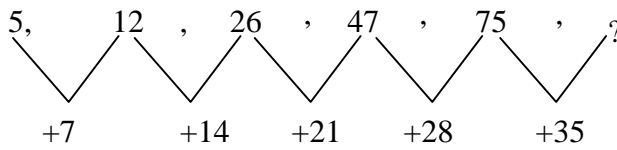


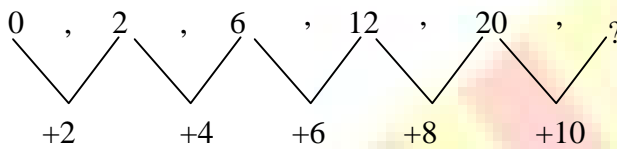
NTSE STAGE - I – 2020 - 2021
TAMIL NADU
PART – I MENTAL ABILITY TEST
SOLUTIONS

1. (2)



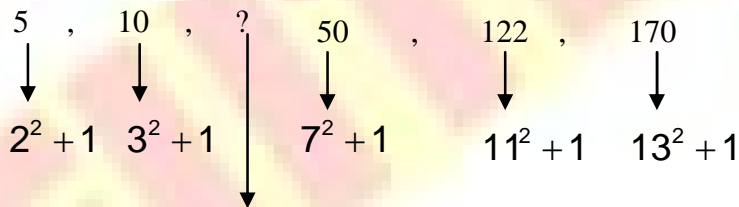
$\therefore 75 + 35 = 110$

2. (4)



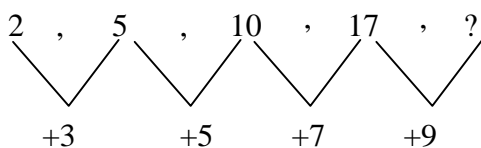
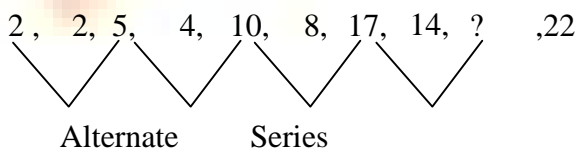
$\therefore 20 + 10 = 30$

3. (1)



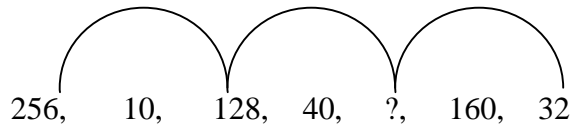
Then $5^2 + 1 = 26$

4. (3)

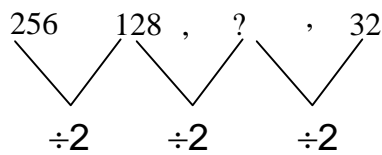


$\therefore 17 + 9 = 26$

5. (1)



Alternate series



$$\therefore 128 \div 2 = 64$$

6. (2/3)

-5A	0F	-3C	20Z	?	19y
1	6	3	26		25

Position of Alphabet - 6 = number
 From options

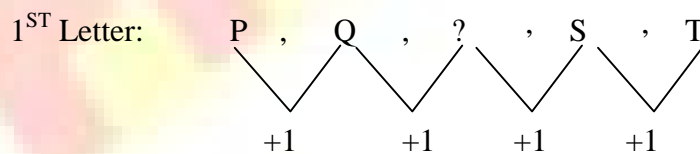
(2) 1 G (3) 2 H
 7 8

$$7 - 1 = 6 \quad 8 - 2 = 6$$

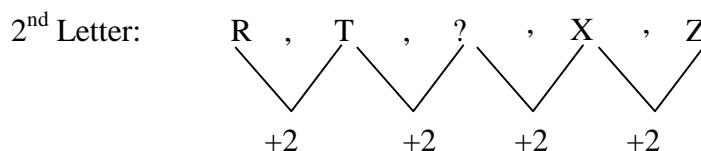
\therefore Both (2) and (3) answers

7. (4)

