

FIITJEE MOCK TEST-1

For NTSE STAGE-2

Mental Ability Test (MAT)

Time:120 Minutes

Maximum Marks:100

Please read the instructions carefully.

INSTRUCTIONS

A: General :

1. Immediately fill in the particulars on this page of the Test Booklet with Blue/Black Ball point pen.
2. Use **Blue/Black Ball Point Pen only** for writing particulars on **Side-1** and **Side-2** of the Answer Sheet. **Use of pencil is strictly prohibited.**
3. Darken the appropriate bubbles with **Blue/Black Ball Point Pen** only.
4. Blank papers, clipboards, log tables, slide rules, calculators, cellular phones, pagers and electronic gadgets in any form are not allowed.
5. The answer sheet, a machine-gradable Objective Response Sheet (ORS) is provided separately.
6. Do not Tamper/mutilate the **ORS** or this booklet.
7. No additional sheets will be provided for rough work
8. On completion of this test, the candidate must hand over the Answer Sheet to the Invigilator on duty in the Room/Hall. **However, the candidates are allowed to take away this Test Booklet with them.**

B: Questions paper format and Marking Scheme :

1. The question paper consists of 100 questions.
2. For each question you will be **awarded 1 marks** if you darken the bubble corresponding to the correct answer and zero mark if no bubbles is darkened. No Negative Mark will be awarded.

Enrollment No. :

Batch : _____

Name : _____

Candidate's Signature _____ Invigilator's Signature: _____

Directions (Q.1 to Q.5): In these questions, relationship between different elements is shown in the statements. These statements are followed by three conclusions. You have to find which of the given conclusions follows from the given statements.

1. **Statements** : $M < T, T \leq K, K = D$
Conclusions : I. $D \geq T$
 II. $K > M$
 III. $D > M$
 (A) Only I and II are true (B) Only I and III are true
 (C) Only II and III are true (D) All are true
2. **Statements** : $B > H, H \geq A, A = K$
Conclusions : I. $B \geq K$
 II. $K \leq H$
 III. $A < B$
 (A) Only I and II are true (B) Only I and III are true
 (C) Only II and III are true (D) All are true
3. **Statements** : $W \geq N, N > R, R \leq F$
Conclusions : I. $F > N$
 II. $W > N$
 III. $R < W$
 (A) None is true (B) Only III is true
 (C) Only I and II are true (D) Only II and III are true
4. **Statements** : $F = K, K > M, M \leq V$
Conclusions : I. $F \geq V$
 II. $V \leq K$
 III. $M > K$
 (A) Only I is true (B) Only II is true
 (C) Only III is true (D) All are true
5. **Statements** : $N \leq D, D < T, T \geq J$
Conclusions : I. $J < D$
 II. $N > J$
 III. $T > N$
 (A) Only III is true (B) Only II is true
 (C) Only I is true (D) Only I and II are true

Directions (Q.6 to Q.10): Study the following information carefully to answer the questions given below it:

Seven professionals A, B, C, D, E, F and G are practising their professions in different cities Chennai, Bangalore, Hyderabad, Mumbai, Ahmedabad, Jaipur and Bhubaneswar, not necessarily in the same order. Each has a different profession – Doctor, Engineer, Pharmacist, Lawyer, Counsellor, Professor and Artist, not necessarily in the same order.

A is Pharmacist and practises in Bhubaneswar. D practises in Bangalore but is not a Doctor or an Artist. The one who practises in Hyderabad is a Professor. G is a Counsellor and does not practise in Mumbai or Chennai. E is Lawyer and practises in Ahmedabad. F practise in Chennai but is not an artist. C practises in Mumbai.

6. What is D's profession?
 (A) Doctor (B) Professor
 (C) Engineer (D) Cannot be determined
7. Who is Professor?
 (A) B (B) C (C) D (D) E
8. Which of the following combinations of profession and place is correct?
 (A) Pharmacist-Jaipur (B) Engineer-Chennai
 (C) Doctor-bangalore (D) Artist-Mumbai

9. Which of the following persons works in Jaipur?
 (A) B (B) G (C) C (D) B or G
10. Who is the Doctor?
 (A) D (B) B (C) C (D) F

Directions (Q.11 to Q.13): Study the following information carefully and answer the given questions:

The successful man has the ability to judge himself correctly.

- (a) Inability to judge correctly causes failure.
 (b) To judge others is of no use to a successful man.
 (c) The successful man cannot make a wrong judgement.
 (d) Hard-working is the key of success.
 (e) A successful man cannot judge others.
 (f) A successful man does not look in to the future.
11. Which of the following among (a), (b), (c) and (d) is implicit in the information given above?
 (A) Only (a) (B) Only (b) (C) Only (c) (D) (a), (b) and (c)
12. Which of the following among (a), (b), (c) and (d) is the cause of success?
 (A) Only (a) (B) Only (b) (C) Only (c) (D) Only (d)
13. Which of the following (c), (d), (e) and (f) is a **weak argument** in favour of successful man?
 (A) Only (c) (B) Only (d) (C) Only (e) (D) Both (e) and (f)

Directions (Q.14 to Q.18): Study the following information to answer the given questions:

A word and number arrangement machine when given an input line of words and numbers rearranges then following a particular rule. The following is an illustration of input and rearrangement.

Input: sun 28 have 19 96 48 luck nice 78 rope

Step I: have sum 28 19 48 luck nice 78 rope 96

Step II: luck have sum 28 19 48 nice rope 96 78

Step III: nice luck hae sum 28 19 rope 96 78 48

Step IV: rope nice luck have sum 19 96 78 48 28

Step V: sum rope nice luck have 96 78 48 28 19

And step V is the last step of the rearrangement.

As per the rules followed in the above steps, find out in each of the following questions the appropriate step for the input given below:

Input: 49 last zen 16 82 yet can vast 33 aim 87 54.

