, 340, 509

    a.   27   b. 61   c. 122   d. 509

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MENTAL ABILITY TEST (MAT) -VIII
NUMBER SERIES
WORKSHEET-2

Name: _____   Class: _____   Date: _____

Type I: Directions: Find the missing term.

1. 80, 64, 48, 32, 16, (....)
   a. 4   b. 0   c. 8   d. 1
2. 1, 9, 17, 33, 49, 73, (....)
   a. 97   b. 98   c. 99   d. 100
3. 9, 81, 90, 810, 819, (....)
   a. 7371   b. 900   c. 8100   d. 1638
4. 5, 3, 6, 2, 7, 1, (....)
   a. 0   b. 2   c. 8   d. 4
5. 2, 7, 14, 23, (....), 47
   a. 30   b. 34   c. 39   d. 44
6. 1, 1, 6, 6, 11, 11, (....)
   a. 11   b. 13   c. 16   d. 17
7. 12, 32, 72, 152, (....)
   a. 312   b. 325   c. 515   d. 613
8. 6.25, 9, 12.25, 16, 20.25, 25,   30.25, 36, (....)
   a. 36   b. 32   c. 28.25   d. 42.25
9. 19200, 1920, 240, 40, 10, (....)
   a. 1   b. 0   c. 5   d. 10
10. 2/3, 4/7, ?, 11/21, 16/31
    a. 5/9   b. 6/11 c. 7/13   d. 9/17

Type II: Directions: Find the missing term of the pair.

11. 121: 12:: 25: ?
    a. 1   b. 2   c. 6   d. 7   e. 4

12. 01: 08 :: 16: ?
    a. 25   b. 125   c. 64   d. 27   e. 81

13. 01: 04:: 08: ?
    a. 96   b. 81   c. 72   d. 64   e. 49

14. 6: 24:: 5: ?
    a. 23   b. 22   c. 25   d. 27   e. 20

15. 17: 52:: 1: ?
   a. 3   b. 4   c. 5   d. 51   e. 10

16. 3: 27:: 4: ?
   a. 140   b. 75   c. 100   d. 80   e. 64

17. 6: 35:: 11: ?
   a. 120   b. 115   c. 122   d. 121   e. 124

18. 5: 35:: 7: ?
   a. 35   b. 34   c. 45   d. 30   e. 42

19. $3 : 3\frac{3}{8}$ :: 5: ?
   a. $5\frac{5}{8}$ b. $6\frac{3}{8}$ c. $5\frac{1}{8}$ d. $2\frac{5}{8}$ e. $6\frac{5}{8}$

20. 25: 125 :: 36: ?
   a. 180   b. 206   c. 216   d. 318   e. 72

Type III Directions: In each of the following questions, one term in the number series is wrong. Find out the wrong term.

21. 196, 169, 144, 121, 101
   a.   101   b. 121   c. 169   d. 196
22. 121, 143, 165, 186, 209
   a.   143   b. 165   c. 186   d. 209
23. 16, 22, 30, 45, 52, 66
   a.   30   b. 45   c. 52   d. 66
24. 125, 126, 124, 127, 123, 129
   a.   126   b. 124   c. 123   d. 129
25. 105, 85, 60, 30, 0, -45, -90
   a.   105   b. 60   c. 0   d. -45
26. 1, 2, 4, 8, 16, 32, 64, 96
   a.   4   b. 32   c. 64   d. 96
27. 24576, 6144, 1536, 386, 96,24
   a.   96   b. 386   c. 1536   d. 6144
28. 6, 15, 35, 77, 165, 221
   a.   35   b. 77   c. 165   d. 221
29. 2, 5, 10, 50, 500, 5000
   a.   5   b. 10   c. 50   d. 5000
30. 5, 10, 40, 80, 320, 550, 2560
   a.   80   b. 320   c. 550   d. 2560

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MENTAL ABILITY TEST (MAT) -VIII
ALPHABET SERIES
BASIC CONCEPTS

1. Alphabet series is a series of single, pairs or groups of letters or combinations of letters, which are called the 'terms of the series'. The terms of the series form a certain pattern as regards the position of the letters in the English alphabet.

2. The students are required to decipher this pattern and then find the next letter or wrong/misfit letter in the series. Solving these questions means just thinking about the English Alphabet in an objective manner.

3. There are no set rules. In each case you have to discover the pattern adopted. Some of the patterns are described below:

    Jumping in natural order: letters appear in the natural order but some letters areskipped in between.
    Eg. B, D, F, H, J, ?
    L is the answer as series follows the pattern of moving the letters 2 steps forward.

    Jumping in reverse order: this is same as above only skipping happens in reverseorder.
    Eg. I, G, E, C, ?
    A is the answer as series follows a pattern of skipping one letter in reverse order.

    Repeating/Continuous pattern series: This type of questions usually consists of aseries of small letters, which follow a certain pattern. However some letters are missing from the series. These missing letters are then given in a proper sequence as one of the alternatives.
    Eg. aab_aaa_bba_
    a. baa   b. abb   c. bba   d. aba
    Ans: c

4. Some skipping patterns are described below:

    Regular order: The number of letters skipped remains the same may be in natural orreverse order.

    Increasing order: Each time the number of letters skipped increases in a given pattern.

5. The easiest way to tackle letter series questions is to check the position of the alphabet and its position number in both forward and backward sequences.

6. To continue the series after Z, we again begin with A. In other words, the sequence is kept in a circular order.

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MENTAL ABILITY TEST (MAT) -VIII
ALPHABET SERIES
WORKSHEET-1

Name: _____   Class: _____   Date: _____

Type I:

In the following questions you are given some letter which will follow a set pattern. Choose theanswer choice that can replace the "?" in the series.