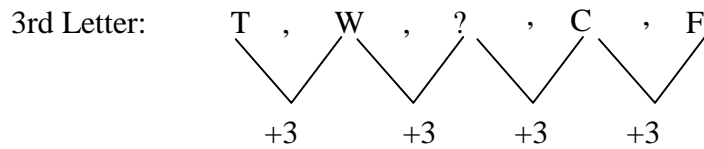
PRT, QTW, ?, SX, TZF



So, R

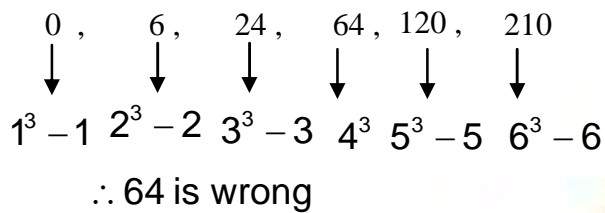


So, V

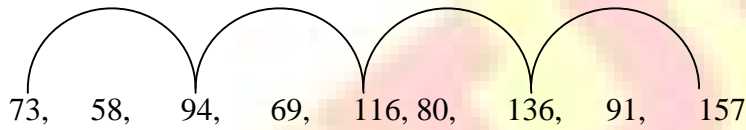


So, Z
 \therefore Answer is RVZ

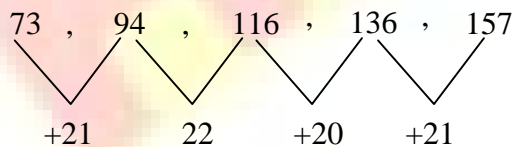
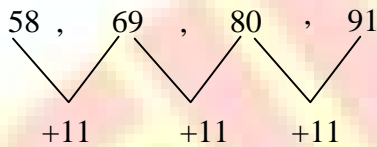
8. (2)



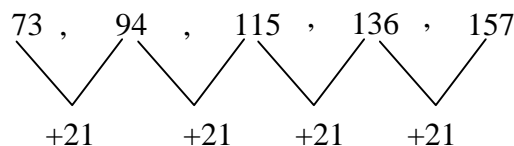
9. (3)



Alternate series:

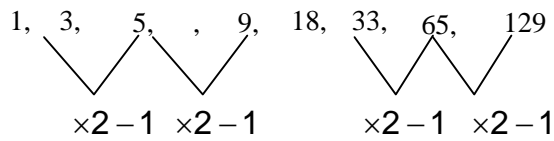


Next,



\therefore 116 is wrong;

10. (1)



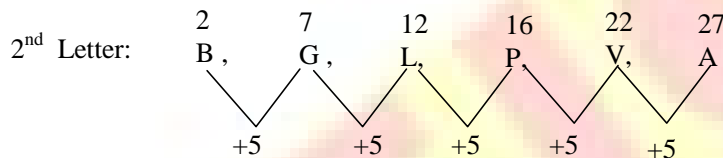
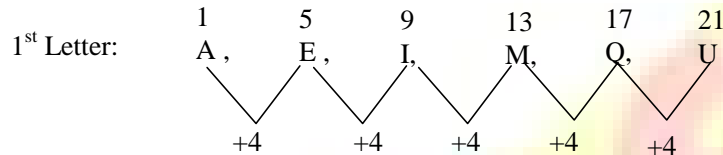
$$9 \times 2 - 1 = 17$$

$$17 \times 2 - 1 = 33$$

\therefore 18 is wrong

11. (3)

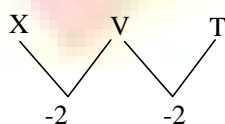
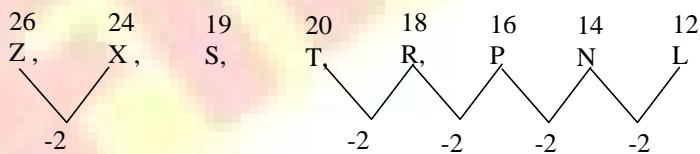
AB, EG, IL, MP, QV, UA



\therefore P is wrong

\therefore MP is wrong

12. (4)



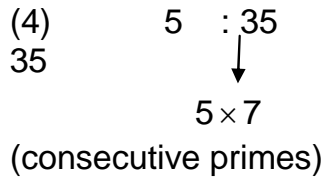
\therefore S is wrong

13. (1)
Newton

14. (3)
Petal

15. (3)
Steel: Factory

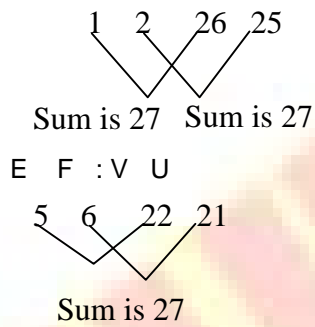
16. (4)
 $7 : 77 :: ? : ?$
 $7 \times 11 = 77$
7, 11 are consecutive primes
 \therefore From options



