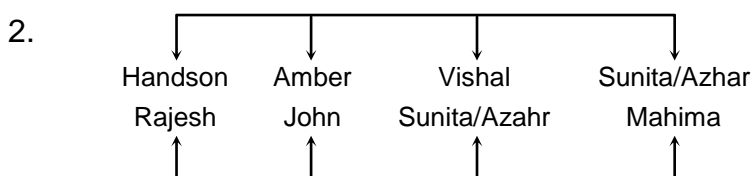


**FIITJEE SOLUTIONS**  
**NTSE STAGE 2 2020-21**  
**MENTAL ABILITY TEST (MAT)**

1. 3, 15, 63, 129, 1023, 4095  
 $3 = 2^2 - 1, 15 = 2^4 - 1, 63 = 2^6 - 1, 129 = 2^7 + 1$   
 $1023 = 2^{10} - 1, 4095 = 2^{12} - 1$   
 So wrong term is 129



3. The schools of studies (Science/Humanities/Social Science Commerce/Edu./Engg and Tech)  
 Come under the jurisdiction of APC

4. APC, PD and FC are at the same level

5. **Statements:** Somedonutes are **dumb**  
 Some dumbs are sweets  
 All sweets are tall  
 No tall is donut  
 All donuts are **sugar**

**Conclusion**

(i) Some sweets are sugar

**Relevant statements:**

All sweets are tall

No tall is donut

All donuts are sugar

$(A + E) + A = E + A = O^*$

Some sugar are not sweets.

So some sweets are sugar is false conclusion

6. **BUILD : CAWRQ**

Letters U and I having reflection symmetry

Letters A and W having reflection symmetry

So, **LAUGH : GHTZL**

7. The lady clearly remembers that they got married in the month of February of the year 1955.

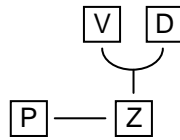
The man clearly remembers that he celebrated his 21<sup>st</sup> birthday with same year and it was Thursday, the 3<sup>rd</sup> February as a bachelor

Before 13<sup>th</sup> of February and after 3<sup>rd</sup> February and it was **WEEKEND**

i.e. Saturday or Sunday

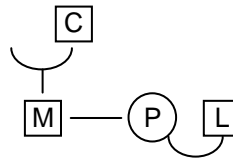
3<sup>rd</sup> February – Thursday, 4<sup>th</sup> February – Friday, 5<sup>th</sup> February – Saturday, 6<sup>th</sup> February – Sunday

8. + → Mother  
 - → Wife  
 × → Brother  
 ÷ → Son



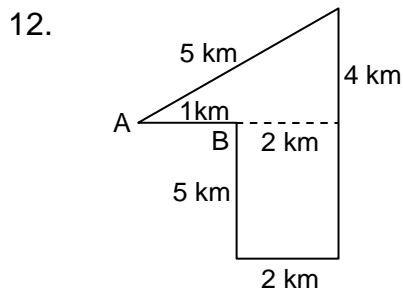
If  $P \times Z \div D - V$   
“V is father of P”

9.  $M \div C + P - L$   
 M is brother-in-law of L



10. Spectacles, Earrings, Shoes, Bangles are wearing objects but bicycle is different thing from this group

11.  $8 \times \square \square \square$
- 8 is correct
- $\begin{matrix} \square & \square & \square \\ \times & & \\ \hline \square & \square & \square \end{matrix}$
- $\begin{matrix} \square & \square & \square \\ \times & & \\ \hline \square & \square & \square \end{matrix}$  → One digit is correct but wrong place
  - $\begin{matrix} \square & \square & \square \\ \times & & \\ \hline \square & \square & \square \end{matrix}$  → None
  - $\begin{matrix} \square & \square & \square \\ \times & & \\ \hline \square & \square & \square \end{matrix}$  → Two digits are correct
  - $\begin{matrix} \square & \square & \square \\ \times & & \\ \hline \square & \square & \square \end{matrix}$  → Two digits are correct and rightly
- Correct code  
 $\begin{matrix} \square & \square & \square \\ \times & & \\ \hline \square & \square & \square \end{matrix}$