14. How many steps will be needed to complete the arrangement?
 (A) IV (B) V (C) VI (D) VII
15. Which step will be:
 Vast last can aim zen 16 yet 33 87 82 54 49
 (A) III (B) II (C) VII (D) IV
16. Which of the following would be step I?
 (A) aim 49 can zen 16 yet vast 33 54 87 82 last
 (B) vast last can aim zen 16 yet 33 87 82 54 49
 (C) zen 49 last 16 82 yet can vast 33 aim 54 87
 (D) None of these
17. In step V, which of the following words numbers would be at 6th position from the right?
 (A) 87 (B) 16 (C) 33 (D) zen
18. Which of the following would be the final arrangement?
 (A) zen yet vast last can aim 16 33 49 54 82 87
 (B) aim can last vast yet zen 16 33 49 54 82 87
 (C) aim can last vast yet zen 87 82 54 49 33 16
 (D) zen yet vast last can aim 87 82 54 49 33 16

Directions (Q.19 to Q.23): In each of the questions below, two/three statements are given followed by conclusions/group of conclusions numbered I and II. You have to assume all the statements to be true even if

they seem to be at variance from the commonly known facts and then decide which of the given two conclusions logically follows from the information given in the statements.

19. **Statements:** Some squares are circles.
No circle is a triangle.
No line is a square.
- Conclusions:** I. All squares can never be triangle
II. Some lines are circles
- (A) Only conclusion I follows
(B) Only conclusion II follows
(C) Either Conclusion I or Conclusion II follows
(D) Both I and II follows
20. **Statements:** Some squares are circles.
No circle is a triangle.
No line is a square.
- Conclusions:** I. No triangle is a square
II. No line is a circle.
- (A) Only conclusion I follows
(B) Only conclusion II follows
(C) Either Conclusion I or Conclusion II follows
(D) Both I and II follows
21. **Statements:** All songs are poems.
All poems are rhymes.
No rhyme is a paragraph.
- Conclusions:** I. No song is paragraph
II. No poem is paragraph
- (A) Only conclusion I follows
(B) Only conclusion II follows
(C) Either Conclusion I or Conclusion II follows
(D) Both I and II follows
22. **Statements:** All songs are poems.
All poems are rhymes.
No rhyme is a paragraph.
- Conclusions:** I. All rhymes are poems.
II. All songs are rhymes.
- (A) Only conclusion I follows
(B) Only conclusion II follows
(C) Either Conclusion I or Conclusion II follows
(D) Both I and II follows
23. **Statements:** Some dewes are drops.
All drops are stones.
- Conclusions:** I. Atleast some dewes are stones
II. Atleast some stones are drops.
- (A) Only conclusion I follows
(B) Only conclusion II follows
(C) Either Conclusion I or Conclusion II follows
(D) Both I and II follows

Directions (Q.24 to Q.28): Study the following information carefully and answer the given questions.

Eight people – E, F, G, H, J, K, L and M are sitting around a circular table facing the centre. Each of them is of different profession – Chartered Accountant, Columnist, Doctor, Engineer, Financial Analyst, Lawyer, Professor and Scientist but not necessarily in the same order. F is sitting second to the left of K. The Scientist is an immediate neighbour of K. There are only three people between the Scientist and E. Only one person sits between the Engineer and E. The Columnist is to the immediate right of the Engineer. M is second to the right of K. H is the Scientist. G and J are immediate neighbours of each other. Neither G nor J is an Engineer. The Financial Analyst is to the immediate left of F. The Lawyer is second to the right of the Columnist. The Professor is an immediate neighbour of the Engineer. G is second to the right of the Chartered Accountant.

24. Who is sitting second to the right of E?
 (A) The Lawyer (B) G (C) The Engineer (D) F
25. Who amongst the following is the Professor?
 (A) F (B) L (C) M (D) K
26. Three of the following four are alike in a certain way based on the given arrangement and hence form a group. Which of the following does not belong to that group?
 (A) Chartered Accountant - H (B) M – Doctor
 (C) J – Engineer (D) Financial Analyst – L
27. What is the position of L with respect to the Scientist?
 (A) Third to the left (B) Second to the right
 (C) Second to the left (D) Third to the right
28. Which of the following statements is true according to the given arrangement?
 (A) The Lawyer is second to the left of the Doctor.
 (B) E is an immediate neighbour of the Financial Analyst
 (C) H sits exactly between F and the Financial Analyst
 (D) Only four people sit between the Columnist and F

Directions (Q.29 to Q.33): Study the following information carefully and answer the given questions.

In a certain code language – 'economics is not money' is written as 'ka la ho ga' 'demand and supply economics' is written as 'mo ta pa ka' 'money makes only part' is written as, 'zi la ne ki' 'demand makes supply economics' is written as, 'zi mo ka ta'.

29. What is the code for 'money' in the given code language?
 (A) ga (B) mo (C) pa (D) la
30. What is the code for 'supply' in the given code language?
 (A) only ta (B) only mo (C) either pa or mo (D) either mo or ta
31. What may be the possible code for 'demand only more' in the given code language?
 (A) xi ne mo (B) mo zi ne (C) ki ne mo (D) mo zi ki
32. What may be the possible code for 'work and money' in the given code language?
 (A) pa ga la (B) pa la tu (C) mo la pa (D) tu la ga
33. What is the code for 'makes' in the given code language/
 (A) mo (B) pa (C) ne (D) zi

Directions (Q.34 to Q.35): Study the following information carefully and answer the questions given below:

There are five statues: L, M, N, O and P. Each of them having different height. Statue L is smaller than only statue M. Statue O is smaller than statue N. Statue O is longer than statue P. The height of the tallest statue is 20 feet. The height of the second smallest statue is 11 feet.

34. What will be the height of statue P?
 (A) 13 feet (B) 15 feet (C) 9 feet (D) 12 feet
35. What will be the height of the third tallest statue?
 (A) 13 feet (B) 10 feet (C) 19 feet (D) 9 feet

Directions (Q.36 to Q.40): In the following number series only one number is wrong Find out the wrong number.