1.   A, C, F, H, ?, M
    a.   P   b. K   c. J   d. I   e. L

2.   X U S P N K I ?
    a.   J   b. K   c. M   d. F   e. O

3.   B e d f ? h j ? l
    a.   I m   b. m I   c. I n   d. j m   e. m k

4.   HV GT FR EP DN ?
    a. KL   b. LM   c. MN   d. NO   e. CL

5.   DF, GJ, KM, NQ, RT, ?
    a. UW   b. YZ   c. XZ   d. UX   e. YA

6.   nd, iy, dt, yo, tj, ...
    a.   mp   b. nq   c. of   d. oe   e. Me

7.   eac gce ieg   ?
    a. jhi   b. jgi   c. kgi   d. khi   e. kij

8.   prt, ..., bdf, hjl, npr
    a.   uwy   b. vya   c. xzb   d. uxw   e. vxz

9.   B F K Q ?
    a.   R   b. S   c. W   d. F   e. X

10. KPA, LQB, MRC, NSD, ...
    a. TOE   b. OET   c. ETO   d. OTE   e. EOT

Type II: These type of questions usually consists of a series of small letters which follow a set pattern where some letters are missing. The missing letters are given in their proper sequence in one of the alternative. Find out the correct answer in each question.

1. ab_ _ _ b _ bbaa _

   a. abaab   b. abbab   c. baaab   d. babba

2. ab _ a _ b _ a_ bba

   a. aaab   b. baba   c. abba   d. baab

3. a b _ a a b b _ _ b b _

   a. abbb   b. abab   c. baba   d. baaa

4. _ b c _ _ b b _ a a b c

   a. abab   b. babc   c. acac   d. aacc

5. abb _ baa _ a _bab _aba

   a. abba   b. abab   c. ccac   d. aabb

6. _ cb_ca_bacb_ca_bac_d

   a. bddddb   b. bbbddd   c. addddb   d. ddbbb

7. ab_aa_caab_c_abb_c

   a. bbcaa   b. bcbca   c. cabac   d. cbbac

8. a_abbb_ccccd_ddccc_bb_ba

   a. abcda   b. abdbc   c. abdcb   d. abcad

9. a_abbb_ccccd_ddccc_bb_ba

   a. abcda   b. abdbc   c. abdcb   d. abcad

10. a_c_abb_a_bc_bc_ab

    a. cbcaaa   b. bcccab   c. bccaac   d. acbabc

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MENTAL ABILITY TEST (MAT) -VIII
ALPHABET SERIES
WORKSHEET-2

Name: _____   Class: _____   Date: _____

Type I: In the following questions you are given some letter which will follow a set pattern. Choose theanswer choice that can replace the "?" in the series.

1. E P V, F Q W, G R X, H S Y, ….
   - a. ITZ
   - b. IUZ
   - c. JIZ
   - d. IRZ
   - e. ISZ

2. ? ayw gec mki sqo
   - a. zxw
   - b. bzw
   - c. usq
   - d. may
   - e. xyv

3. PON, RQP, TSR, VUT, ….
   - a. WUY
   - b. YXZ
   - c. XWV
   - d. UVW
   - e. ZYX

4. B E I N T ?
   - a. R
   - b. S
   - c. U
   - d. A
   - e. V

5. R, M, ?, F, D, ?
   - a. C,B
   - b. J,H
   - c. B,H
   - d. H,C
   - e. I,C

6. cx, fu, ir, ……, ol, ri
   - a. lo
   - b. mn
   - c. no
   - d. op
   - e. or

7. ABD, DGK, HMS, MTB, SBL, ?
   - a. ZKW
   - b. ZKU
   - c. ZAB
   - d. XKW
   - e. KWZ

8. Q, L, ….., E, C, ….
   - a. B, A
   - b. I, G
   - c. A, G
   - d. G, B
   - e. H, B

9. F I M P ?
   - a. V
   - b. Q
   - c. T
   - d. R
   - e. S

10. R, U, X, A, D, ?
    - a. F
    - b. G
    - c. H
    - d. I
    - e. J

11. T, R, P, N, L, ?, ?
    - a. J, G
    - b. J, H
    - c. K, H
    - d. K,I
    - e. H, I

12. B, D, F, I, L, P, ?
    - a. R
    - b. S
    - c. T
    - d. U
    - e. V

13. H, I, K, N, ?
   a. O   b. Q   c. R   d. S   e. T

14. Z, ?, T, ?, N, ?, H, ?, B
   a. W,Q,K,E   b. W, R, K, E   c. X, Q, K, E   d. X, R, K, E

15. a, d, c, f, ?, h, g, ?, i
   a. e, j   b. e, k   c. f, j   d. j, e   e. none of these

16. AZ, GT, MN, ?, YB
   a. JH   b. SH   c. SK   d. TS   e. MS

17. PMT, OOS, NQR, MSQ, ?
   a. LUP   b. LVP   c. LVR   d. LWP   e. None of these

18. BMX, DNW, FOU, ?
   a. GHO   b. GPS   c. HPS   d. HPT   e. HQS

19. C, Z, F, X, I, V, L, T, O, ?, ?
   a. O,P   b. P,Q   c. R,R   d. S,R   e. S,T

20. M, N, O, L, R, I, V, ?
   a. A   b. E   c. F   d. H   e. Z

Type II: These type of questions usually consists of a series of small letters which follow a set pattern wheresome letters are missing. The missing letters are given in their proper sequence in one of the alternative. Find out the correct answer in each question.

21. m_nm_n_an_a_ma_
   a. aamnan   b. ammanm   c. aammnn   d. amammn

22. a_ba_b_b_a_b
   a. abaab   b. abbab   c. aabba   d. bbabb

23. _stt_tt_tts_
   a. tsts   b. ttst   c. sstt   d. tsst

24. _op_mo_n_ _pnmop_
   a. mnpmon   b. mpnmop   c. mnompn   d. mnpomn

25. _tu_rt_s_ _usrtu_
   a. rtusru   b. rsutrr   c. rsurtr   d. rsurts

26. ba_cb_b_bab_
   a. acbb   b. bacc   c. bcaa   d. cabb

26. bca_b_aabc_a_caa

   a. acab   b. bcbb   c. cbab   d. ccab

27. _ aa _ ba _ bb _ ab _aab

   a. aaabb   b. babab   c. bbaab   d. bbbaa

28. ab _ d _aaba _na _ badna _ b

   a. andaa   b. babda   c. badna   d. dbanb

29. a_ n_b_ _ ncb _ _ ncb

   a. abbbcc   b. abcbcb   c. bacbab   d. bcabab

30. gfe_ ig _ eii _fei _ gf _ ii

   a. eifgi   b. figie   c. ifgie   d. ifige

31. _acca _ ccca _ acccc _ aaa

   a. acca   b. caaa   c. ccaa   d. caac

32. aa_ aaa_aaaa_aaaa_b

   a. baaa   b. bbaa   c. bbbb   d. bbba

33. _ aaba_bba_bba_abaa_b

   a. aabab   b. ababa   c. baaba   d. bbaba

34. m n o n o p q o p q r s _ _ _ _ _

   a. mnopq   b. oqrst   c. pqrst   d. Qrstu

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MENTAL ABILITY TEST (MAT) -VIII
ALPHA-NUMERIC SERIES
BASIC CONCEPTS

1. This type of series is just a combination of both number and alphabet series.
2. The terms of the given series are a combination of letters and numerals, which move according to a set pattern.
3. Students are required to decipher this pattern and find out the missing/wrong term.