13. Number of odd dates in a week more than 1 so we can't say about the day
14. Many numbers possible
15. From statement-1  
 Pari > Ashvi > Kimaya > Vihane
16. **P A C M K I N G** after arrangement **A P E C A M I K G N**

17. Z X W, V T S, R P O, N L K, ??, F D C

Z, V, R, N, 

J
10

X, T, P, L, 

H
8

18. Sun → 520 visitors

Other day → 100 visitors

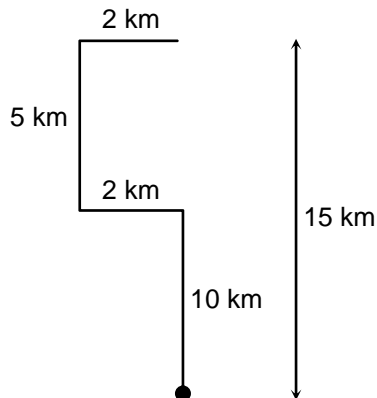
$$\left. \begin{array}{l} 1^{\text{st}} \text{ (Sun)} \\ 8^{\text{th}} \text{ " } \\ 15^{\text{th}} \text{ " } \\ 22^{\text{th}} \text{ " } \\ 29^{\text{th}} \text{ " } \end{array} \right\} = 520 \times 5 = 2600$$

Other 25 days =  $100 \times 25 = 2500$

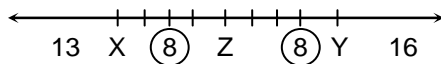
5100

Average =  $\frac{5100}{30} = 170$

19.



20.



21. The series is based on the following difference:

X1, X5, X9, X13, X17, X21

This is further based on the difference of 14

So, answer is 2714985

Option (1)

22.  $(4 \times 11) + (11 \times 1^2) = 55$

$(55 \times 9) + (9 \times 3^2) = 576$

$(576 \times 7) + (7 \times 5^2) = 4207$  and so on

Option (2)

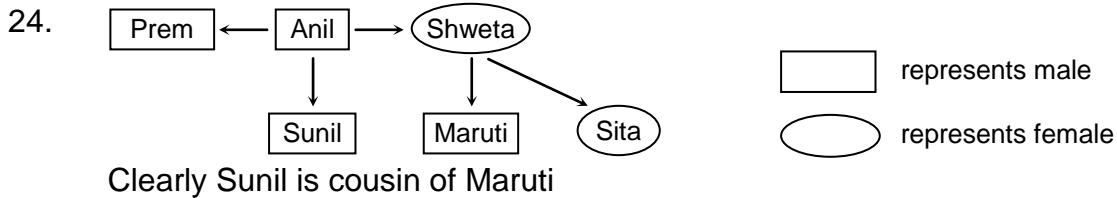
23. Z = 2197, R = 729, P = 512, J = ?

$Z = 26 \Rightarrow \left(\frac{26}{2}\right)^3 = 13^3 = 2197$

$$R = 18 \Rightarrow \left(\frac{18}{2}\right)^3 = 9^3 = 729$$

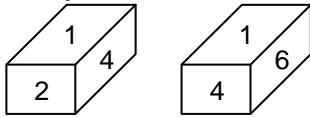
$$P = 16 \Rightarrow \left(\frac{16}{2}\right)^3 = 8^3 = 512$$

$$I = 10 \Rightarrow \left(\frac{10}{2}\right)^3 = 5^3 = 125$$



25. By observation

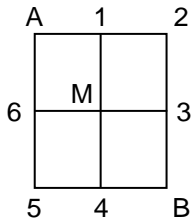
26. 1 adjacent to 2, 4, 6 means opposite of 1 will be either 3 or 5



Therefore, 3 and 5 are definitely adjacents

27. By comparing,  
 Sun shines brightly => ba lo sul... (1)  
 Light comes from sun => dopikup lo nro... (2)  
 We get, sun common  
 So, Sun code will be 'lo'  
 Houses are brightly lit => 'kado ula ariba' ... (3)  
 By comparing (1) and (3)  
 Brightly would be 'ba'

28. Let mark the pathways as follows:



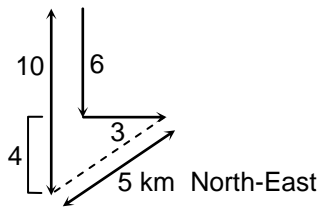
He will be covering like this

- I-way : A 1 2 3 B
- II-way : A 1 M 3 B
- III-way : A 1 M 4 B
- IV-way : A 6 M 3 B
- V-way : A 6 M 4 B
- VI-way : A 6 5 4 B

There are total 6-ways

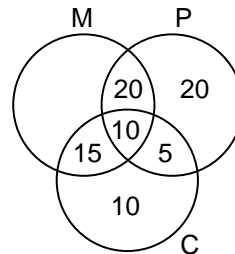
29. By observation

30.