36. 9050 5675 3478 2147 1418 1077 950
(A) 3478 (B) 1418 (C) 5675 (D) 1077
37. 7 12 40 222 1742 17390 208608
(A) 7 (B) 12 (C) 40 (D) 1742
38. 6 91 584 2935 11756 35277 70558
(A) 91 (B) 70558 (C) 584 (D) 2935
39. 1 4 25 256 3125 46656 823543
(A) 3125 (B) 823543 (C) 46656 (D) 25
40. 8424 4212 2106 1051 526.5 263.25 131.625
(A) 131.625 (B) 1051 (C) 4212 (D) 8424
41. Six-eleventh of a number is equal to twenty-two percent of second number. Second number is equal to the one-fourth of third number. The value of the third number is 2400. What is the 45% of first number?
(A) 109.8 (B) 111.7 (C) 117.6 (D) 108.09
42. An HR Company employees 4800 people, out of which 45 percent are males and 60 percent of the males are either 25 years or older. How many males are employed in that HR Company who are younger than 25 years?
(A) 2640 (B) 2160 (C) 1296 (D) 864
43. The average marks in English subject of a class of 24 students is 56. If the marks of three students were misread as 44, 45 and 61 of the actual marks 48, 59 and 67 respectively, then what would be the correct average?
(A) 56.5 (B) 59 (C) 57.5 (D) 57
44. In a test, a candidate secured 468 marks out of maximum marks 'A'. If the maximum marks 'A' were converted to 700 marks, he would have secured 336 marks. What were the maximum marks of the test?
(A) 775 (B) 875 (C) 975 (D) 1075
45. The simple interest accrued on an amount of ₹ 22,500 at the end of four years is ₹ 10,800. What would be the compound interest accrued on the same amount at the same rate at the end of two years?
(A) ₹ 16,908 (B) ₹ 5,724 (C) ₹ 28,224 (D) ₹ 8,586
46. Rubina could get equal number of ₹ 55, ₹ 85 and ₹ 105 tickets for a movie. She spends ₹ 2940 for all the tickets. How many of each did she buy?
(A) 12 (B) 14 (C) 16 (D) Cannot be determined
47. Ramola's monthly income is three times Ravina's monthly income. Ravina's monthly income is fifteen percent more than Ruchira's monthly income. Ruchira's monthly income is ₹ 32,000. What is Ramola's annual income?
(A) ₹ 1,10,400 (B) ₹ 13,24,800 (C) ₹ 36,800 (D) ₹ 52,200
48. In an Entrance Examination Ritu scored 56 percent marks. Smita scored 92 percent marks and Rina scored 634 marks. The maximum marks of the examination are 875. What are the average marks scored by all the three girls together?
(A) 1929 (B) 815 (C) 690 (D) 643

49. The respective ratio between the present age of Manisha and Deepali is 5 : X. Manisha is 9 years younger than Parineeta. Parineeta's age after 9 years will be 33 years. The difference between Deepali's and Manisha's age is same as the present age of Parineeta. What will come in place of X?
 (A) 23 (B) 39 (C) 13 (D) Cannot be determined
50. Seema bought 20 pens, 8 packets of wax colours, 6 calculators and 7 pencil boxes. The price of one pen is ₹7, one packet of wax colour is ₹22, one calculator is ₹175 and one pencil box is ₹14 more than the combined price of one pen and one packet of wax colours. How much amount did Seema pay to the shopkeeper?
 (A) ₹1,491 (B) ₹1,725 (C) ₹1,667 (D) ₹1,527

Directions (Q.51 to Q.55): Study the given information carefully to answer the questions that follows:
 An urn contains 4 green, 5 blue, 2 red and 3 yellow marbles.

51. If four marbles are drawn at random, what is the probability that two are blue and two are red?
 (A) $\frac{10}{1001}$ (B) $\frac{9}{14}$ (C) $\frac{17}{364}$ (D) $\frac{2}{7}$
52. If eight marbles are drawn at random, what is the probability that there are equal number of marbles of each colour?
 (A) $\frac{4}{7}$ (B) $\frac{361}{728}$ (C) $\frac{60}{1001}$ (D) 1
53. If two marbles are drawn at random, what is the probability that both are red or at least one is red?
 (A) $\frac{26}{91}$ (B) $\frac{1}{7}$ (C) $\frac{199}{364}$ (D) $\frac{25}{91}$
54. If three marbles are drawn at random, what is the probability that at least one is yellow?
 (A) $\frac{1}{3}$ (B) $\frac{199}{364}$ (C) $\frac{165}{364}$ (D) $\frac{3}{11}$
55. If three marbles are drawn at random, what is the probability that none is green?
 (A) $\frac{2}{7}$ (B) $\frac{253}{728}$ (C) $\frac{10}{21}$ (D) $\frac{30}{91}$

Directions (Q.56 to Q.60): Study the table carefully to answer the questions that follow:

Number of people visiting six different Super-markets and the percentage of men, women and children visiting those Super-markets.

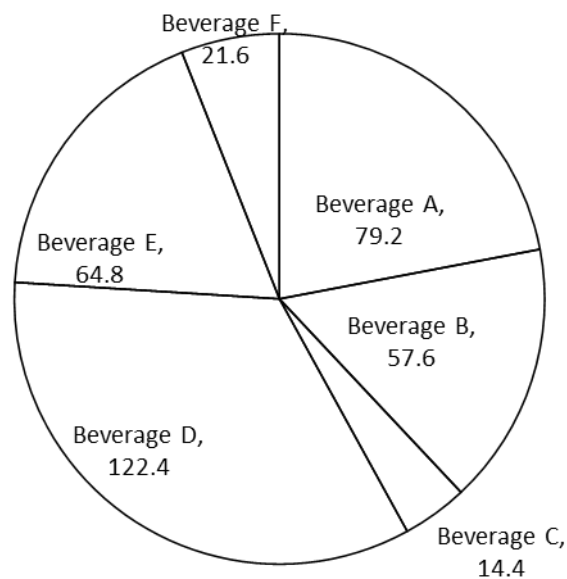
Name of the Super-markets	Total Number of people	Percentage of		
		Men	Women	Children
A	34560	35	55	10
B	65900	37	43	20
C	45640	35	45	20
D	55500	41	26	33
E	42350	6	70	24
F	59650	24	62	14