Worksheet-1

Directions: In each of the following questions, a letter number series is given with one or more terms missing. Choose the missing term out of the given alternatives.

1. C-2, E-3, G-4, I-5, ?
   a. H-6　　　　b. J-8　　　　c. K-6　　　　d. L-7

2. D-23, F-21, H-19, J-17, ?
   a. K-18　　　　b. M-18　　　　c. O-21　　　　d. L-15

3. C^3, F^6, I^9, L^{12}, ?
   a. O^{13}　　　　b. Q^{17}　　　　c. P^{15}　　　　d. O^{15}

4. D-4, F-6, H-8, J-10, ?, ?
   a. K-12, M-13　　b. L-12, M-14　　c. L-12, N-14　　d. K-12, K,14

5. 2B, 4C, 8E, 14H, ?
   a. 16K　　　　b. 20I　　　　c. 20L　　　　d. 22L

6. 3F, 6G, 11I, 18L, ?
   a. 21O　　　　b. 25N　　　　c. 25P　　　　d.27 P

7. W-144, ?, S-100, Q-81, O-64
   a. U-121　　　　b. U-122　　　　c. V-121　　　　d. V-128

8. 2, A, 9, B, 6, C, 13, D, ?
   a. 9   b. 10   c. 12   d. 19

9. KM5, IP8, GS11, EV14, ?
   a. BX17   b. BY17   c. CY17   d. CY18

10. C4X, F9U, I16R, ?
    a. K25P   b. L25P   c. L25O   d. L27P

11. 2Z5, 7Y7, 14X9, 23W11, 34V13, ?
    a. 27U24   b. 45U15   c. 47U15   d. 47V14

12. N5V, K7T, ?, E14P, B19N
    a. H9R   b. H10Q   c. H10R   d. I10R

13. Q1F, S2E, U6D, W21C, ?
    a. Y44B   b. Y66B   c. Y88B   d. Z88B

14. 2A11, 4D13, 12G17, ?
    a. 36I19   b. 36J21   c. 48J21   d. 48J23

15. Find the term which does not fit into the series:
    1CV, 5FU, 9IT, 15LS, 17OR
    a. 5FU   b. 15LS   c. 9IT   d. 17OR

16. Find the wrong term in the series:
    G4T, J10R, M20P, P43N, S90L
    a. G4T   b. J10R   c. M20P   d. P43N

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MENTAL ABILITY TEST (MAT)-VIII
ANALOGY
BASIC CONCEPTS

1. Analogy means 'correspondence'.
2. Analogy can be explained as a similarity between things in some respects that are otherwise dissimilar.
3. It can be regarded as comparison made between two or more things in order to show their similarity.
4. It can also be explained as a similarity between like features of two things (which are otherwise unlike) on which a comparison may be based.
5. So, it can be deduced that Analogy is a form of reasoning in which one thing is inferred to be similar to another thing in a certain respect, on the basis of known similarities.
6. In questions related to analogy, a particular relationship is given and another similar relationship has to be identified from the alternatives provided.
7. Analogy tests are, therefore, meant to test a candidate's overall knowledge, power of reasoning and ability to think concisely and accurately.
8. Some common relationships which will help you to detect most analogies are:
   1. Country and Capital
   2. Country and Currency
   3. Instrument and Measurement
   4. Quantity and Unit
   5. Individual and Group
   6. Animals and Young One
   7. Male and Female
   8. Individual and Dwelling Place
   9. Part and Whole relationship
   10. Pair Relationship
   11. Animal and Movement
   12. Animal and Sound
   13. Individual/Thing and Class
   14. Games and Place of Playing
   15. Worker and Tool
   16. Tool and Action
   17. Worker and product
   18. Product and Raw Material
   19. Study and Topic
   20. Word and Synonym/Antonym

Illustration:

1. Dog : Rabies :: Mosquito : Malaria

Explanation: Second word is the disease caused by the bite of first word.

2. Moon : Satellite :: Earth : Planet

Explanation: First word belongs to the category of second word.

MENTAL ABILITY TEST (MAT)-VIII
ANALOGY
WORKSHEET-1

Name: _____ Class: _____ Date: _____

Type I: Completing the Analogous pair

Directions: There is a certain relationship between two given words on one side of : : and one word is given on another side of : : while another word is to be found from the given alternatives, having the same relation with this word as the given pair has. Select the best alternative.

1. Fire : Ashes : : Explosion : ?
   a. Flame   b. Death   c. Sound   d. Debris
2. Race : Fatigue : : Fast : ?
   a. Food   b. Appetite   c. Hunger   d. Weakness
3. Vegetable : Chop : : Body : ?
   a. Cut   b. Ampute   c. Peel   d. Prune
4. Lakshadweep : Kavaratti : : Andaman and Nicobar : ?
   a. Port Blair   b. Daman   c. Pondicherry   d. Silvassa
5. Breeze : Cyclone : : Drizzle : ?
   a. Earthquake   b. Storm   c. Flood   d. Downpour
6. Giant : Dwarf : : Genius : ?
   a. Wicked   b. Gentle   c. Idiot   d. Tiny
7. Anaemia : Blood : : Anarchy : ?
   a. Lawlessness   b. Government   c. Monarchy   d. Disorder
8. Botany : Plants : : Entomology : ?
   a. Snakes   b. Insects   c. Birds   d. Germs
9. Vigilant : Alert : : Viable : ?
   a. Active   b. Hopeless   c. Feasible   d. Useful
10. Menu : Food : : Catalogue : ?
    a. Rack   b. Newspaper   c. Library   d. Books

Type II: Direct Analogy

11. Joule is related to Energy in the same way as Pascal is related to _____?
    a. Volume   b. Pressure   c. Density   d. Purity