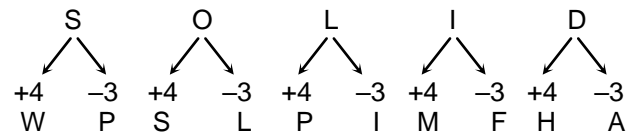
31.

- $n(M) = 45$
- $n(P) = 55$
- $n(C) = 40$
- $n(M \cap P) = 30$
- $n(P \cap C) = 15$
- $n(M \cap C) = 25$
- $n(M \cap P \cap C) = 10$



Total % of students studying  
 $= 20 + 10 + 15 + 5 + 10 + 20 = 80\%$   
 Total % of students not studying  $= 100 - 80 = 20\%$

32. Each letter of SOLID is first decoded as +4 and then followed by -3



Similarly the code for ATEXXQIBVO will be WATER

33. Opposite pair of dots will be

- $2 \leftrightarrow 2$
- $3 \leftrightarrow 5$
- $1 \leftrightarrow 6$       Opposite to 1 will be 6

34.  $Z(26) + (4 + 4 + 5) = 39 \Rightarrow 13(M)$   
 $S(19) + (7 + 2 + 5) = 33 \Rightarrow 7(G)$

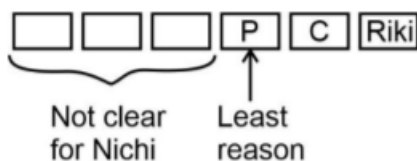
35. **Logical -**

- Sri > Ruchi > Puchi
- Nichi > Chiki
- Puchi > Chiki

**Reasoning-**

- Sri > Ruchi > Puchi
- Riki > Nichi > Chiki > Sri > Ruchi > Puchi

**Logical order -**

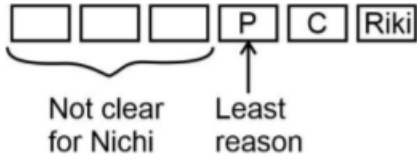


36. **Logical –**  
 Sri > Ruchi > Puchi  
 Nichi > Chiki  
 Puchi > Chiki

**Reasoning-**

Sri > Ruchi > Puchi  
 Riki > Nichi > Chiki > Sri > Ruchi > Puchi

**Logical order-**



37. Blue → 1 male patient  
 Pink → 1 female patient  
 Green → 2 male and 3 female  
 Red → -1 male and -2 female  
 B → 10 → 10 × 1 = 10 male  
 P → 06 → 06 × 1 = 06 female  
 G → 07 → = 14 male + 21 female  
 R → 03 → -3 male - 6 female

(24 - 3) male and (27 - 6) female  
 21 male and 21 female

**2<sup>nd</sup> sequence**

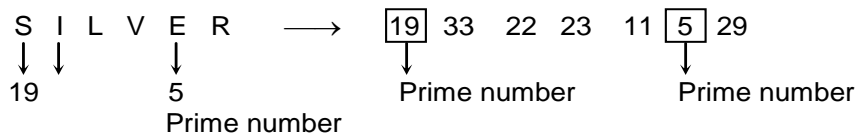
B P G B B G P B R P B P B G G R B G B B G P P R G B  
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26  
 ↓  
 P R B B B G P B R R B R B G B R B G B B B R P R B B

B → 14 → 14 male  
 P → 2 → 2 Female  
 G → 3 → 6 male + 9 female  
 R → 7 → -7 male -14 female

