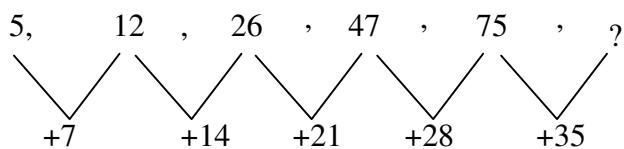


NTSE STAGE-I-2020-2021
TAMIL NADU

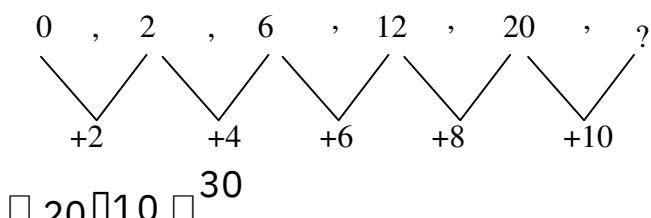
PART-I MENTAL ABILITY TEST
SOLUTIONS

1. (2)



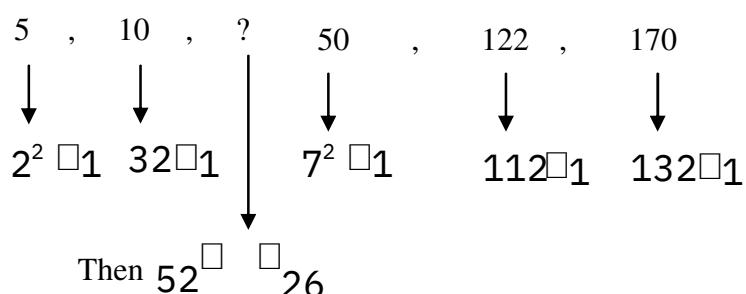
75 35 110

2. (4)



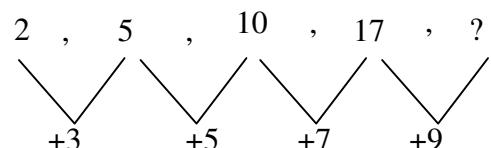
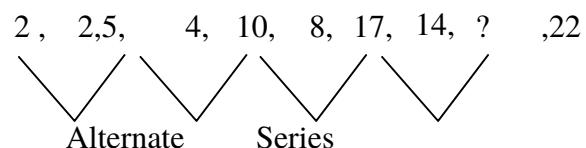
20 10 30

3. (1)



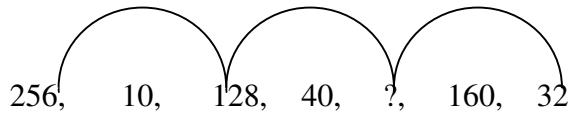
1

4. (3)

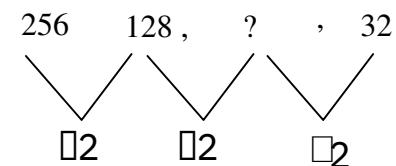


17 9 26

5. (1)



Alternate series



128 2 64

6. (2/3)

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

Position of Alphabet - 6 = number

From options

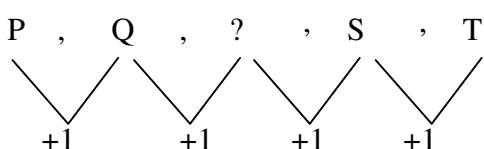
(2) 1 G (3) 2 H

7 8
7 1 6 6
 Both (2) and (3) are answers

7. (4)

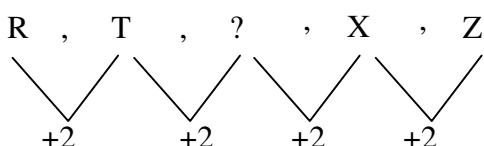
PRT, QTW, ?, SX, TZF

1st Letter:



So, R

2nd Letter:



So, V

3rd Letter: T , W , ? , C , F

So, Z
□ Answer is RVZ

8. (2)
- 0 , 6 , 24 , 64 , 120 , 210
- ↓ ↓ ↓ ↓ ↓ ↓
- 13 □ 12³ □ 2 33 □ 3 4³ 5³ □ 563 □ 6
- 64 is wrong