12. Ecology is related to the study of Environment in the same way as Histology is related to _____?
    a. Fossils   b. History   c. Tissues   d. Hormones
13. Horse is related to Hay in the same way as Cow is related to _____?
    a. Leaves   b. Fodder   c. Milk   d. Straw
14. Gravity is related to Pull in the same way as Magnetism is related to _____?
    a. Repulsion   b. Separation   c. Attraction   d. Pull

15. Hare is related to Burrow in the same way as Owl is related to _____?
    a. Nest   b. Hive   c. Hole   d. Barn
16. Sugar is related to Molasses in the same way as Gasoline is related to _____?
    a. Mine   b. Quarry   c. Drill   d. Petroleum
17. Starvation is related to Nutrition in the same way as Exhaustion is related to _____?
    a. Energy   b. Bravery   c. Freshness   d. Courage
18. Friend is related to Foe in the same way as Union is related to _____?
    a. Separate   b. Different   c. Discord   d. Divorce

Type III: Choosing the Analogous Pair

Directions: The following questions consist of two words each that have a certain relationship to each other, followed by four lettered pairs of words. Select the lettered pair that has the same relationship as the original pair of words.

19. Knife : Chopper
    a. Walking: Fitness   b. Swim: Float   c. Scissors: Cloth   d. Quilt: Blanket
20. Ass : Bray
    a. Flies: Squeak   b. Hen: Mew   c. Fox: Snout   d. Sheep: Bleat
21. Bee: Hive
    a. Horse: Carriage   b. Cow: Byre   c. Rider: Bicycle   d. Dog: Show
22. Branch: Tree
    a. Crest: Wave   b. Bulb: Filament c. Clothes: Cupboard d. Water: Tap
23. Mad: Insane
    a. Red: Pink   b. Healthy: Fat   c. Brave: Timid   d. Slim: Thin
24. Savage : Civilized
    a. Illiterate : Book b. Dark : Lighted c. Wild : Animal   d. Brutal : Heroic
25. Cigarette : Tobacco
    a. Coffee : Caffeine b. Milk : Bottle c. Cigar : Filter   d. Shoes : Socks

Type IV: Double Analogy

Directions: In each of the following questions, two words indicated by I&II have been left out. The correct word to come in place of I is given as one of the four alternatives (1, 2, 3, 4) against I and the correct word to come in place of II is given as one of the four alternatives (A, B, C, D) against II. Read with the correct words, there is some relationship between the two words to the left of sign (: :) and the same relationship obtains between the two words to the right of the sign (: :). The correct combination is given as one of the four alternatives a, b, c, d. Find the correct combination in each case.

26. I : Distance : : Kilogram : II
    I.   1. Far   2. Metre   3. Europe   4. Travel
    II.   A. Heavy   B. Ounce   C. Weight   D. Noise
            a. 1A   b. 2A   c. 2B   d. 2C

27. I : Roots : : House : II

I.	1. Flower	2. Tree	3. Branches	4. Trunk
II.	A. Foundation	B. Walls	C. Floor	D. Platform
	a. 1B	b. 2A	c. 3D	d. 4C

28. I : Sword : : Thread : II

I.	1. Dagger	2. Knife	3. Warrior	4. Kill
II.	A. Needle	B. Tailor	C. Rope	D. Stitch
	a. 2C	b. 4D	c. 1A	d. 3B

29. I : Horse : : Bray : II

I.	1. Neigh	2. Hoof	3. Ride	4. Saddle
II.	A. Relay	B. Pony	C. Wagon	D. Donkey
	a. 1A	b. 1D	c. 2D	d. 3C

30. I : Gardening : : Bat : II

I.	1. Spade	2. Gardener	3. Flowers	4. Grass
II.	A. Playing	B. Cricket	C. Ball	D. Sportsman
	a. 2D	b. 4A	c. 3C	d. 1B

31. Summit : Apex : : I : II

I.	1. Beautiful	2. Picture	3. Attractive	4. Enchanting
II.	A. Comfortable	B. Pretty	C. Healthy	D. Brave
	a. 1B	b. 2A	c. 3A	d. 4D

32. _____ is to Horse as Chauffeur is to _____

   a. Mane-Uniform   b. Stable-Limousine   c. Jockey -Car   d. Harness-Auto

33. _____ is to Land as Navy is to _____

   a. Ground-Sea   b. Army-Sea   c. Marine-Air   d. Ship-Infantry

Type V: Choosing a Similar Word

Directions: In each of the following questions, a group of interrelated words is given. Choose a word from given alternatives, that is similar to the given words & hence belong to same group.

34. Pituitary : Thyroid : Pancreas

   a. Adrenal   b. Heart   c. Liver   d. kidney

35. Sodium : Potassium : Zinc

   a. Sulphur   b. Calcium   c. Water   d. Iodine

36. Jam : Jelly : Pickles

   a. Butter   b. Marmalade   c. Grapes   d. Preservatives

37. Which of the following is same as Measles, Rabies, and Cancer?

   a. Pneumonia   b. Diabetes   c. Tetanus   d. Hepatitis

38. Which of the following is same as Dozen, Score, Decade?

   a. Century   b. Number   c. Measurement   d. Counting

39. Which of the following is same as Lung, Pharynx, and Bronchioles?

   a. Alveoli   b. Ribs   c. Oesophagus   d. Nephrons

Type VI: Detecting Analogies

Directions: Three words are given in each question, which have something in common among themselves. Out of four given alternatives choose the most appropriate description about these three words.

40. Gnu : Emu : Curlew
    a. They are fast runners.
    b. These are birds.
    c. These are small insects.
    d. These are animal pests.

41. Delhi : Agra : Mathura
    a. They have been capitals of the country
    b. They have exquisite temples
    c. They have religious background.
    d. They are situated on the bank of Yamuna

42. Yeats : Ghalib : Kabir
    a. They were given Nobel Prize
    b. They were poets.
    c. They were social reformers.
    d. They were saints.

43. Aorta : Pulmonary : Ventricle
    a. They are the veins that supply blood.
    b. They are the names of the parts of heart.
    c. They are related to lung.
    d. They are different sections of food pipe.

44. Viper : Krait : Mamba
    a. These are boot polishes.
    b. These are haunting spirits.
    c. These are snakes.
    d. They are insects living in bushes.