56. What is the respective ratio of number of women visiting Super-markets A to those visiting Super-market C?
 (A) 35 : 37 (B) 245 : 316 (C) 352 : 377 (D) None of these
57. Number of men visiting Super-market D forms approximately what percent of the total number of people visiting all the Super-markets together?
 (A) 11 (B) 5.5 (C) 13 (D) 7.5

58. Number of children visiting Super-market C forms what percent of number of children visiting super market F? (rounded off to two digits after decimal)
 (A) 91.49 (B) 49.85 (C) 121.71 (D) 109.30
59. What is the total number of children visiting Super-markets B and D together?
 (A) 18515 (B) 28479 (C) 31495 (D) 22308
60. What is the average number of women visiting all the Super-markets together?
 (A) 24823.5 (B) 22388.5 (C) 26432.5 (D) 20988.5

Directions (Q.61 to Q.65): Study the following pie-chart and answer the questions given below:

Preferences of students among six beverages in terms of degree of angle in the pie-chart. Total number of students are 6800.



61. The number of students who prefer Beverage C are approximately what percent of the number of students who prefer Beverage D?
 (A) 7 (B) 12 (C) 18 (D) 22
62. How many students prefer Beverage B and Beverage E together?
 (A) 2312 (B) 2313 (C) 2315 (D) 2318
63. What is the difference between the total number of students who prefer Beverage A and C together and the total number of students who prefer Beverage D and F together?
 (A) 959 (B) 955 (C) 952 (D) 954
64. The number of students who prefer Beverage E and F together are what percent of the total number of students?
 (A) 18 (B) 14 (C) 26 (D) 24
65. What is the respective ratio between the number of students who prefer Beverage F and the number of students who prefer Beverage A?
 (A) 3 : 11 (B) 3 : 13 (C) 6 : 11 (D) 5 : 11

Directions (Q.66 to Q.69): Study the following information carefully and answer the given questions:

A word and number arrangement machine when given an input line of words and numbers rearranges them following a particular rule in each step. The following is an illustration of input and rearrangement (All the numbers are two digits numbers)

Input : tall 48 13 rise alt 99 76 32 wise jar high 28 56 bam
 Step I : 13 tall 48 rise 99 76 32 wise jar high 28 56 bam alt
 Step II : 28 13 tall 48 rise 99 76 32 wise jar high 56 alt bam
 Step III : 32 28 13 tall 48 rise 99 76 wise jar 56 alt bam high
 Step IV : 48 32 28 13 tall rise 99 76 wise 56 alt bam high jar
 Step V : 56 48 32 28 13 tall 99 76 wise alt bam high jar rise
 Step VI : 76 56 48 32 28 13 99 wise alt bam high jar rise tall
 Step VII: 99 76 56 48 32 28 13 alt bam high jar rise tall wise

And Step VII is the last step of the above input, as the desired arrangement is obtained.

As per the rules followed in the above steps, find out in each of the following question the appropriate step for the given input.

Input : 84 why sit 14 32 not best ink feet 51 27 vain 68 92 (All the numbers are two digits numbers)

66. Which step number is following output?
 32 27 14 84 why sit not 51 vain 92 68 feet best ink
 (A) Step V (B) Step VI (C) Step IV (D) There is no such step
67. Which word/number would be at 5th position from the right in Step V?
 (A) 14 (B) 92 (C) feet (D) best
68. How many elements (words or numbers) are there between 'feet' and '32' as they appear in the last step of the output?
 (A) One (B) Three (C) Four (D) Five
69. Which of the following represents the position of 'why' in the fourth step?
 (A) Eighth from the left (B) Fifth from the right
 (C) Sixth from the left (D) Fifth from the left

Directions (Q.70 to Q.75): Study the following information carefully and answer the given questions:

A, B, C, D, E, F, G and H are sitting around a circle facing the centre but not necessarily in the same order.

- B sits second to left of H's husband. No female is an immediate neighbour of B.
- D's daughter sits second to right of F. F is the sister of G. F is not an immediate neighbour of H's husband.
- Only one person sits between A and F. A is the father of G. H's brother D sits to the immediate left of H's mother. Only one person sits between H's mother and E.
- Only one person sits between H and G. G is the mother of C. G is not an immediate neighbour of E.

70. What is position of A with respect to his mother-in-law?
 (A) Immediate left (B) Third to the right
 (C) Third to the left (D) Second to the right
71. Who amongst the following is D's daughter?
 (A) B (B) C (C) E (D) G
72. What is the position of A with respect to his grandchild?
 (A) Immediate right (B) Third to the right
 (C) Third to the left (D) Second to the left
73. How many people sit between G and her uncle?
 (A) One (B) Two (C) Three (D) Four

74. Three of the following Four are alike in a certain way based on the given information and so form a group. Which is the one that does not belong to the group?
 (A) F (B) C (C) E (D) H
75. Which of the following is true with respect to the given seating arrangement?
 (A) C is the cousin of E
 (B) H and H's husband are immediate neighbours of each other
 (C) No female is an immediate neighbour of C
 (D) H sits third to left of her daughter

Directions (Q.76 to Q.80): In the following number series only one number is wrong. Find out the wrong number.