9. (3)
-

Alternate series:

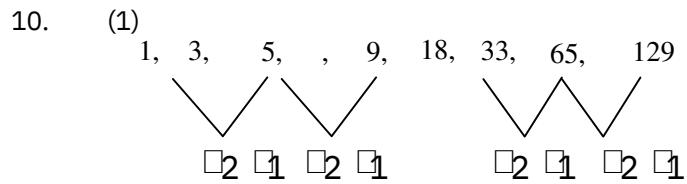
58 , 69 , 80 , 91

73 , 94 , 116 , 136 , 157

Next,

73 , 94 , 115 , 136 , 157

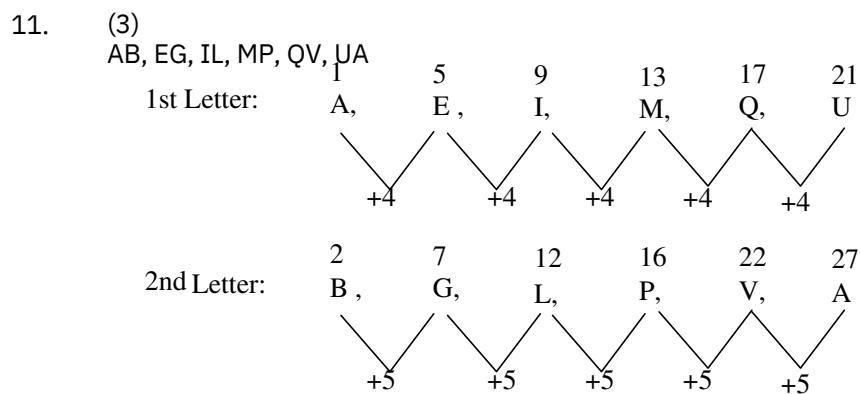
□ 116 is wrong;



90201017

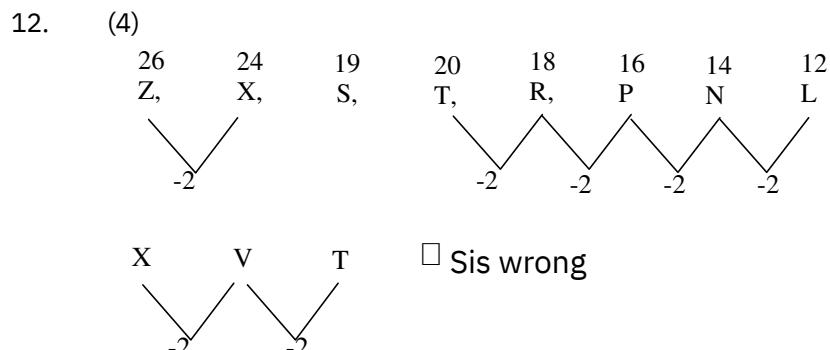
170201033

018 is wrong



P is wrong

MP is wrong



13. (1)
Ne wto n

14. (3)
Petal

15. (3)
Steel: Factory

16. (4)
 $7 : 77 :: ? : ?$
 $7 \square 11 \square 77$

7, 11 are consecutive primes
 From options

$$\begin{array}{ccc} (4) & 5 & : 35 \\ 35 & & \downarrow \\ & 5 \square 7 & \end{array}$$

(consecutive primes)

17. (1)
 Pull

18. (2)
 Jewellery

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

$$\begin{array}{ccc} & & : ? \\ & 1 & 2 & 2625 \\ & \diagdown & \diagup & \diagup \\ 5 & 6 & 2221 & \\ \diagup & \diagdown & \diagup & \\ \text{Sum is } 27 & \text{Sum is } 27 & \end{array}$$

$$\begin{array}{ccc} E & F & : V U \\ 5 & 6 & 2221 \\ \diagup & \diagdown & \diagup \\ \text{Sum is } 27 & \end{array}$$

20. (4)
 $(7 \quad 14 \quad 23)$

From options: (4) :