Type VII: Multiple Word Analogies

Directions: In each of the questions, some words are given which are related in some way. The same relationship obtains among the words in one of the four alternatives given under it. Find the correct alternative.

45. **Bone : Skelton : Nerve**
    a. House : Door : Window
    b. Spoke : Wheel : Handle
    c. Retina : Eye : Pupil
    d. Snow : Cloud : Ice

46. **Magazine : Story : Article**
    a. Tea : Milk : Sugar
    b. Television : Newspaper : Entertainment
    c. Bed : Quilt : Pillow
    d. Novel : Drama : Literature

47. Evaporation: Cloud : Rain
   a. Sneezing : Cough : Cold
   b. Accident : Injury : Pain

   c. Tanning : Leather : Purse
   d. Bud : Flower : Fragrance

48. Hunt : Pleasure : Panic
   a. Death : Disease : Germs
   b. Game : Match : Win

   c. Theft : Gain : Loss
   d. Rain : Cloud : Flood

49. Village : City : Suburb
   a. Puppy : Dog : Bitch
   b. School : College : University

   c. Continent : Country : State
   d. Transistor : Radio : Television

50. Picture : Clock : Wall
   a. Pillow : Quilt : Bed
   b. Pen : Pencil : Colour

   c. Flowers : Garden : Park
   d. Footpath : Road : Highway

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MENTAL ABILITY TEST (MAT)-VIII
ANALOGY
WORKSHEET-2

Name: _____   Class: _____   Date: _____

Type I: Completing the Analogous pair

Directions: There is a certain relationship between two given words on one side of : : and one word is given on another side of : : while another word is to be found from the given alternatives, having the same relation with this word as the given pair has. Select the best alternative.

1. Eye: Wink : : Heart : ?
   a. Move   b. Throb   c. Pump   d. Quiver
2. Coherent : Consistent : : Irate : ?
   a. Angry   b.Unreasonable   c. Unhappy   d. Irritated
3. Tuberculosis : Lungs : : Cataract : ?
   a. Ear   b. Throat   c. Skin   d. Eye
4. Elegance : Vulgarity : : Graceful : ?
   a. Awkward   b. Comely   c. Asperity   d. Dirty
5. Patrolling : Safety : : Insurance : ?
   a. Finance   b. Policy   c. Money   d. Protection
6. King : Throne : : Rider : ?
   a. Seat   b. Horse   c. Saddle   d. Chair
7. Book : Critic : : Building : ?
   a. Engineer   b. Contractor   c. Weigher   d. Appraiser
8. Wimbledon Trophy : Tennis : : Walker's Cup : ?
   a. Hockey   b. Polo   c. Golf   d. Wrestling
9. Cruel : Kind : : Lethargy : ?
   a. Sharp   b. Alertness   c. Interest   d. Shrewd

Type II: Direct Analogy

10. Borrower is related to Loan in the same way as Beggar is related to _____?
    a. Alms   b. Mercy   c. Money   d. Gift
11. Appreciation is related to Reward in the same way as Disgrace is related to _____?
    a. Crime   b. Guilt   c. Allegation   d. Punishment
12. Drummer is related to Orchestra in the same way as Minister is related to _____?
    a. Voter   b. Constituency   c. Cabinet   d. Department
13. Prison is related to Jailor in the same way as Museum is related to _____?
    a. Manager   b. Monitor   c. Curator   d. Warden

14. Tree is related to Sapling in the same way as Horse is related to _____?
    a. Pony   b. Mule   c. Cub   d. Foal
15. Forfeit is related to Surrender in the same way as Remit is related to _____?
    a. Perceive   b. Confiscate   c. Exempt   d. Cancel

16. Bald is related to Blond in the same way as Barren is related to _____?
    a. Vegetation   b. Farm   c. Fertile   d. Inhabited
17. Catalogue is related to Library Books in the same way as Index is related to _____?
    a. Chapters   b. Books   c. Preface   d. Contents

Type III: Choosing the Analogous Pair

Directions: The following questions consist of two words each that have a certain relationship to each other, followed by four lettered pairs of words. Select the lettered pair that has the same relationship as the original pair of words.

18. Energy : Joule
    a. Axe: Grind   b. Power: Ampere   c. Ammeter : Current   d. Resistance : Ohm
19. Greed: Corruption
    a. Insult: Enemy   b. Sleep: Dream   c. Goodwill : Friendship   d. Knowledge : Book
20. Jews : Synagogue
    a. Parsis : Temple   b. Jains : Fire Temple c. Buddhists : Pagoda   d. Hindus: Vedas
21. Incubator : Infant
    a. Bullet: Revolver   b. Hive: Bee   c. Greenhouse: Plants   d. Archive: Document
22. Paper : Ream
    a. Eggs : Dozen   b. Books : Pile   c. Twigs : Bush   d. Food : Packet
23. Interrupt : Speak
    a. Shout : Yell   b. Intrude : Enter   c. Concede : Defend   d. Interfere : Assist
24. Theft : Confess
    a. Fight : Dare   b. Fault : Admit   c. Murder : Commit   d. Mistake : Agree
25. Fragile : Crack
    a. Cemetery : Death b. Pliable : Bend   c. Hydro : Water   d. Irreducible: Reduce

Type IV: Double Analogy

Directions: In each of the following questions, two words indicated by I&II have been left out. The correct word to come in place of I is given as one of the four alternatives (1, 2, 3, 4) against I and the correct word to come in place of II is given as one of the four alternatives (A, B, C, D) against II. Read with the correct words, there is some relationship between the two words to the left of sign (: :) and the same relationship obtains between the two words to the right of the sign (: :). The correct combination is given as one of the four alternatives a, b, c, d. Find the correct combination in each case.