76. 3 7 16 35 72 153 312
 (A) 7 (B) 153 (C) 35 (D) 72
77. 18 20 23 32 48 73 109
 (A) 20 (B) 23 (C) 32 (D) 48
78. 7 4 5 9 20 51 160.5
 (A) 4 (B) 5 (C) 9 (D) 51
79. 6 10 14 34 66 130 258
 (A) 10 (B) 14 (C) 34 (D) 66
80. 2 7 30 138 524 1557 3102
 (A) 7 (B) 30 (C) 138 (D) 524

Directions (Q.81 to Q.85): Study the following information carefully and answer the given questions:

An Institute having 450 employees has sent all its employees for training in one or more areas out of HRM, Computer Skills and Financial Skills. The employees are classified into two categories – Officers and Clerks, who are in the ratio of 4 : 5. 10% of the Officers take training only in Computer Skills, 16% of the Clerks take training only in HRM which is equal to the number of Officers taking training only in Financial Skills and 50% of the number of Officers taking training in HRM and Financial Skills both. 6% of the total employees take training in all the three, of which two-thirds are officers. 10% of the total employees take training in HRM and Computer Skills both, which is five times the number of Clerks taking training in Computer Skills and Financial Skills. 10% of the Clerk take training in HRM and Computer Skills both. The number of officers taking training only in HRM is 25% of the number of Clerks taking training only in HRM. 20% of the total number of employees take training only in Computer Skills. Number of clerks taking training in HRM and Financial skills both is 20% of the total number of Clerks.

81. Total how many officers take training in HRM?
 (A) 110 (B) 128 (C) 18 (D) 92
82. Total how many Clerks take training in Computer Skills but not in HRM?
 (A) 113 (B) 104 (C) 88 (D) None of these
83. Total how many employees take training in Financial Skills but not in HRM?
 (A) 106 (B) 135 (C) 127 (D) None of these
84. Total how many Clerks take training in Financial Skills?
 (A) 115 (B) 106 (C) 47 (D) None of these
85. What per cent of the total number of Officers take training in Computer Skills but not in Financial Skills?
 (A) 25 (B) 40 (C) 20 (D) None of these

Directions (Q.86 to Q.90): Study the following table carefully to answer the questions that follow:

Total number of people in Different Villages and (of these) Percentage of Men, Women and Children.

Village	Total No. of People	Percentage of men	Percentage of women	Percentage of Children
L	1240	35	45	20
M	2140	45	30	25
N	1450	50	30	20
O	1680	65	20	15
P	2060	40	40	20
Q	1990	40	50	10

86. Which village has the least number of children?
 (A) L (B) N (C) Q (D) O
87. What is the ratio of the number of women in Villages L and P together to the number of men in the same villages together?
 (A) 617 : 664 (B) 629 : 691 (C) 664 : 617 (D) 691 : 629
88. What is the total number of women and children together in Village Q?
 (A) 995 (B) 1184 (C) 1086 (D) None of these
89. The total number of people from village O is approximately what per cent of the total number of people from all the villages together?
 (A) 16 (B) 21 (C) 11 (D) 25
90. What is the total number of children from village M and N together?
 (A) 785 (B) 825 (C) 855 (D) 795

Directions (Q.91 to Q.95): Study the following information to answer the given questions:

In a certain code, 'always create new ideas' is written as 'ba ri sha gi', 'ideas and new thoughts' is written as 'fa gi ma ri', 'create thoughts and insights' is written as 'ma jo ba fa', and 'new and better solutions' is written as 'ki ri to fa',

91. What is the code for 'ideas'?
 (A) sha (B) ba (C) gi (D) ma
92. What does 'fa' stand for?
 (A) thoughts (B) insights (C) new (D) and
93. 'fa lo ba' could be a code for which of the following?
 (A) thoughts and action (B) create and innovate
 (C) ideas and thoughts (D) create new solutions
94. What is the code for 'new'?
 (A) ki (B) ri (C) to (D) fa
95. Which of the following may represent 'insights always better'?
 (A) jo ki to (B) ki to ri (C) sha jo ri (D) toi sha jo

Directions (Q.96 to Q.100): Study the following information carefully and answer the given questions.

A, B, C, D, E, G, and I are seven friends who study in three different standards namely 5th, 6th and 7th such that not less than two friends study in the same standard. Each friend also has a different favourite subject namely History, Civics, English, Marathi, Hindi, Maths and Economics but not necessarily in the same order.

A likes Maths and studies in the 5th standard with only one other friend who likes Marathi. I studies with two other friends. Both the friends who study with I like languages. (Her languages include only Hindi, Marathi and English). D studies in the 6th standard with only one person and does not like civics. E studies with only one friend. The one who likes history does not study in 5th or 6th standard. E does not like languages. C does not like English, Hindi or Civics.

96. Which combination represents E's favourite subject and the standard in which he studies?
(A) Civics and 7th (B) Economics and 5th
(C) Civics and 6th (D) History and 7th
97. Which of the following is I's favourite subject?
(A) History (B) Civics (C) Marathi (D) Either English or Marathi
98. Which amongst the following combinations studies in the 7th standard?
(A) G (B) C (C) E (D) D
99. Which of the following is definitely correct?
(A) I and Hindi (B) G and English (C) C and Marathi (D) B and Hindi
100. Which of the following subjects does G like?
(A) Either Maths or Marathi (B) Either Hindi or English
(C) Either Hindi or Civics (D) Either Hindi or Marathi

FIITJEE MOCK TEST

For NTSE STAGE-2

Mental Ability Test (MAT)

ANSWERS

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

HINTS & SOLUTIONS

1. D
Sol. $M < T, T \leq K, K = D$
 $M < T \leq K = D$
Conclusion I: True
Conclusion II: True
Conclusion III: True

2. C
Sol. $B > H, H \geq A, A = K$
 $B > H \geq A = K$
Conclusion I: False
Conclusion II: True
Conclusion III: True

3. B
Sol. $W \geq N, N > R, R \leq F$
 $W \geq N \geq R \leq F$
Conclusion I: False
Conclusion II: False
Conclusion III: True

4. D
Sol. $F = K, K > M, M \leq V$
 $F = K > M \leq V$
Conclusion I: False
Conclusion II: False
Conclusion III: False

5. A
Sol. $N \leq D, D < T, T \geq J$
 $N < D < T \geq J$
Conclusion I: False
Conclusion II: False
Conclusion III: True

6. C
Sol.

Professional	City	Profession
A	Bhubaneshwar	Pharmacist
B	Hyderabad	Professor
C	Mumbai	Artist
D	Bangalore	Engineer
E	Ahmedabad	Lawyer
F	Chennai	Doctor
G	Jaipur	Counsellor

7. A

Sol.