13 male + (-3 female)  
 21 - 3 = 18 female

38. Prime number as it is in it position

4 9 1 13 15 14 4 → 22 33 1 13 35 27 22  
 D I A M O N D ↓ 2 × 2 ↓  
 Prime number Prime number as it is  
 B R O N Z E → 2 23 335 27 21 3 5  
 2 5  
 ↓ ↓  
 Prime number Prime number



39. Tuesday noon to next Tuesday 2 PM = 170 hours

$$\text{Time gain} = 2 + 4 + \frac{48}{60} = \frac{34}{5} \text{ min}$$

$\frac{34}{5}$  min gained in 170 hours

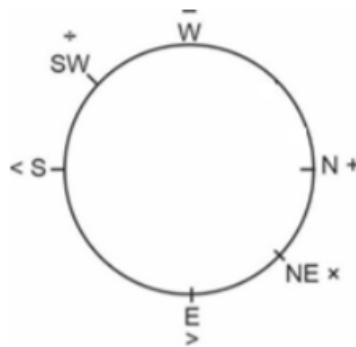
$$1 \text{ min gain} = \frac{170 \times 5}{34} = 25 \text{ hours}$$

$$2 \text{ min slow} = 2 \times 25 \text{ hours} = 50 \text{ hours}$$

$$\text{Thursday 12 noon} + 50 \text{ hours} = \text{Thursday 2 pm}$$

Option (3)

40. North will become West and so on. So the diagram will be as follows:



While solving the options and substituting the signs

$$(1) 6 \text{ N } 4 \text{ SW } 8 \text{ NE } 2 \text{ E } 9 \text{ W } 6 \text{ NE } 2 \text{ SW } 3 \text{ E } 3 \text{ NE } 2 \text{ SW } 1 \text{ W } 5$$

$$= 6 + 4 \div 8 \times 2 > 9 - 6 \times 2 \div 2 > 3 \times 2 \div 1 - 5$$

$$= 6 + \frac{4}{8} \times 2 > 9 - 6 \times \frac{2}{3} > 3 \times \frac{2}{1} - 5$$

$$= 6 > 5 > 1 \text{ condition satisfied}$$

41. 1

$$+ \rightarrow 7:25 + 0:05 = 7:30$$

$$\times \rightarrow 5:15 + 0:15 = 5:30$$

$$\div \rightarrow 9:00 - 0:20 = 8:40$$

$$< \rightarrow 10:55 + 0:25 = 11:20$$

$$> \rightarrow 3:30 - 0:30 = 3:00$$

$$= \rightarrow 1:05 + 0:35 = 1:40$$

$$- \rightarrow 11:25 - 0:10 = 11:15$$

$$(1) \quad 6 - 4 \times 1 \div 2 + 3 > 1 \times 8 \div 4$$

$$4 + 3 > 2 \text{ (correct)}$$

$$(2) \quad 6 + 4 - 1 \times 2 \div 3 > 1 = 8 < 4$$

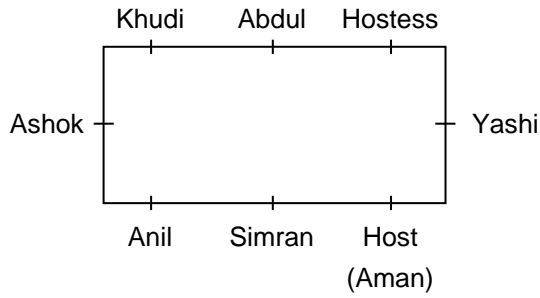
$$(3) \quad 6 - 4 < 1 \div 2 > 3 = 1 + 8 \times 4$$

$$2 < \frac{1}{2} > 3 = 33$$

$$(4) \quad 6 \div 4 \times 1 \times 2 + 3 = 1 - 8 > 4$$

$$3/2 \times 2 = -7 \text{ Clearly only (1) is correct}$$

42.