26. **I : Melt : : Bright : II**

I.	1. Liquid	2. Ice	3. Heat	4. Freeze
II.	A. Dull	B. Dazzle	C. Light	D. Colour
	a. 1D	b. 2C	c. 3B	d. 4A

27. **I : Wheat : : Brick : II**

I.	1. Cereal	2. Field	3. Bread	4. Farmer
II.	A. Building	B. Mason	C. Clay	D. Kiln
	a. 1A	b. 2D	c. 3C	d. 4B

28. **I : Garland : : Star : II**

I.	1. Perfume	2. Hero	3. Flower	4. Honour
II.	A. Galaxy	B. Shine	C. Sun	D. Night
	a. 3C	b. 3A	c. 2D	d. 4B

29. **I : Water : : Thermometer : II**

I.	1. Humidity	2. Rain	3. Pitcher	4. Evaporation
II.	A. Temperature	B. Mercury	C. Doctor	D. Fever
	a. 1D	b. 3B	c. 4A	d. 2C

30. **I : Bird : : Shedding : II**

I.	1. Calling	2. Flying	3. Migrating	4. Moulting
II.	A. Barn	B. Dog	C. Hay	D. Farm
	a. 2A	b. 2C	c. 4A	d. 4D

31. **I : Transaction : : Language : II**

I.	1. Money	2. Business	3. Contract	4. Agreement
II.	A. Communication	B. Media	C. Conversation	D. Scholar
	a. 4A	b. 2B	c. 1C	d. 3D

Type V: Choosing a Similar Word

Directions: In each of the following questions, a group of interrelated words is given. Choose a word from given alternatives, that is similar to the given words & hence belong to same group.

32. Peat : Lignite : Bituminous

a. Granite	b. Basalt	c. Anthracite	d. Coke

33. Bleat : Bray : Grunt

a. Bark	b. Croak	c. Cry	d. Scream

34. Mumbai : Kolkata : Mangalore

a. Hyderabad	b. Cochin	c. Delhi	d. Jaipur

35. Rabbit : Rat : Mole

a. Mongoose	b. Frog	c. Earthworm	d. Ant

36. Which of the following is the same as Radium, Polonium, and Uranium?

a. Thorium	b. Caesium	c. Barium	d. Strontium

37. Which of the following is the same as Emancipate, Free and Release?

a. Liberate	b. Quit	c. Pardon	d. Ignore

38. Which of the following is same as Grafting, Budding and Layering?

a. Weeding	b. Digging	c. Field	d. Seed

39. Which of the following is same as Count, List and Weight?

a. Compare	b. Sequence	c. Number	d. Measure

Type VI: Detecting Analogies

Directions: Three words are given in each question, which have something in common among themselves. Out of 4 given alternatives choose the most appropriate description about these 3 words.

40. Hiss:Hoot: Trumpet
a. They are sounds made by creatures. b. They are joyous cries of children
c. They are sounds made by war instruments. d. They are connected with under-world activities.

41. Lettuce : Fenugreek : Celery
a. They are cactus plants.   b. They are wild flowers.
c. They are wild plants.   d. They are leafy vegetables.

42. Magenta : Fawn : Turquoise
a. They are marine creatures.   b. They are migratory birds.
c. They are precious and semi-precious stones.   d. They are colors.

43. Cherries : Berries : Apricots
a.   They grow on creepers.   b. They need hot climate.
c.   They are very expensive fruits.   d. They have a hard stone inside.

44. Vigour : Vitality : Stamina
a.   The terms are related to medicines.   b. They are related to one's
     instinct for fighting.

c.   The terms are measurement for tolerance.   d. The terms are related to inner
     strength.

45. **Forgery : Fabrication : Counterfeit**-mention the common quality to the three given words.
a. Smuggling   b. Deceit   c. Falsity   d. Designed

Type VII: Multiple Word Analogies

Directions: In each of the questions, some words are given which are related in some way. The same relationship obtains among the words in one of the four alternatives given under it. Find the correct alternative.

46. Horse : Foal : Mare
    a. Sheep : Lamb : Goat   b. Lion : Cub : Den
    c. Man : Child : Woman   d. Cat : Kitten : Puppy

47. Researcher : Historian : Scholar
   a. Epic : Novel : Book
   b. Teacher : Graduate : Poet
   c. Teacher : Professor : Lecturer
   d. History : Story : Book

48. Iron : Silver : Gold
   a. Parents : Father : Mother
   b. Wheat : Barley : Cereal
   c. Tree : Branch : Fruit
   d. Deer : Lion : Wolf

49. Studio : Mumbai : Stars
   a. Ship : Madras : Harbour
   b. Oranges : Nagpur : Juice
   c. Parliament : Delhi : Ministers
   d. Sunrise : Darjeeling : Sherpas

50. Morning : Evening : Dusk
   a. Triangle : Quadrilateral : Pentagon
   b. Happy : Sad : Excited
   c. Summer : Winter : Autumn
   d. Botany : Zoology : Physiology

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Mental Ability Test (MAT) -VIII
Coding and Decoding
BASIC CONCEPTS

1. A code is a 'system of signals'. It indicates some word which stands for some another word.
2. **Coding** is a method of transmitting a message between the sender and the receiver without a thirdperson knowing it.
3. Decoding is reverse to coding.
4. This type of test helps to judge the student's ability to find out the rule that codes a particular word/message and break the code to decipher the message.

Letter Coding

• In these questions, the letters in a word are replaced by certain other letters according to a specific rule to form its code. You are required to detect the coding pattern/rule and answer the questions accordingly.

Eg. If ROAST is coded as PQYUR in a certain language, then how will SLOPPY be coded in thatlanguage?

a. MRNAQN   b. NRMNQA   c. QNMRNA   d. RANNMQ

Ans: **c**

Explanation: R   O   A   S   T

        -2 ↓   +2↓   -2 ↓   +2↓   -2 ↓

        P   Q   Y   U   R

Direct Letter Coding

• In this type of coding, the code letters occur in the same sequence as the corresponding letters occur in the words.

Eg. If the word EARTH be written as QPMZS in coded form, how can HEART be written following thesame coding?

a. SQPZM   b. SQMPZ   c. SPQZM   d. SQPMZ

Ans. d

Explanation: HEART consists of same letters as EARTH. Thus code for HEART becomes SQPMZ.

Number/Symbol Coding

- In these questions, either numerical codes are assigned to a word or alphabetical code letters are assigned to the numbers.

- Letters and numbers are correlated to each other in relation to the position of the letters in English alphabet.

Eg. If MACHINE is coded as 19-7-9-14-15-20-11, how will you code DANGER?

    a. 11-7-20-16-11-24   b. 13-7-20-9-11-25

    c.10-7-20-13-11-24   d. 13-7-20-10-11-25

    Ans:**c**

    Explanation: Every letter is assigned a numerical code obtained by adding 6 to the number denoting the position of that letter in English alphabet.

