

FIITJEE

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PART – I

MENTAL ABILITY TEST (MAT)

Held on: February 27, 2022

ANSWER KEY

1.	3 ★	2.	★	3.	2	4.	3
5.	1	6.	2	7.	4	8.	3
9.	2	10.	1	11.	3	12.	4
13.	1	14.	1	15.	4	16.	3
17.	1	18.	1	19.	4	20.	2
21.	4	22.	3	23.	4	24.	1
25.	3	26.	4	27.	1	28.	3
29.	4	30.	★	31.	2 or 3 ★	32.	1
33.	4	34.	4	35.	2	36.	1
37.	4	38.	3	39.	1	40.	2
41.	1	42.	2	43.	4	44.	1
45.	3	46.	4	47.	2	48.	3
49.	3	50.	1	51.	2	52.	1
53.	3	54.	3 or Bonus	55.	2	56.	2
57.	2	58.	4	59.	2	60.	3
61.	1	62.	2	63.	3	64.	4
65.	4	66.	3	67.	2	68.	4
69.	1	70.	1	71.	4	72.	3
73.	4	74.	3	75.	3	76.	4
77.	1	78.	2	79.	3	80.	3
81.	2	82.	2	83.	4	84.	3
85.	2	86.	1	87.	3	88.	1
89.	4	90.	1 or 3 ★	91.	1	92.	2
93.	2	94.	4	95.	4	96.	2
97.	4	98.	4	99.	3	100.	2

Note:

1. Questions given in two languages are different. According to Hindi language answer is possible i.e. 3.
2. None of the option is correct.
30. None of the option is correct as pattern is:
 $(3)^3, (5)^3, (7)^3, (9)^3, (11)^3, (13)^3$
i.e. answer is 2197.
31. Both options 2 and 3 are correct.
90. Both options 1 and 3 are correct.

HINTS & SOLUTIONS

1. 3 *

2. *

T	E	A	C	H	E	R
+1↓	+2↓	+3↓	↓	+1↓	+2↓	+3↓
U	G	D	C	I	G	U

Similarly,

S	T	U	D	E	N	T
+1↓	+2↓	+3↓	↓	+1↓	+2↓	+3↓
T	V	X	D	F	P	W

3. 2
The colour of the sky is Blue and Blue means Green.

4. 3
By adding the last 2 digit, we get the third digit, i.e.
 $\boxed{1} + 2 = 3$
 $2 + 3 = 5$
 $3 + 5 = 8$
 $8 + 5 = 13$

5. 1
By observation

6. 2
By observation

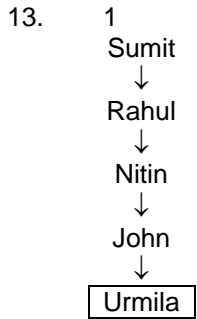
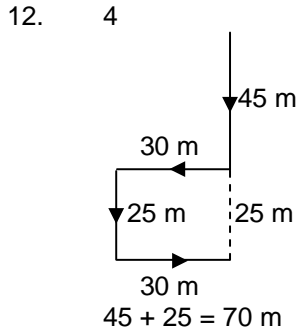
7. 4
By observation

8. 3
By observation

9. 2
By observation

10. 1
By observation

11. 3
By observation



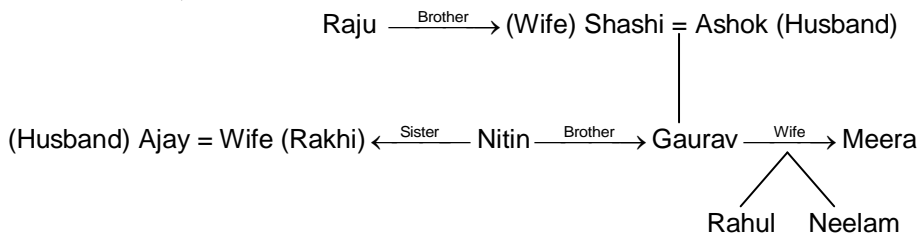
14. 1
By observation

15. 4
By observation

16. 3
By observation

17. 1
By observation

Solution for Q. 18 to 22:



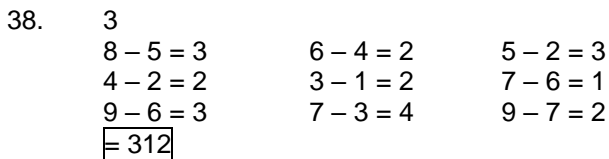
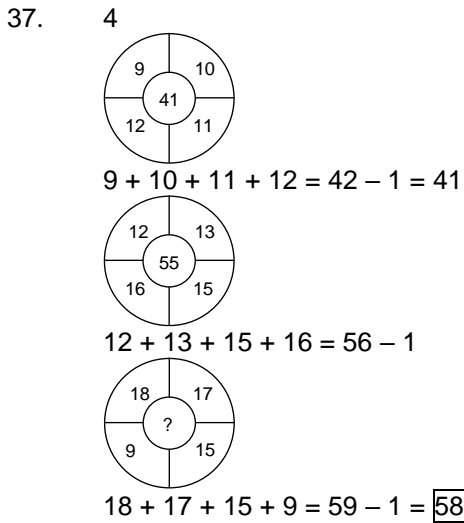
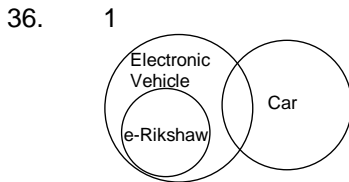
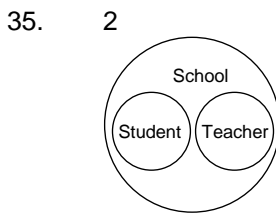
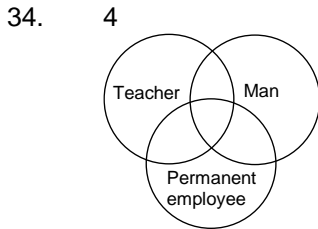
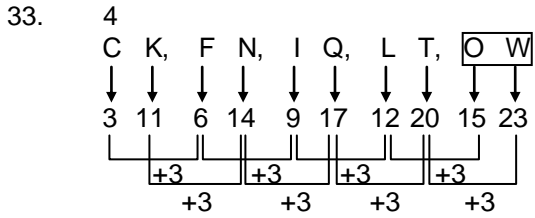
18. 1

19. 4

20. 2

21. 4

22. 3

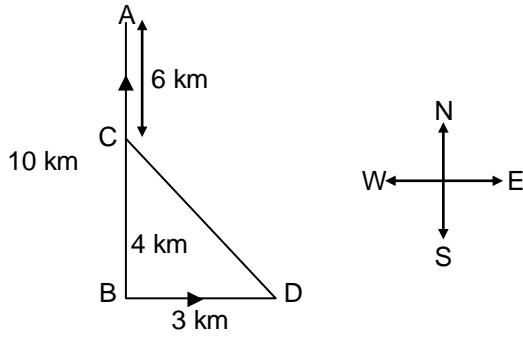


39. 1
 $3 + 19 + 12 + 95 = 129$
 $5 + 87 + 29 + 26 = 147$
 $16 + 21 + 78 + 17 = \boxed{132}$
40. 2
 $8 + 5 = \boxed{13} = \boxed{13} = 9 + 4$
 $9 + 7 = \boxed{16} = \boxed{16} = 10 + 6$
 $7 + 6 = \boxed{13} = \boxed{13} = 8 + \boxed{5}$
41. 1
 $8 \times 9 = 72$ Reverse digit = 27
 $6 \times 3 = 18$ Reverse digit $\boxed{81}$
42. 2
 $9 \times 3 = 27$
 $3 \times 7 = 21$
 $7 \times 8 = 56$
 $8 \times 9 = 72$
43. 4
 After changing signs
 $27 \div 3 \times 6 + 7 - 9$
 $9 \times 6 + 7 - 9$
 $54 - 2 = 52$
44. 1
 Student of English (2019) = 796
 Total student in year (2019) = 3990
 $\therefore \frac{796}{3990}$
 $= \frac{796 \times 100}{3990} = 19.94$
 $= 19.94\% = 20$ (approx.)
45. 3
 Total student of mathematics given years = 2120
 Total student of science in given years = 2434
 \therefore Difference = $2434 - 2120 = 314$
46. 4
 Total number of student (2021) = 3907
 Maximum student in subject Science = 859
 \therefore Sum = $3907 + 859 = 4766$
47. 2
 Highest number in 2019 in Hindi = 891
 Least number in 2019 in Social Science = 687
 $\therefore 891 - 687 = 204$
48. 3
 Total number of student all year = 19741
 Number of student of (Math, Science, Social Science) all year = 11834
 $\therefore 19741 + 11834 = 31575$

49. 3
There 'P' is not in the given word.