43. M → 2, 5    E → 1, 7    R → 2, 1  
           5, 2            5, 4            8, 1  
           6, 1    7, 6

C → 3, 6    U → 1, 2    Y → 1, 1    J → 2, 7  
           4, 7    5, 1    3, 4            3, 8  
           7, 1                            8, 3

P → 3, 1    I → 3, 3    T → 1, 4    N → 3, 5  
           4, 6    6, 7    6, 4    4, 2  
   8, 6    6, 5

Codes are based on sum of digits of respective letters

M	→	7	}	Reject two digit values
E	→	8, 9		
R	→	3, 9		
C	→	9, 8, 11		
U	→	3, 6		
Y	→	2, 7, 11		
J	→	9, 11		
P	→	4, 10		
I	→	6, 13		
T	→	5, 10, 14		
N	→	8, 6, 11		

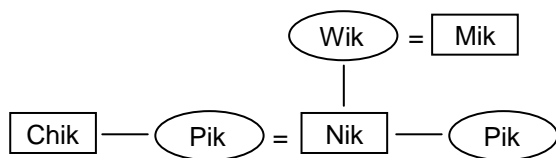
M E R C U R Y → 7 8 3 8 3 9 2

After shuffling : 3 3 7 9 2 8 8

Similarly N E P T U N E → 6 9 4 5 3 8 8

After shuffling : 3 5 9 4 6 8 8

44.



Where  means male

means female

= means married couple

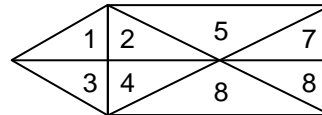


45.  $+ \rightarrow 78^\circ \rightarrow 13 + 5 = 18$   
 $- \rightarrow 162^\circ \rightarrow 27 - 7 = 20$   
 $\times \rightarrow 210^\circ \rightarrow 35 + 9 = 44$   
 $\div \rightarrow 114^\circ \rightarrow 19 - 11 = 08$   
 $= \rightarrow 240^\circ \rightarrow 40 + 13 = 53$   
 $\leftrightarrow \rightarrow 312^\circ \rightarrow 52 - 15 = 37$   
 6:44, 7:08, 9:18, 10:20, 2:53  
 $\downarrow \quad \downarrow \quad \downarrow \quad \downarrow \quad \downarrow$   
 $\times \quad \div \quad + \quad - \quad =$   
 $8 \times 20 \div 5 + 9 - 3 = 38$   
 $8 \times 4 + 6 = 38$   
 $38 = 38$

46. QUARANTINE  
 Second appearance is A. And (A + 4) i.e. N and seven letters before N i.e. **U**

47.  $(12 + 3) \div 5 = 3,$   
 $(15 + 5) \div 4 = 5,$   
 $(21 + 4) \div 5 = 5,$   
 $(29 + 7) \div 4 = 9,$   
 So answer is a = 5

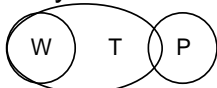
48.  $\Delta 1, \Delta 12, \Delta 13, \Delta 2, \Delta 24, \Delta 246, \Delta 245, \Delta 3,$   
 $\Delta 34$   
 $\Delta 4, \Delta 5, \Delta 578, \Delta 6, \Delta 678, \Delta 7, \Delta 78, \Delta 8$   
 Hence, number of triangle is 17



49. Lion is related to claws in the same way Egle is related to Talon
50. Total number of students appeared i.e. 500 and number of students who failed in at least two subjects i.e.  $10 + 12 + 5 = 39$   
 So,  $\frac{39}{500} \times 100 = 7.8\%$

51. Seed  $\rightarrow$  sprout  $\rightarrow$  Sapling  $\rightarrow$  Plant  $\rightarrow$  Tree

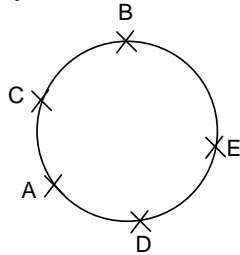
52. Only conclusion I follow



As if all women are trains then some trains are women is correct and the second conclusion does not follow as there is no confirm relation between women and painters.

53. A B A C U S  
 $\downarrow +2 \quad \downarrow +2 \quad \downarrow +2 \quad \downarrow +2 \quad \downarrow +2 \quad \downarrow +2$   
 C D C E W U

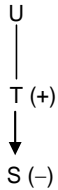
54. By observation



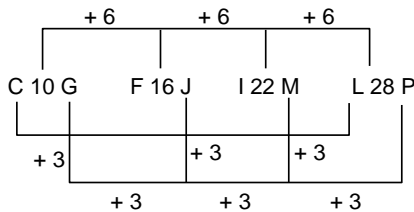
55. From Dice (iii) and (iv) two sides are common between them i.e. E and A. So the third sides become opposite to other in both the dices. It means B is opposite F.