17. (1)
Pull

18. (2)
Jewellery

19. (4)
 $AB : ZY :: EF : ?$



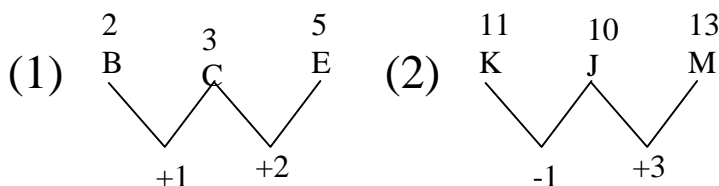
20. (4)
(7, 14, 23)
+7 +9

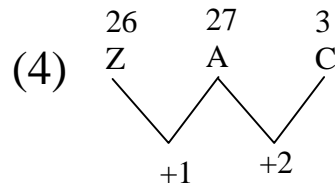
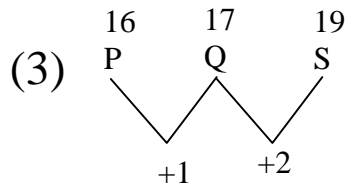


From options: (4) :

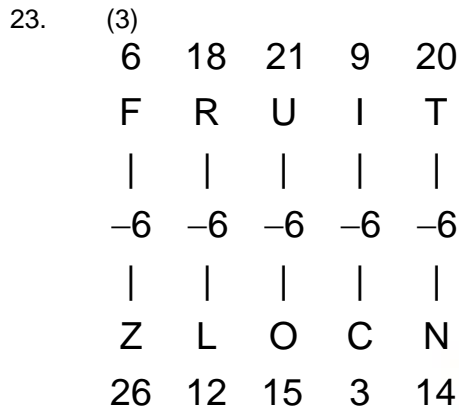
21. (4)
a b b a b a a b | a b b a b a ab
Sin Answer is a b b a

22. (2)
From options:





So, KJM is different



∴ Answer is ZFIQYL

24. (1)

L	U	G	G	A	G	E
12	21	7	7	1	7	5

$$(\text{sum} \times 2) = (12 + 21 + 7 + 7 + 1 + 7 + 5) \times 2$$

$$= 60 \times 2 = 120$$

∴ Answer is 120

25. (4)
 Red flowers – sik hee
 Gre - pee
 Fragrant – mit
 ∴ Fragrant are red flowers is
 (4) sik hee pee mit.

26. (1)
A B C X Y Z
26 25 24 3 2 1
 $a + b = 51$
 $26 + 25 = 51$
 $x + y = 5$
 $3 + 2 = 5$
 $p - q = ?$
 $11 - 10 = 1$

27. (3)
Height

28. (4)
Cow, Milk, Curd, Butter

29. (4)
As a responsible citizen we should not take which is not ours.

30. (1)
Credential

31. (4)
'U' is not there in the word

32. (1)

2	6	5	1	4	3
P	O	L	I	C	E

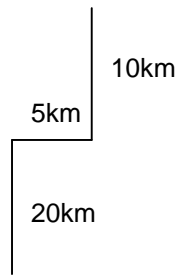
33. (3)
A, C, O, T, R
ACTOR

34. (4)
ZPB, 3 such sequences

35. (2)
Z Y ⊗C B R
←
 $6 - L + 18 - R = 24 R$

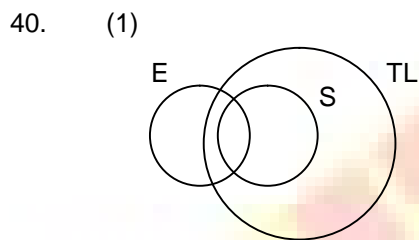
36. (1)
Potato is a Tuber, all others are root

37. (4)
South



38. (2)
 $15 + 1 = 16$
 $\frac{150000}{16} = 9375$

39. (1)
 Wrong - x
 Correct - (120 - x)
 $(120 - x) 3 - x = 80$
 $360 - 3x - x = 80$
 $4x = 280$
 $x = 70$



- 1 - ✓
 2 - ✓

Both 1 and 2 correct

41. (3)
 $8 + 7 \times 8 \div 40 - 2$
 BODMAS Rule
 $8 + \frac{7}{5} - 2$
 $= 7\frac{2}{5}$