Deciphering message word codes

In this type of questions, some messages are given in the coded language and the code for the particular word or message is asked.

To solve such questions, any two messages bearing a common word is picked up.

The common code word will thus represent that word.

Eg. In a certain code, 'sun shines brightly' is written as 'ba lo sul' and 'light comes from sun' as 'dopikup lo nro'. What code words are written for 'sun'?

Ans:'lo'- In both statements 'sun' is a common word and 'lo' is the common code word.

Substitution

In this type, some particular words are assigned certain substituted names.

Eg. If 'cook' is called 'butler', 'butler' is called 'manager', 'manager' is called 'teacher', 'teacher' is called'clerk' and 'clerk' is called 'principal', who will teach in the class?

Ans: Clerk, as teacher teaches in class and 'teacher' is called 'cook'.

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Mental Ability Test (MAT) -VIII
Coding and Decoding
WORKSHEET-1

Name: _____ Class: _____ Date: _____

TYPE I: Letter Coding

1. If in a certain language, MADRAS is coded as NBESBT, how is BOMBAY coded in that language?
   a. CPNCBX   b. CPNCBZ   c. CPOCBZ   d. CQOCBZ

2. If FISH is written as EHRG in a certain code, how would JUNGLE be written in that code?
   a. ITMFKD   b. ITNFKD   c. KVOHMF   d. TIMFKD

   In a certain code, TWINKLE is written as SVHOJKD, then how would FILTERS be written in the
3. same code?
   a. EHKSDQR   b. EHKUDQR   c. EGKUDQR   d. GJMSFST

TYPE II: Direct Letter Coding

4. In a coding system, FIRE is written as QHOE and MOVE as ZMWE. Following the same rule of coding, what should be the word for OVER?
   a. MWED   b. MWEQ   c. MWOE   d. MWZO

5. In a coding system, PEN is written as NZO and BARK as CTSL. How can we write PRANK in that codingsystem?
   a. CSTZN   b. NSTOL   c. NTSLO   d. NZTOL

6. In a coding system, the word CENTRAL is coded as ABCDEFG and PLANETARIUM as HGFCBDFEIJK. With the same coding, how can we express the word LANTERN?
   a. GFCDFEG   b. GFCDEFG   c. GFCDBEC   d. GFCDBEB

TYPE III: Number/Symbol Coding

7. In a certain code, the word DEAL is coded as 4-5-1-12. Following the same rule of coding, what should be the

   a. 12-4-1-25   b. 12-1-4-25   c. 10-1-4-23   d. 12-1-4-22

8. If A=2, M=26, Z=52, then BET=?
   a. 44   b. 54   c. 64   d. 72

9. If ZEBRA can be written as 2652181, how can COBRA be written?
   a. 302181   b. 3152181   c. 31822151   d. 1182153

10. If REASON is coded as 5 and BELIEVED as 7, then what is the code for GOVERNMENT?

    a. 6   b. 8   c. 9   d. 10

11. In a certain code, BRAIN is written as *%÷# and TIER is written as $ #+%. How is RENT written in that code?

    a. $\%^x$ #$ b. $\%\#^x$ $ c. $\%+^x$ $ d. $+^x$ %$

12. In a certain code language, STRING is written as %=*_$÷ and PRAISE as ?*@_$\%^x$. How will the word GRAPES be written in that code language?

    a. $÷*@^x$?%   b. $÷@*?^x$ %   c. $÷*@?^x$ %   d. None of these

13.In a certain code, DESK is written as #$52, RIDE is written as %7#$. How is RISK written in that code?

    a. %725   b. %752   c. %7#2   d. %7$#

Type IV: Deciphering message word codes

14. In a certain code language, 'col tip mot' means 'singing is appreciable', 'mot baj min' means 'dancing is good' and 'tip nop baj' means 'singing and dancing', which of the following means 'good' in that code?

    a. Not   b. min   c. baj   d. Can't be determined

15. In a certain code language, 'mink yang pe' means 'fruits are ripe', 'pe lao may mink' means 'oranges are not ripe' and 'may pe nue mink' means 'mangoes are not ripe'. Which word in that language means 'mangoes'?

    a. May   b. pe   c. nue   d. mink

16. In a certain code language, 'tom kun sud' means 'dogs are barking', 'kun jo mop' means 'dogs and horses' and 'mut tom ko' means 'donkeys are mad'. Which word in that language means 'barking'?

    a. Sud   b. kun   c. jo   d. tom

17.In a code language, 'mok dan sil' means 'nice big house', 'fit kon dan' means 'house is good' and 'warm tir fit' means 'cost is high'. Which word stands for 'good' in that language?

    a. Mok   b. dan   c. fit   d. Kon

Type V: Substitution

18. If 'white' is called 'blue', 'blue' is called 'red', 'red' is called 'yellow', 'yellow' is called 'green', 'green' is called 'black', 'black' is called 'violet' and 'violet' is called 'orange', what would be the colour of human blood?

    a. Red   b. Green   c. Yellow   d. Violet

19.If 'oranges' are 'apples', 'bananas' are 'apricots', 'apples' are chillies', 'apricots' are 'oranges' and 'chillies' are 'bananas', then which of the following are green in colour?

    a. Apricots   b. Apples   c. Chillies   d. Bananas

20. If 'pen' is 'table', 'table' is 'fan', 'fan' is 'chair' and 'chair' is 'roof', on which of the following will a person sit?

    a. Fan   b. Chair   c. Roof   d. Table

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MENTAL ABILITY TEST (MAT) –VIII
CODING AND DECODING
WORKSHEET-2

Name: _____   Class: _____   Date: _____

TYPE I: Letter Coding

1. If SUMMER is coded as RUNNER, the code for WINTER will be
   a. SUITER   b. VIOUER   c. WALKER   d. SUFFER

2. In a certain code, PRODUCTIONS is written as QQPCVEUHPMT. How is ORIENTATION written in that code?
   a. PQJDOVBSJNO   b. PQJDOUBUJPO   c. PSJFOVBSJNO   d. None of these

3. If, in a code, MIND becomes KGLB and ARGUE becomes YPESC, then what will DIAGRAM be in that code?
   a. BGYEPYK   b. BGYPYEK   c. GLPEYKB   d. LKBGYPK

4. In a certain code, BASIC is written as DDULE. How is LEADER written in that code?
   a. NGCFGT   b. NHCGGU   c. OGDFHT   d. OHDGHU