56. By observation both I and II are sufficient

57.  $S + T = U$   
Grand daughter

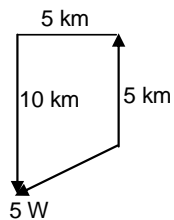


58.



59. By observation

60. South – West



61. By observation

62. Friday + 4 = Tuesday is 7<sup>th</sup> day  
7, 14, 21, 28 days is Tuesday  
31 day = Tuesday + 3 = Friday

63.

314(25) is to 8(10)

523(46) is to 10(24)

453(37) is to 11(21)

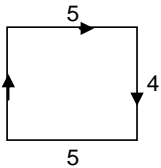
$3 + 1 + 4 = 8$ ,  $2 \times 5 = 10$  so, 31425 is 810

$5 + 2 + 3 = 10$ ,  $4 \times 6 = 24$  so, 52346 is 1024

Now 64382 is  $\rightarrow (6 + 4 + 3)$ ,  $(8 \times 2) = 1316$

64. Wrong question

65.



4 km towards north

66. By observation

67. Total students = 200

Students come by bicycle = 40% =

80 Students came by walk = 50%

= 100 Students came by bus = 10%

= 20

Students who came by bicycle and play cricket = 30% = 24

Students who came by walk and play cricket 40% =

40

Students who came by bus and do not play cricket

= 40% = 8

So students who came by bus and play cricket =

$20 - 8 = 12$

68. Total + 1 = Top + Bottom  $21 + 1 = T + 10$

So, Madhav from Top is 12th

So by question Neethu is 13th from the top

Now, Total students are 22

So, 14th from the back means 9th from the top

So, by question Madhav is at 9th from the top

So, 3 students between Madhav and Neethu.

69.  $4 + 2 + 1 = 7, 5 + 2 = 7, 7$   
 $3 + 4 + 5 = 12, 6 + 6 = 12, 12$   
 $6 + 11 + 4 = 21, 19 + 2 = 21$   
 $5 + 5 + 9 = 19, 10 + 9 = 19, 19$

70. 3<sup>rd</sup> Jan is Friday  
 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan  
 $28 + 1 + 3 + 2 + 3 + 2 + 3 + 3 + 2 + 3 + 2 + 3 + 3$   
 Friday +  $\frac{58}{8} = 8W + 2P$   
 Friday + 2 = Sunday

71. **1**  
 By Sudoku logic

72.

①	②	③	④	⑤	⑥
\$,	AN,	#,	AT,	*,	IN,
⑦	⑧	⑨	⑩	⑪	⑫
-,	IT,	+,	IF,	Δ,	AF

Class start at - IT, # = 8:15

Teaches till - AN, \* = 2:25

---

Class till = 10:40

Break = 1:30 hr

---

Time = 12:10

AF AN

73. Step 1 >> arrangement alphabetically taking last alphabet of each word  
 step2>> Alphabetic arrangement taking 1st alphabet  
 Step 3>> Taking 2nd last alphabet of each word  
 step 4 > Second alphabet of each word  
 Step 5 >> 3rd last alphabet  
 And lastly Step 6>> alphabetic arrangement on basis of 3rd alphabet

74. F 5 AQ2 E 8 I 9 O L U R I 6 U J K A E 2 E V B I A M 3 O

75.

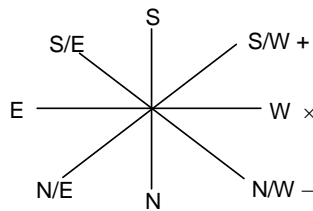
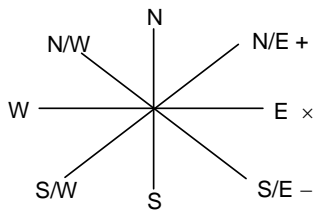
7	Bamboo	--	+	--	+	--	--	--	Banyan	1
			Peepal		Neem					