50. 1
By observation

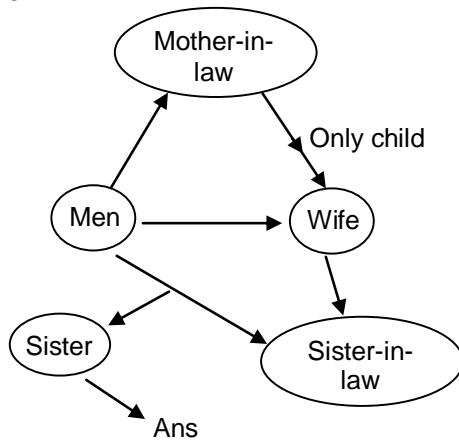
51. 2



∴ $\triangle CBD$
 $CD = \sqrt{4^2 + 3^2}$
 $CD = 5 \text{ km}$

52. 1
Position of Praveen from left = 18
 Position of Praveen from left = 12
 ∴ total student = $(18 + 12 - 1) = 29$
 Position of Mohan from left = 13th
 ∴ $29 - 13 = 16$ student in right of Mohan.

53. 3



54. **3 or Bonus**
Best possible answer is mother-in-law.
However, the gender of F is not known
so, F can be father in law also

55. 2
 $R \times H + D$
 (i) H is son of D
 (ii) R is mother of H
 \therefore R is mother and father of H respectively
 \therefore R is wife of D

56. 2
 There is no relation between any of the two.

57. 2
 $PALE \rightarrow 2134$
 $EARTH \rightarrow 41590$
 $P \rightarrow 2$
 $E \rightarrow 4$
 $A \rightarrow 1$
 $R \rightarrow 5$
 $L \rightarrow 3$

58. 4
 By "one face common rule"
 $\begin{array}{ccc} 3 & 5 & 1 \\ & 3 & 2 & 6 \end{array}$
 2 is opposite of 5

59. 2
 $2 \times (3 \times 3) = 18$

60. 3
 $4 \times (3 \times 3) = 36$

61. 1
 $8 \times (5 - 2) = 24$

62. 2
 $4 \times (5 - 2) = 12$

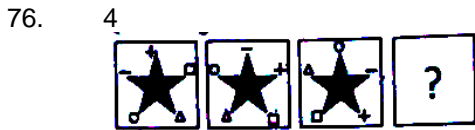
63. 3
 $\begin{array}{cccccc} & \text{---} & & \text{---} & & \\ \text{N} & \text{U} & \text{R} & \text{S} & \text{I} & \text{N} & \text{G} \\ & & & \text{---} & & & \\ & & & & & & \end{array}$

64. 4
It is the study of human and animals.

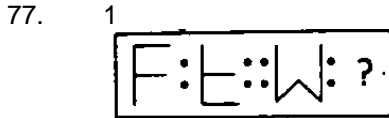
65. 4
 $\begin{array}{ccc} 18 & 20 & 14 & 16 \\ \text{R} & \text{T} & \text{N} & \text{P} \end{array}$ similarly $\begin{array}{ccc} 8 & 10 & 4 & 6 \\ \text{H} & \text{J} & \text{D} & \text{F} \end{array}$
 $\begin{array}{|c|c|c|c|} \hline \text{R} & \text{T} & \text{N} & \text{P} \\ \hline \end{array}$ $\begin{array}{|c|c|c|c|} \hline \text{H} & \text{J} & \text{D} & \text{F} \\ \hline \end{array}$
 -4
 -4

66. 3
 $196 = 14^2$
 $256 = 16^2$
 $576 = 24^2$
 $529 = 23^2$
 23 is a prime number
67. 2
 $256, 81, 64, 27, 16, 9, \boxed{4}$
 $4^4, 3^4, 4^3, 3^3, 4^2, 3^2, 4^1$
68. 4
 $2, 5, 4, 8, 6, 11, 8, 14, 10, \boxed{17}$
 +3 +3 +3 +3
 +2 +2 +2 +2
69. 1
 $2, 6, 14, 26, 42, 62, 86$
 4 8 12 16 20 24
70. 1
 aba c baca/a ba c baca/abac b aca
71. 4
 $1ZA, 3YB, 6XC, 10WD, 15VE$
 -1 -1 -1 -1
 +2 +3 +4 +5
 +1 +1 +1 +1
72. 3
 $7 \times 3 + 8 = 29$
 $4 \times 3 + 7 = 19$
 $8 \times 5 + 2 = 42$
 $5 \times x + 6 = 31$
 $5x = 25$
 $x = 5$
73. 4
 $1 \times 2 = 2, 2 \times 3 = 6, 6 \times 4 = 24$
 $6 \times 2 = 12, 12 \times 3 = 36, 36 \times 4 = 144$
 $16 \times 2 = 32, 32 \times 3 = 96, 96 \times 4 = 384$
 $8 \times 2 = 16, 16 \times 3 = 48, 48 \times 4 = 192$
74. 3
 $9 \times (8 - 1) = 63$
 $7 \times (8 - 1) = 49$
 $11 \times (11 - 1) = 110$
 $12 \times (13 - 1) = 144$