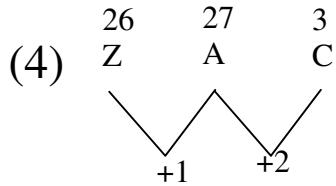
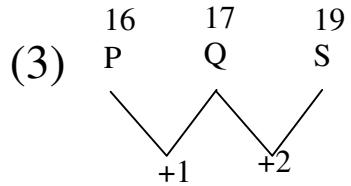
$$(18 \quad 25 \quad 34)$$

21. (4)
 $a b \underline{bab} a ab | \underline{abb} a \underline{baab} _$
 So Answer is a b b a

22. (2)
 From options:

(1) $\begin{array}{ccc} 2 & 3 & 5 \\ B & & E \\ \diagdown & \diagup & \diagup \\ +1 & +2 & \end{array}$

(2) $\begin{array}{ccc} 11 & 10 & 13 \\ K & J & M \\ \diagdown & \diagup & \diagup \\ -1 & +3 & \end{array}$



So, KJM is different

23. (3)
 6 18 21 9 20
 F R U I T
 | | | | |
 □6 □6 □6 □6 □6
 | | | | |
 Z L O C N
 26 12 15 3 14
 6 121523 5 18
 F L O W E R
 | | | | | |
 □□6 □6 □6 □6 □6 □6
 | | | | | |
 26 6 9 172512
 Z F I Q Y L
 □ Answer is ZFIQYL

24. (1)

L	U	G	G	A1	G	E
12	21	7	7	□	7	5

 (sum □ 2) □ (12 □ 21 □ 7 □ 7 □ 1 7 □ 5) □ 2
 □ 60 □ 2 □ 120

□ Answer is 120

25. (4)
 Red flowers - sik hee
 Gre - pee
 Fragrant - mit
 □ Fragrant arer ed flowers is
 (4) sik hee pee mit.

26. (1)

A B C X Y Z
26 25 24 3 2 1

$$a + b = 51 \quad 26 + 25 = 51 \quad x + y = 5 \quad 3 + 2 = 5 \quad p - q = ? \quad 11 - 10 = 1$$

(3)

Height

(4)

Cow, Milk, Curd, Butter

27. (4)

As a responsible citizen we should not take which is not ours.

(1)

28. Credent ia l

29.

30.

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
ACT OR

34. (4)

ZPB, 3 such sequences

35. (2)

Z Y □.....C B R



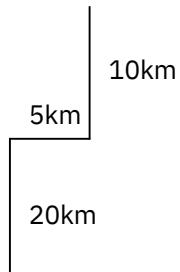
$$6 - L + 18 - R = 24 \quad R$$

36. (1)

Potato is a Tuber, all others are root

37. (4)

Sout h

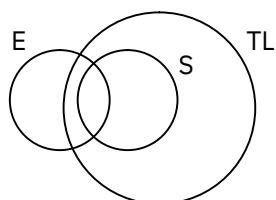


38. (2)

$$\begin{array}{r} 15 + 1 = 16 \\ \hline 150000 \quad \square 9375 \\ \hline 16 \end{array}$$

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

40. (1)



1 ✓
 -
 2 ✓

Both 1 and 2 correct

41. (3)

$$\begin{array}{r} 8 \square 7 \square 8 \square 40 \square 2 \\ \text{BODMAS Rule} \\ 87 \square \frac{4}{5} \square 2 \\ \qquad \qquad 2 \\ \square 7 \square 5 \end{array}$$

42. (1)
52□4□5□8□2□ 36
52□20□4□36
36□36

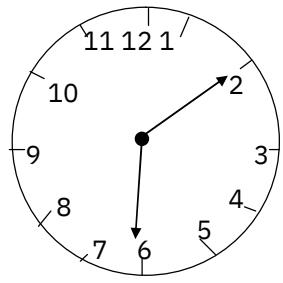
43. (2)
7□8□2□16□2□ 15
7□16□8□15
15□15
(3)

44.
5□4□20□104
4□5□20□104
4□100□104
104□104

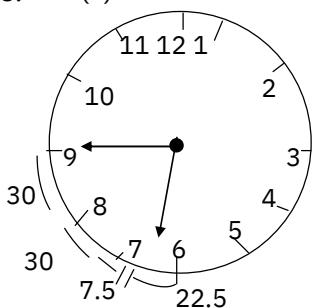
45. (2)
5□7□74
52□72□74
25□49□74
7 □ 8 □
49□64□113

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

47. (1)



48. (4)



Hour needle

60M - 30°

45M - 22.5°

30 30 7.5

67.5

(2)

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

49.