5. In a certain code, ROAD is written as URDG. How is SWAN written in that code?
   a. VXDQ   b. VZDQ   c. VZCP   d. UXDQ

6. In a certain code, FAVOUR is written as EBUPTS. How is DANGER written in that code?
   a. CBFFDS   b. CBMHDS   c. EBFHDS   d. EBHHFS

7. In a certain language, MIRACLE is coded as NKUEHRL, then how is GAMBLE coded in that language?
   a. JDOCMF   b. CLEMNK   c. HCPFQK   d. AELGMN

8. If TRUTH is coded as SUQSTVSUGI, then the code for FALSE will be
   a. EGZBKMRDE   b. EGZKMRTDF   c. EGZBKMRTDF   d. FGZBKNRTDF

TYPE II: Direct Letter Coding

9. In a coding system, TUTORIAL is written as DODNGLCF and DANCE is written as YCJMZ, how can EDUCATION be written in that code?
   a. ZYMODCLNJ   b. ZYOMCDLNJ   c. ZYOMDCLNJ   d. ZYOTNLCMD

10. In a coding system, STOVE is written as FNBLK, then how will VOTES be written in the same code?
    a. FLKBN   b. LBNKF   c. LKNBF   d. LNBKF

11. If TEACHER is coded as LMKJNMP, then how will HEART be coded?
    a. NMAPL   b. NMPKL   c. NPKML   d. NMKPL

Directions (Ques.12-14): In a secret way of writing, INDIA HAS WON FIRST GOLD MEDAL is written as JFZJU OUV SEF PJDVB REQZ ITZUQ. Bearing the method in mind, pick up the code from the answer choices for each given word.

12. FOOT	a. BEEB	b. CEEA	c. PEEB	d. SEEZ
13. DIESEL	a. ZJTVTQ	b. ZJTQVT	c. ZJEVTQ	d. BZTETV
14. WOOD	a. BEEZ	b. ZEES	c. LEEB	d. SEEZ

TYPE III: Number/Symbol Coding

15. If in a certain code, BAT=23 and CAT=24, then how will you code BALL?
    a. 27   b. 28   c. 32   d. 120

16. If WORK is coded as 4-12-9-16, then how will you code WOMAN?
    a. 4-12-14-26-13   b. 4-26-14-13-12   c. 23-12-26-14-13   d. None of these

17. If DRIVER=12, PEDESTRIAN=20, ACCIDENT=16, then CAR =?
    a. 3   b. 6   c. 8   d. 10

18. If AT=20 , BAT= 40, then CAT will be equal to?
    a. 30   b. 50   c. 60   d. 70

19. In a certain code, ORDER is written as ×÷$#÷ and BOARD is written as *×%÷$. How is ABODE written in that code?

    a. %*×$#   b. *×$#÷   c. %*×$÷   d. None of these

20. In a certain code, DEAF is written as 3587 and FILE is written as 7465. How is IDEAL written in that code?

    a. 43568   b. 43586   c. 63548   d. 48536

21. In a certain code, PRABA are coded as 27595 and THILAK are coded as 368451, how can BHARATI be coded?

    a. 9567568   b. 9675538   c. 9657538   d.9567538

TYPE IV: Deciphering message word codes

22. If 'ski rps tri' stands for 'nice Sunday morning', 'teh sti rps' stands for 'every Tuesday morning' and 'ski ptr qlm' stands for 'nice market place', which word stands for 'Sunday'?
    a. Ski   b. rps   c. tri   d. qlm

Directions (Ques.23-24): In a certain code language,

- 'pit dar na' means 'you are good'
- 'dar tok pa' means 'good and bad'
- 'tim na tok' means 'they are bad'

23. In that language, which word stands for 'they'?
    a. Na   b. tok   c. tim   d. pit

24. In that language, which word stands for 'good'?
    a. Dar   b. pit   c. tok   d. Pa

Directions (Ques.25-27): In a certain code, 'il be pee' means 'roses are blue', 'sik hee' means 'red flowers' and 'pee mit hee' means 'flowers are vegetables'

25.   How is 'red' written in that code?
    a. Hee   b. sik   c. be   d. None of these

26. How is 'roses' written in that code?
    a. il   b. pee   c. be   d. Can't be determined

27. How is 'vegetables are red flowers' written in this code?

    a. Pee sik mit hee   b. Sik pee hee be   c. il sik mit hee   d. None of these

28. In a certain code, '234' means 'spark and fire', '456' means 'spark is cause' and '258' means 'fire is effect'. Which of the following numerals is used for 'cause'
    a. 3   b. 4   c. 5   d. 6

Type V: Substitution

29.   If 'bat' is 'racket', 'racket' is 'football', 'footbal' is 'shuttle', 'shuttle' is 'ludo' and 'ludo' is 'carrom', what is cricket played with?
    a. Racket   b. Football   c. Bat   d. Shuttle

30. If 'sky' is 'star', 'star' is 'cloud', 'cloud' is 'earth', 'earth' is 'tree' and 'tree' is 'book', then where do the birds fly?
    a. Cloud   b. Sky   c. Star   d. Data Inadequate

31. If 'room' is called 'bed', 'bed' is called 'window', 'window' is called' flower' and 'flower' is called 'cooler', on what would a man sleep?
    a. Window   b. Bed   c. Flower   d. Cooler

32. If 'book' is called 'watch', 'watch' is called 'bag', 'bag' is called 'dictionary' and 'dictionary is called 'window', what is used to carry the books?
    a. Dictionary   b. Bag   c. Book   d. Watch

33. If 'cushion' is called 'pillow', 'pillow' is called 'mat', 'mat' is called 'bed sheet', 'bed sheet' is called 'cover', which will be spread on the floor?
    a. Cover   b. Bed sheet   c. Mat   d. Pillow

34. If 'orange' is called 'butter', 'butter' is called 'soap', 'soap' is called 'ink', 'ink' is called 'honey' and 'honey' is called 'orange', which of the following is used for washing clothes?
    a. Honey   b. Butter   c. Orange   d. Ink

35. If 'sand' is called 'air', 'air' is called 'plateau', 'plateau' is called 'well', 'well' is called 'island' and 'island' is called 'sky', then from where will a woman draw water?
    a. Well   b. Island   c. Sky   d. Air

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