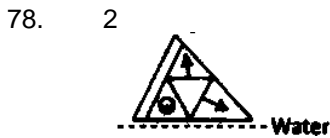
75. 3
 S I G NATURE
 A E G I N R S T U



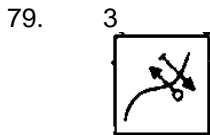
By observation



By observation



By observation



By observation

Solution for Q. 80 to 81:

Very well earned respect → fo mi la gu (i)
 Respect is always earned → de gu mi bm (ii)
 Well being is essential → bm hr la xf (iii)
 Earned money being best → zt qs mi xf (iv)
 from (i) and (ii) respect → gu
 from (ii) and (iii) is → bm
 from (iii) and (v) being → xf
 from (i) and (ii) earned → mi
 from (i) and (iii) well → la
 essential → hr

80. 3
 money → zt or qs

81. 2
 very essential → hr fo

82. 2
 9, 19, 30, 42, 55, 69, 84
 +10 +11 +12 +13 +14 +15

83. 4

0, 6, 24, 60, 120

1^3-1 2^3-2 3^3-3 4^3-4 5^3-5

84. 3

3, 8, 11, 19, 30, 49, ?

$3 + 8 = 11$
 $8 + 11 = 19$
 $11 + 19 = 30$
 $19 + 30 = 49$
 $30 + 49 = 79$

85. 2

$9 \times 2 + 1 = 19$
 $19 \times 2 + 1 = 39$
 $39 \times 2 + 1 = 79$
 $79 \times 2 + 1 = 159$
 $159 \times 2 + 1 = 319$

86. 1

25	49	16
36	81	64
11	16	?

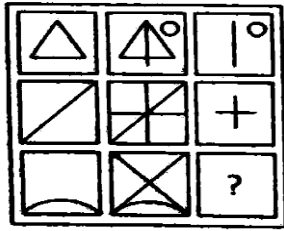
$25 = 5^2$ i.e. $5 + 6 = 11$, $49 = 7^2$ i.e. $7 + 9 = 16$
 $36 = 6^2$ $81 = 9^2$
 $16 \rightarrow 4^2$ i.e. $4 + 8 = 12$
 $64 \rightarrow 8^2$

87. 3

$2 - 1 = 1$ $4 - 2 = 2$ $7 - 5 = 2$
 $6 - 3 = 3$ $6 - 2 = 4$ $9 - 3 = 6$
 $5 - 4 = 1$ $8 - 0 = 8$ $3 - 1 = 2$

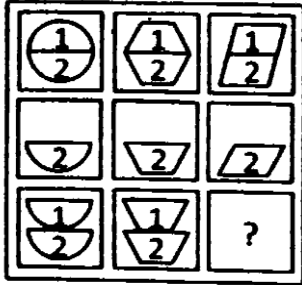
88. 1
By observation

89. 4



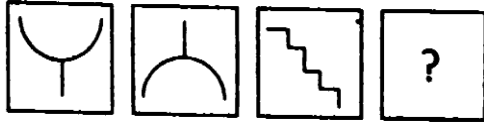
By observation

90. 1 or 3 *



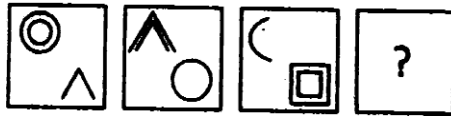
By observation

91. 1



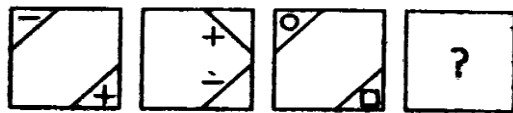
By observation

92. 2



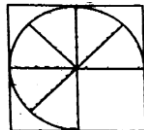
By observation

93. 2



By observation

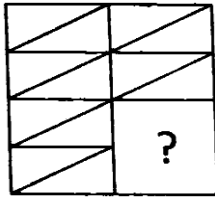
94. 4



By observation

95.

4



By observation

96.

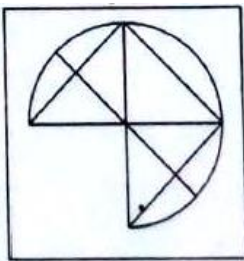
1



By observation

97.

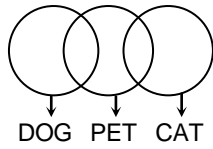
4



By observation

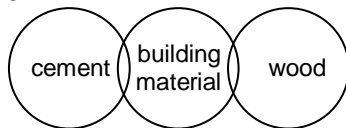
98.

4



99.

3



100.

2