Professional	City	Profession
A	Bhubaneshwar	Pharmacist
B	Hyderabad	Professor
C	Mumbai	Artist
D	Bangalore	Engineer
E	Ahmedabad	Lawyer
F	Chennai	Doctor
G	Jaipur	Counsellor

8. D

Sol.

Professional	City	Profession
A	Bhubaneshwar	Pharmacist
B	Hyderabad	Professor
C	Mumbai	Artist
D	Bangalore	Engineer
E	Ahmedabad	Lawyer
F	Chennai	Doctor
G	Jaipur	Counsellor

9. B

Sol.

Professional	City	Profession
A	Bhubaneshwar	Pharmacist
B	Hyderabad	Professor
C	Mumbai	Artist
D	Bangalore	Engineer
E	Ahmedabad	Lawyer
F	Chennai	Doctor
G	Jaipur	Counsellor

10. D

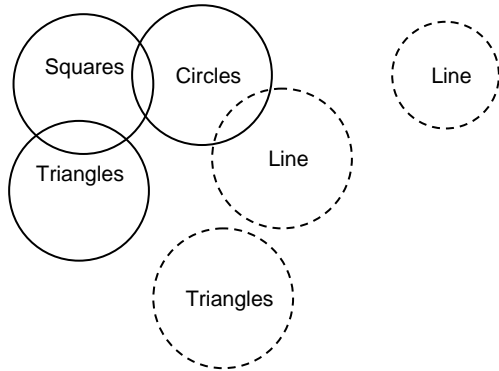
Sol.

Professional	City	Profession
A	Bhubaneshwar	Pharmacist
B	Hyderabad	Professor
C	Mumbai	Artist
D	Bangalore	Engineer
E	Ahmedabad	Lawyer
F	Chennai	Doctor
G	Jaipur	Counsellor

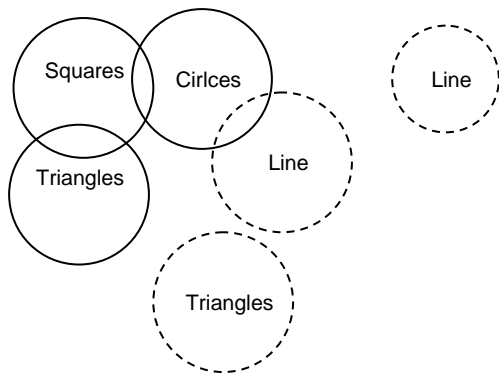
11. D
Sol. By observation
12. D
Sol. By observation
13. D
Sol. By observation
14. C
Sol. In the given word and number arrangement machine, in step I the word coming first alphabetically is shifted at the 1st place and the greatest number is shifted to the end. In step II the word coming second alphabetically is shifted at the first place and the second greatest number is shifted to the end. Same pattern is followed in the next steps till all the words and numbers are arranged as in step V.
Input: 49 last zen 16 82 yet can vast 33 aim 97 54
Step I: aim 49 last zen 16 82 yet can vast 33 54 87
Step II: can aim 49 last zen 16 yet vast 33 54 87 82
Step III: last can aim 49 zen 16 yet vast 33 87 82 54
Step IV: vast lst can aim zen 16 yet 33 87 82 54 49
Step V: yet vast last can aim zen 16 87 82 54 49 33
Step VI: zen yet vast last can aim 87 82 54 49 33 16
15. D
Sol. In the given word and number arrangement machine, in step I the word coming first alphabetically is shifted at the 1st place and the greatest number is shifted to the end. In step II the word coming second alphabetically is shifted at the first place and the second greatest number is shifted to the end. Same pattern is followed in the next steps till all the words and numbers are arranged as in step V.
Input: 49 last zen 16 82 yet can vast 33 aim 97 54
Step I: aim 49 last zen 16 82 yet can vast 33 54 87
Step II: can aim 49 last zen 16 yet vast 33 54 87 82
Step III: last can aim 49 zen 16 yet vast 33 87 82 54
Step IV: vast lst can aim zen 16 yet 33 87 82 54 49
Step V: yet vast last can aim zen 16 87 82 54 49 33
Step VI: zen yet vast last can aim 87 82 54 49 33 16
16. D
Sol. In the given word and number arrangement machine, in step I the word coming first alphabetically is shifted at the 1st place and the greatest number is shifted to the end. In step II the word coming second alphabetically is shifted at the first place and the second greatest number is shifted to the end. Same pattern is followed in the next steps till all the words and numbers are arranged as in step V.
Input: 49 last zen 16 82 yet can vast 33 aim 97 54
Step I: aim 49 last zen 16 82 yet can vast 33 54 87
Step II: can aim 49 last zen 16 yet vast 33 54 87 82
Step III: last can aim 49 zen 16 yet vast 33 87 82 54
Step IV: vast lst can aim zen 16 yet 33 87 82 54 49
Step V: yet vast last can aim zen 16 87 82 54 49 33
Step VI: zen yet vast last can aim 87 82 54 49 33 16
17. B
Sol. In the given word and number arrangement machine, in step I the word coming first alphabetically is shifted at the 1st place and the greatest number is shifted to the end. In step II the word coming second alphabetically is shifted at the first place and the second greatest number is shifted to the end. Same pattern is followed in the next steps till all the words and numbers are arranged as in step V.
Input: 49 last zen 16 82 yet can vast 33 aim 97 54
Step I: aim 49 last zen 16 82 yet can vast 33 54 87
Step II: can aim 49 last zen 16 yet vast 33 54 87 82
Step III: last can aim 49 zen 16 yet vast 33 87 82 54
Step IV: vast lst can aim zen 16 yet 33 87 82 54 49
Step V: yet vast last can aim zen 16 87 82 54 49 33
Step VI: zen yet vast last can aim 87 82 54 49 33 16
18. D
Sol. In the given word and number arrangement machine, in step I the word coming first alphabetically is shifted at the 1st place and the greatest number is shifted to the end. In step II the word coming second alphabetically is shifted at the first place and the second greatest number is shifted to the end. Same pattern is followed in the next steps till all the words and numbers are arranged as in step V.
Input: 49 last zen 16 82 yet can vast 33 aim 97 54