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 200 which divi 10 but not 30
 divisible 10 20

divisible 30 6

14

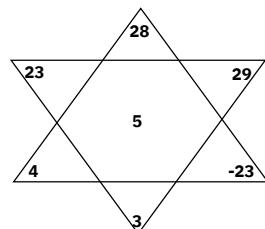
52. (1)
 Total is $44 - 5 = 39$
Total $\square 40$

$\square 18$

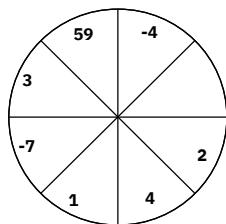
$\underline{22}$

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)
 $23 \square 5 \square 3$
 $43 \square 5 \square 59$
 $13 \square 5 \square 4$
 $\square 7 \square 35 \square 348$



57. (2)

$$= 5 \square 2 + 10 \square 11 \quad \square 7 + 7 \square 9$$

$$= 10 + 110 + 63$$

$$= 183$$

$$= 12 \square 8 + 4 \square 7 + 6 \quad \square 5$$

$$= 96 + 28 + 30$$

$$= 154$$

$$= 9 \square 3 +$$

$$5 \square 7 + 11$$

$$\square 1$$

$$= 27 + 35$$

$$+ 11 = 73$$

58. (1)

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

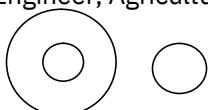
3C + 9 E = 27 D (D is middle letter of C and E)

7I + 12 M = 84 K (K is middle letter of I and M)

5A + 13 G = 65 D (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

(3)

62. (4)

Haryana, Punjab as common capital Chandigarh

(4)

63. (3)

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.

(4)

67. (1)

The region 8 represents managerial cadre low salaried IT professionals.

(1)

68. (4)

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

(4)

69. (1)

The person standing right end of row is F

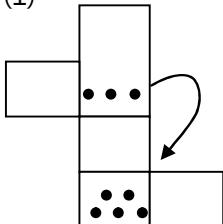
70. (3)
The person standing left end of row is E
71. (1)
The person who is standing in the middle of row is A
- (2)
72. The person standing right of G is C

73- 75.

Person	P	Q	R	S
CAP	Blue	Green	White	Red

73. (1)
R wears white cap
74. (4)
P wears blue cap
- (2)
75. Q wears Green cap
- (1)
76. No of triangles = 17
- (2)
77. $1 \square 1 = 13$
 $2 \square 2 = 8$
 $3 \square 3 = 5$
 $5 \square 5 = 1$

$\square 27$

78. (3)
79. $1 + 3 + 6 = 10$
(1)
- 
80. (3)
Son's present age = x
 \square Father present age = $2x$
 $2x = 48$ $x = 24$
 \square 6 years ago $\square 18$
81. (2)
- . (3)

82

- 83 (1) (3) (1)
 $(3-2)(3-2)(3-2) = 1$
.

84

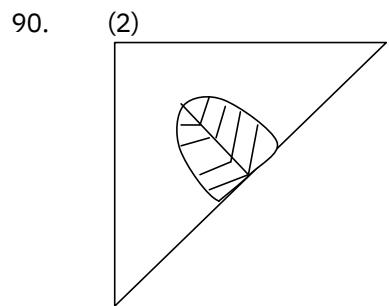
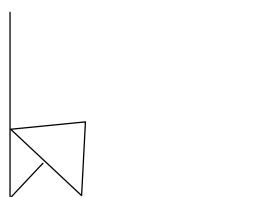
.

86.
85 only 1 shaded triangle

87. (4)
shaded region on same direction

88. (3)
number of gap between dot and arrow should be 4.

89.



91. (3)
The arrow line (↔) is moving 90° clockwise.
The dot-line (↑) 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.

(1)
93. 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.

(2)
94 (1)
.

First letter is +4.
second letter is +3 and mirror image of that letter.

95

96 (4) (2) (1)
square appears in fig (B)
. similarly, circle should be there.

97 (3)
. (2)

98.

100.