42. (1)
 $52 - 4 \times 5 + 8 \div 2 = 36$
 $52 - 20 + 4 = 36$
 $36 = 36$

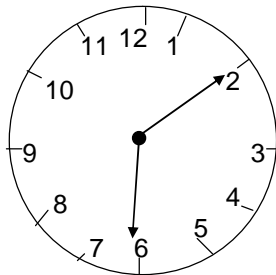
43. (2)
 $7 + 8 \times 2 - 16 \div 2 = 15$
 $7 + 16 - 8 = 15$
 $15 - 15$

44. (3)
 $5 \times 4 + 20 = 104$
 $4 + 5 \times 20 = 104$
 $4 + 100 = 104$
 $104 = 104$

45. (2)
 $5 \times 7 = 74$
 $5^2 + 7^2 = 74$
 $25 + 49 = 74$
 $7 \times 8 =$
 $49 + 64 = 113$

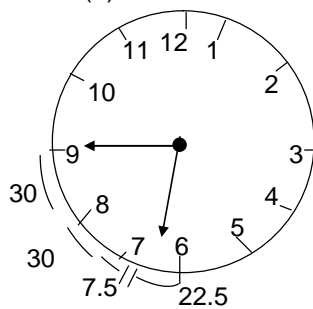
46. (4)
 $17 + 22 = 12$
 $(1 + 7)(2 + 2) = 12$
 $8 + 4 = 12$
 $26 + 19 = 18$
 $(2 + 6) + (1 + 9) = 18$
 $8 + 10 = 18$
 $(10 + 20) + (12 + 2)$
 $(1 + 0) + (2 + 0) + (1 + 2) + (2)$
 $(1 + 2) + (3 + 2)$
 $3 + 5 = 8$

47. (1)



6 : 10

48. (4)



Hour needle

60M – 30°

45M – 22.5°

$\therefore 30 + 30 + 7.5$

$= 67.5^\circ$

49. (2)

The daughter of the daughter of (his Aunt's mother)

The daughter of the (daughter of Grand mother)

The daughter of the (Aunt / Mother)

Cousin / Sister

50. (3)

14, 24, 34, 41, 42, 43, 44, 45, 46, 47, 48, 49, 54, 64, 74, 84, 94

51. (3)

The no. of no's dt \rightarrow 200 which divi 10 but not 30

divisible 10 \rightarrow 20

divisible 30 \rightarrow 6

14

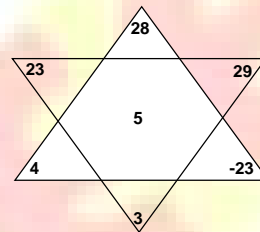
52. (1)
Total is $44 - 5 = 39$
Total = 40

$$\begin{array}{r} -18 \\ \hline \underline{\underline{22}} \end{array}$$

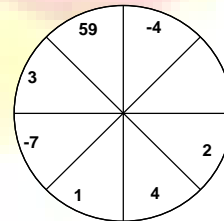
53. (4)
All the given options are true.

54. (1)
All the given options are true

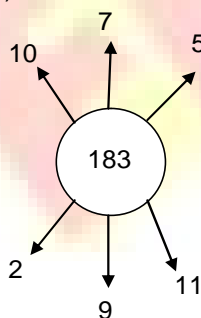
55. (1)
 $28 - 3 = 25$
 $29 - 4 = 25$
 $23 - (-2) = 25$
(1) 23



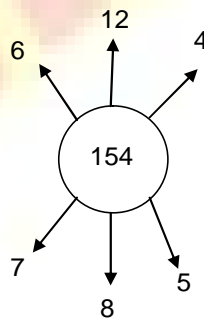
56. (2)
 $2^3 - 5 = 3$
 $4^3 - 5 = 59$
 $1^3 - 5 = -4$
 $(-7)^3 - 5 = -348$