Step I: aim 49 last zen 16 82 yet can vast 33 54 87
Step II: can aim 49 last zen 16 yet vast 33 54 87 82
Step III: last can aim 49 zen 16 yet vast 33 87 82 54
Step IV: vast 1st can aim zen 16 yet 33 87 82 54 49
Step V: yet vast last can aim zen 16 87 82 54 49 33
Step VI: zen yet vast last can aim 87 82 54 49 33 16

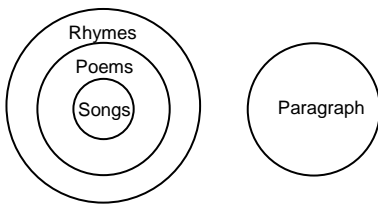
19. A
 Sol.



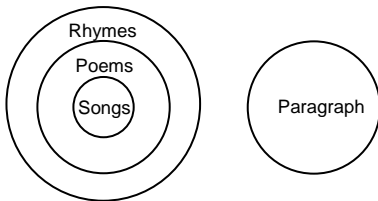
20. D
 Sol.



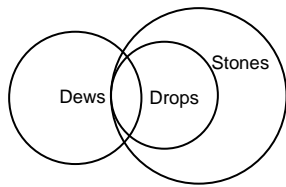
21. D
 Sol.



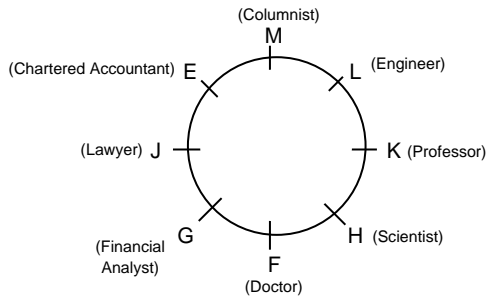
22. B
 Sol.



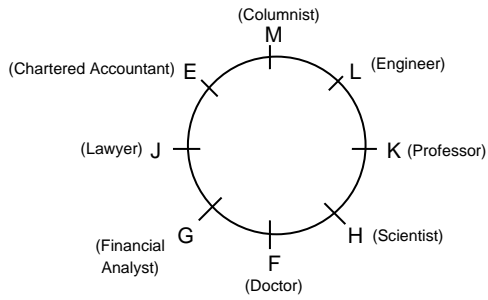
23. D
 Sol.



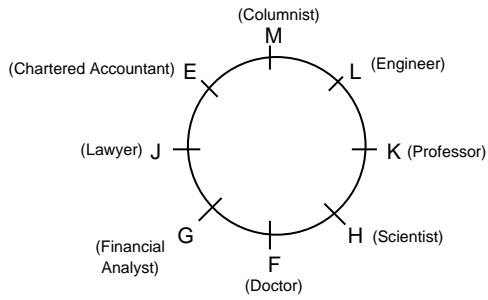
24. Sol. B



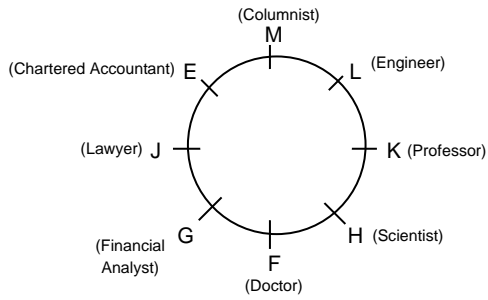
25. Sol. D



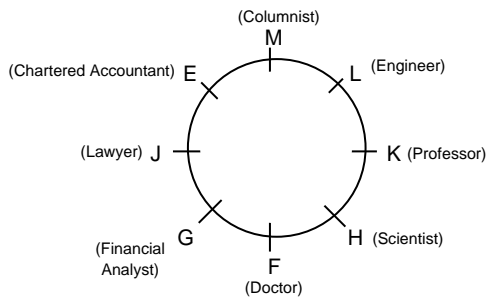
26. Sol. C



27. Sol. B



28. Sol. A



29. D
 Sol. economics is not money – ka la ho ga ...**(i)**
 demand and supply economics – mo ta pa ka ...**(ii)**
 money makes only part – zi la ne ki ...**(iii)**
 demand makes supply economics – zi mo ka ta ...**(iv)**
 from (i) & (iii)
 money → 'la'
 from (iii) & (iv)
 makes → 'zi'
 From (i) & (iv)
 economics – 'ka'
 also, and – 'pa'
 demand – 'mo' or 'ta'
 supply – 'mo' or 'ta'
 only – 'ne' or 'ki'
 part – 'ne' or 'ki'
 is – 'ho' or 'ga'
 not – 'ho' or 'ga'
 money → 'la'

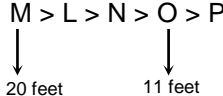
30. D
 Sol. economics is not money – ka la ho ga ...**(i)**
 demand and supply economics – mo ta pa ka ...**(ii)**
 money makes only part – zi la ne ki ...**(iii)**
 demand makes supply economics – zi mo ka ta ...**(iv)**
 from (i) & (iii)
 money → 'la'
 from (iii) & (iv)
 makes → 'zi'
 From (i) & (iv)
 economics – 'ka'
 also, and – 'pa'
 demand – 'mo' or 'ta'
 supply – 'mo' or 'ta'
 only – 'ne' or 'ki'
 part – 'ne' or 'ki'
 is – 'ho' or 'ga'
 not – 'ho' or 'ga'
 money → 'la'