$13 + 7 = 20$

76. POPULAR is coded as 16-15-16-21-12-1-18  
 $L + R = 18 + 12 = 30$   
 $U + A = 21 + 1 = 22$   
 $P + L = 16 + 12 = 28$   
 $O + U = 15 + 21 = 36$   
 $P + P = 16 + 16 = 32$   
 Similarly; code of VOCALIST will be:  
 $V + C = 22 + 3 = 25$   
 $O + A = 15 + 1 = 16$   
 $C + L = 3 + 12$   
 $A + I = 1 + 9 = 10$   
 $L + S = 12 + 19 = 31$   
 $I + T = 9 + 20 = 29$

77. Reading in odometer at = 1024 km  
 reading in parking  
 may be  
 1 2 2 1  
 1 3 3 1  
 1 4 4 1  
 1 5 5 1 etc  
 if reading in parking 12 distance corend  
 $1221 - 1024 = 197$   
 let initial speed = A.T.Q.  $\frac{147}{142} = 65.7 \text{ km}$

78.



move  $45^\circ$

SE	=
S	$\div$
W	+
NW	$\times$
N	-

$$33 \times 11 \div 3 - 6 = 115$$

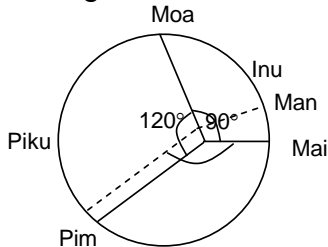
$$33 \times \frac{11}{3} - 6 = 115$$

$$121 - 6 = 115$$

NW, S, N, SE

79.  $5 - 4 \times 3 < 4 + 10 \div 2 = 3 \times 2 + 3 > 4 \div 7 \times 1$   
 $5 - 12 < 4 + 5 = 6 + 3 > \frac{4}{7} \times 1$   
 $= -7 < 9 = 9 > \frac{4}{7}$   
 $= -7 < 9 > 4/7$

80. 150Degree



81. Statement (A)  $\leftarrow \leq \alpha$   
 (B)  $\% > \$$   
 (C)  $\$ \geq \downarrow$   
 (D)  $\leftarrow \rightarrow \$$

Conclusion (1)  $\alpha < \$$  (x)  
 (2)  $\$ = \downarrow$  (x)  
 (3)  $\leftarrow \rightarrow \downarrow$  (✓)

Only conclusion (3) is correct

82.

$$\left. \begin{array}{l} 5 \text{ sec gain} \quad \text{-----} \quad 3 \text{ min} \\ \times 20 \quad \quad \quad \times 20 \\ 10 \text{ sec gain} \quad \text{-----} \quad 3 \text{ min} \end{array} \right\} 1 \text{ hour}$$

$$\left. \begin{array}{l} 10 \text{ sec loose} \quad \text{-----} \quad 3 \text{ min} \\ \times 20 \quad \quad \quad \times 20 \\ 200 \text{ sec loose} \quad \therefore \quad 60 \text{ min} \end{array} \right\} 1 \text{ hour}$$

$$\left. \begin{array}{l} 15 \text{ sec gain} \quad \text{-----} \quad 3 \text{ min} \\ \times 20 \quad \quad \quad \times 20 \\ 300 \text{ sec gain} \quad \text{-----} \quad 60 \text{ min} \end{array} \right\} 1 \text{ hour}$$

Therefore in 12 hours from 7:00 Am – 7:00 PM

$$100 - 200 + 300 - 400 + 500 - 600 + 700 - 800 + 900 - 1000 + 1000 - 1200$$

$$\Rightarrow (-600 \text{ sec})$$

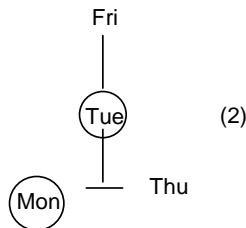
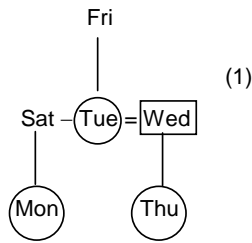
i.e. 10 min lose  $\Rightarrow$  6 : 50 PM

83. By observation

84. The following pair as follows  
 AL, DR, IM, NO, NT, OT, ES, CH  
 OP, EH, OT, ER, MO, PR

**#  $\rightarrow$  Question has different answers considering two different language segments.**

85.



