

FIITJEE Vizag Centre KEY to
NTSE – 2019 – Stage I (Andhra Pradesh State)
(For class X Students)

QUESTION PAPER CODE: 109213

MENTAL ABILITY TEST

DATE OF EXAM: 03-11-2019

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

SOLUTIONS

1. 1
2. 3
3. 2
4. 2
5. 3

Sol:
$$\begin{array}{c} \text{Ff} \\ | \\ \text{C}_m \left(\text{A}_m \text{---} \text{B}_f \right) \\ | \\ \text{D}_m \text{---} \text{E}_f \end{array}$$

6. 4

Sol: $3 \times 4, 3 \times 5, 3 \times 9, 3 \times 14, 3 \times 23, 3 \times 37;$
 $4, 5, 9, 14, 23, 37, 23 + 37$

7. 3

Sol: Check the difference between consecutive numbers

8. 2

Sol: Even place numbers have a pattern

9. 3

Sol: Check Difference

10. 4

Sol: Check Difference

11. 4

Sol: Check Difference

12. 4

Sol: Differences are 18, 36, 60, 6×15

13. 1

Sol: Even place numbers

14. 4

Sol: Check difference

15. 3

Sol: Check difference

16. 2

17. 2

18. 2

19. 1

20. 1

Sol: $D = 7, Q = 4, N = 1, A = 9, T = 5, M = 6$

21. 1

22. 3

23. 1
 24. 2
 25. 2
 26. 1
 27. 2
 28. 1
 29. 2
 30. 2
 31. 3

Sol: Mirror Image

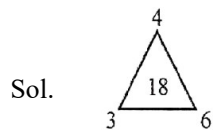
32. 4

Sol: Rotate clockwise

33. 1
 34. 3
 35. 4
 36. 4
 37. 2
 38. 3

Sol: Symbols are rotated in anti-clockwise sense

39. 2
 40. 2
 41. 4
 42. 4
 43. 1
 44. 1
 45. 3
 46. 3
 47. 3
 48. 4
 49. 1
 50. 4
 51. 4



$$4 \times 3 + 6 = 18(\text{pattern})$$

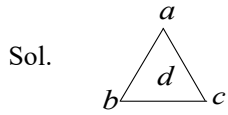
52. 4

Sol. Square all and add to get middle

53. 2

Sol. Add all four corners

54. 1



$$d = a \times (c - b)$$

55. 4

Sol. Difference prime

56. 1

Sol. Multiply diagonal numbers

57. 4

Sol. Square and get opposite

58. 3

Sol. Each row is having common difference of 1

59. 3

Sol. Difference of squares of top elements

$$\text{Ex: } (11^2 - 5^2 = 96)$$

60. 2

Sol. Common difference of 2

61. 4

Sol. Connect 1 twice and hence 2 twice

62. 3

Sol. Rotate

63. 4

Sol. Rotate

64. 1

65. 4

66. 2

67. 3

68. 3

69. 1

70. 4

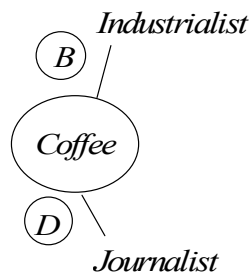
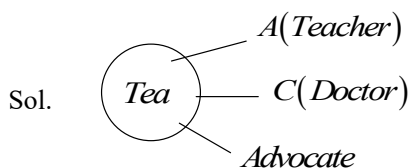
71. 4

72. 4

73. 2

74. 1

75. 1



76. 3
77. 1
78. 1
79. 1
80. 4
81. 2
82. 1
83. 1
84. 4
85. 1
86. 1
87. 3
88. 3
89. 3
90. 3
91. 3
Sol. Alternate facing
92. 2
Sol. Rotate and see up and down semicircle
93. 2
94. 1
Sol. Rotate
95. 3
Sol. All are crest down
96. 2
97. 3
Sol. Triangle missing
98. 1
Sol. Rotate
99. 1
100. 3
Sol. Rotate (clockwise)