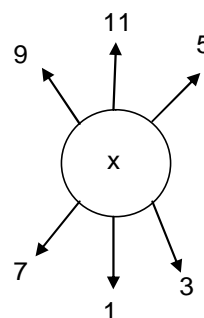
57. (2)



$$\begin{aligned} &= 5 \times 2 + 10 \times 11 \times 7 + 7 \times 9 \\ &= 10 + 110 + 63 \\ &= 183 \end{aligned}$$



$$\begin{aligned} &= 12 \times 8 + 4 \times 7 + 6 \times 5 \\ &= 96 + 28 + 30 \\ &= 154 \end{aligned}$$



$$\begin{aligned} &= 9 \times 3 + \\ &5 \times 7 + 11 \\ &\times 1 \\ &= 27 + 35 \\ &+ 11 \\ &= 73 \end{aligned}$$

58. (1)

3C	27D	9E
7I	84K	12M
5A	?	13G

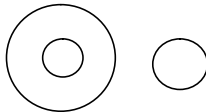
$3C \times 9E = 27D$ (D is middle letter of C and E)

$7I \times 12M = 84K$ (K is middle letter of I and M)

$5A \times 13G = 65D$ (D is middle letter of A and G)

59. (2)

Engineer, Agriculture officer, professional



60. (3)

Polygon is diagram triangle is a polygon

61. (1)

Boys, girls is a part of women

62. (3)

Haryana, Punjab as common capital Chandigarh

63. (4)

Cats, Dogs are Pets

(64 – 68)

64. (1)

The region which represents high salaried managerial cadre in IT employers

65. (4)

One employed people represents the region 1

66. (2)

low salaried managerial cadre, non IT employees represents the region is 9.

67. (4)

The region 8 represents managerial cadre low salaried IT professionals.

68. (1)

The region 4, 5, 6 and 7 represents high salaries people

(69 – 72)

(b) (i) C A D

(ii) E G C

(iii) D B F

69. (4)

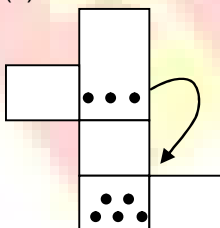
The person standing right end of row is F

70. (3)
 The person standing left end of row is E
71. (1)
 The person who is standing in the middle of row is A
72. (2)
 The person standing right of G is C

73 - 75.

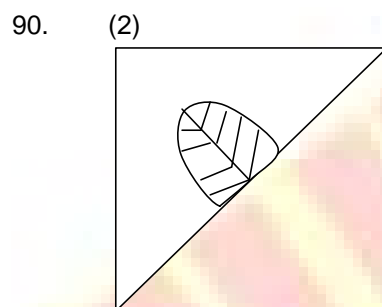
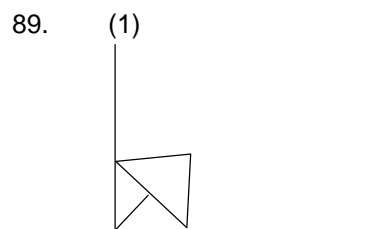
Person	P	Q	R	S
CAP	Blue	Green	White	Red

73. (1)
 R wears white cap
74. (4)
 P wears blue cap
75. (2)
 Q wears Green cap
76. (1)
 No of triangles = 17
77. (2)
 $1 \times 1 = 13$
 $2 \times 2 = 8$
 $3 \times 3 = 5$
 $5 \times 5 = 1$
 $\therefore 27$
78. (3)
 $1 + 3 + 6 = 10$
79. (1)



80. (3)
 Son's present age = x
 \therefore Father present age = $2x$
 $2x = 48$ $x = 24$
 \therefore 6 years ago \Rightarrow **18**
81. (2)
82. (3)

83. (1)
84. (3)
85. (1)
 $(3 - 2) (3 - 2) (3 - 2) = 1$
86. (4)
only 1 shaded triangle
87. (4)
shaded region on same direction
88. (3)
number of gap between dot and arrow should be 4.



91. (3)
The arrow line (\uparrow) is moving 90° clockwise.
The dot-line (\uparrow) is moving 90° anti-clockwise.
92. (2)
In fig(A) the shaded part is 1
fig (B) the shaded part is 2
so, its increasing.
93. (1)
From fig. (A) to fig (B), square is constant and circle is moving 180° clockwise.
from fig (B) to fig (C)
Now, circle is constant & square is moving 90° anti clockwise.
This process is repeating.
94. (2)
95. (1)
First letter is +4.
second letter is +3 and mirror image of that letter.

96. (4)
97. (2)
98. (1)
square appears in fig (B)
similarly, circle should be there.
99. (3)
100. (2)

***** All the best *****