Whereas circle represent female, square male and double parallel lines means husband wife relation.

86. By observation

87. By observation

88.  $5 + 6$  (hexagon) = 11  
 $(1 + 3) + 3$  (triangle) = 7  
 $9 + 8$  (octagon) = 17  
 $(2 + 1) + 4$  (square) = 7

All of these are prime numbers

89. Figure (I), (II) and (III)  
 Sum of (1st and 2nd row) numbers  
 $(3 + 8 + 5)$ ,  $(7 + 6 + 4)$ ,  $(2 + 13 + a)$   
 $16, 17, 2 + 13 + a = 18$   
 $a = 3$   
 Similarly; Last row from figure (I), (II) and (III)  
 $(4 + 7)$ ,  $(9 + 4)$ ,  $(b + 10)$   
 $11, 12, b + 10 = 13$   
 $b = 3$

90. (3)  
 Numbers are first arranged in descending order and then it's ascending order is subtracted from it to get the solution.  
 $4321 - 1234 = 3087$   
 $6432 - 2346 = 4086$   
 Similarly,  
 $7641 - 1467 = 6174$

91. (2)  
 In 3858 → number 3 comes 1 time number 5 comes 1 time number 8 comes 2 times  
 ∴ According to this logic answer is 315182

92. By observation

93. Except 5 all squares are possible.

94. Series are as follows  
1 2 2 3 3 3 4 4 4 4 ..... 15 1 6 1

95. Let the radius 'r' of semicircle in the II path  
So,  $\rightarrow$ (Path I) AXB  $\frac{1}{2} \cdot 2\pi(7r) = 7\pi$   
(Path II) AYB  $\frac{1}{2} \cdot 2\pi r \times 7 = \pi r \times 7$  (7 semicircle)  
(Path III) for AZB, 2 types of semicircle  
Small semicircle diameter is 3r  
So  $\frac{1}{2} \cdot 2\pi(3r/2) \times 2$  (for two semicircle)  
 $\therefore 3\pi r$

For bigger semi-circle  
Radius is 4r  
 $\therefore \frac{1}{2} \cdot 2\pi(4r) = 4\pi r$   
Total =  $7\pi r$

96. For 1st line ₹1 for the perpendicular line, we need to mark 4 arcs i.e. ₹80. Now we will draw 1 line by joining the arc  
 $\therefore$  ₹82 for a pair.  
 $\therefore 1000/82 = 12.195$  (approx..)  
= 12 pairs

#  $\rightarrow$  Question has different answers considering two different language segments.

97. 6(First number)  $\rightarrow$  4(second number)  
second number is the total number of factors of first number  
Hence total number of factor of 42 is  
 $42 \rightarrow 2^1 \times 3^1 \times 7^1$   
 $(1 + 1) \times (1 + 1) \times (1 + 1)$   
 $= 2 \times 2 \times 2 = 8$

98. Mirror image of vowels by the observation. The mirror image of VI and X will be same but not of VII.

99. 2, 3, 5, 7, 13, 23, ?

Prime Numbers : 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47,  
Prime Numbers sequence :

1, 2, 3, 4, 6, 9, 14<sup>th</sup> no. prime number is the answer  
+1 +1 +1 +2 +3 +5  
14<sup>th</sup>, 22<sup>nd</sup> no. prime  
+8



100. (1)

If  $13 \rightarrow 5$ ,  $17 \rightarrow 5$ ,  $29 \rightarrow 7$ ,  $41 \rightarrow 11$ 

$$2^2 + 3^2 = 4 + 9 = 13 \Rightarrow 2 + 3 = 5$$

$$1^2 + 4^2 = 1 + 17 = 17 \Rightarrow 1 + 4 = 5$$

$$2^2 + 5^2 = 4 + 25 = 29 \Rightarrow 2 + 5 = 7$$

$$4^2 + 4^2 + 3^2 = 16 + 16 + 9 = 41 \Rightarrow 4 + 4 + 3 = 11$$

$$\text{then } 73 \rightarrow 8^2 + 3^2 \Rightarrow 8 + 3 = 11$$

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**FIITJEE ANSWER KEY-NTSE STAGE 2 2020-21 (MAT)**

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

**# →** Question has different answers considering two different language segments.