31. A
 Sol. economics is not money – ka la ho ga ...**(i)**
 demand and supply economics – mo ta pa ka ...**(ii)**
 money makes only part – zi la ne ki ...**(iii)**
 demand makes supply economics – zi mo ka ta ...**(iv)**
 from (i) & (iii)
 money → 'la'
 from (iii) & (iv)
 makes → 'zi'
 From (i) & (iv)
 economics – 'ka'
 also, and – 'pa'

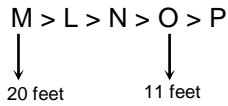
demand – ‘mo’ or ‘ta’
 supply – ‘mo’ or ‘ta’
 only – ‘ne’ or ‘ki’
 part – ‘ne’ or ‘ki’
 is – ‘ho’ or ‘ga’
 not – ‘ho’ or ‘ga’
 money → ‘la’

32. B
 Sol. economics is not money – ka la ho ga ... (i)
 demand and supply economics – mo ta pa ka ... (ii)
 money makes only part – zi la ne ki ... (iii)
 demand makes supply economics – zi mo ka ta ... (iv)
 from (i) & (iii)
 money → ‘la’
 from (iii) & (iv)
 makes → ‘zi’
 From (i) & (iv)
 economics – ‘ka’
 also, and – ‘pa’
 demand – ‘mo’ or ‘ta’
 supply – ‘mo’ or ‘ta’
 only – ‘ne’ or ‘ki’
 part – ‘ne’ or ‘ki’
 is – ‘ho’ or ‘ga’
 not – ‘ho’ or ‘ga’
 money → ‘la’

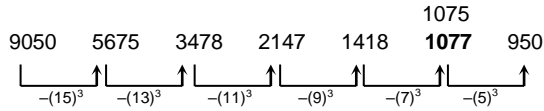
33. D
 Sol. economics is not money – ka la ho ga ... (i)
 demand and supply economics – mo ta pa ka ... (ii)
 money makes only part – zi la ne ki ... (iii)
 demand makes supply economics – zi mo ka ta ... (iv)
 from (i) & (iii)
 money → ‘la’
 from (iii) & (iv)
 makes → ‘zi’
 From (i) & (iv)
 economics – ‘ka’
 also, and – ‘pa’
 demand – ‘mo’ or ‘ta’
 supply – ‘mo’ or ‘ta’
 only – ‘ne’ or ‘ki’
 part – ‘ne’ or ‘ki’
 is – ‘ho’ or ‘ga’
 not – ‘ho’ or ‘ga’
 money → ‘la’

34. C
 Sol. Statue L is smaller than only statue M. Therefore, M is the tallest statue.
 $N > O > P$
 Now,
 $M > L > N > O > P$

 20 feet 11 feet

35. A
 Sol. Statue L is smaller than only statue M. Therefore, M is the tallest statue.
 $N > O > P$
 Now,

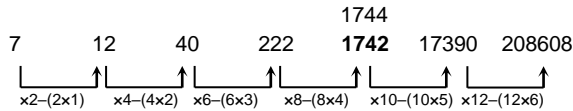


36. D
Sol.



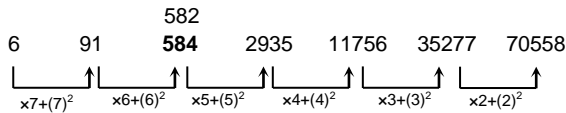
Hence, the number 1077 is wrong and it should be replaced by 1075.

37. D
Sol.



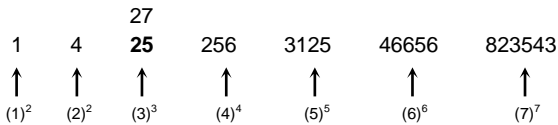
Hence, the number 1742 is wrong and it should be replaced by 1044.

38. C
Sol.



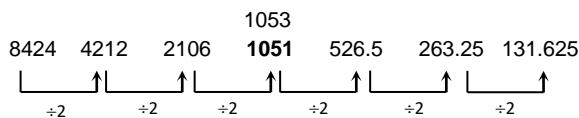
Hence, the number 584 is wrong and it should be replaced by 582.

39. D
Sol.



Hence, the number 25 is wrong and it should be replaced by 27.

40. B
Sol.



Hence, the number 1051 is wrong and it should be replaced by 1053.

41. D
Sol.

According to question,

$$\text{Third number} = 2400 \times \frac{1}{4} = 600$$

$$\text{Again, First number} \times \frac{6}{11} = \text{Second number} \times \frac{22}{100}$$

$$\therefore \text{First number} = 600 \times \frac{22}{100} \times \frac{11}{6} = 242$$

$$\therefore 45\% \text{ of the first number} = 242 \times \frac{45}{100} = 108.9$$

42. D

Sol. Required number = $4800 \times \frac{45}{100} \times \frac{40}{100} = 864$

43. D

Sol. Correct average = $\frac{(24 \times 56) + (48 + 59 + 67) - (44 + 45 + 61)}{24}$
 $= \frac{1344 + 174 - 150}{24} = \frac{1368}{24} = 57$

44. C

Sol. $\frac{468 \times 100}{x} = \frac{336 \times 100}{700}$
 $x = \frac{468 \times 100 \times 700}{336 \times 100} = 975$

45. B

Sol. Rate of simple interest = $\frac{10800 \times 100}{22500 \times 4} = 12\%$

Compound Interest = $22500 \left[\left(1 + \frac{12}{100} \right)^2 - 1 \right] = ₹ 5724$

46. A

Sol. Value of one ticket of each kind = $55 + 85 + 105 = ₹ 245$

\therefore Required number of ticket of each kind = $\frac{2940}{245} = 12$

47. B

Sol. Ravina's monthly income = $32000 \times \frac{100 + 15}{100} = 36800$

Ramola's annual income = $36800 \times 3 \times 12 = ₹ 1324800$

48. D

Sol. Marks scored by Ritu = $875 \times \frac{56}{100} = 490$

Marks scored by Smita = $875 \times \frac{92}{100} = 805$

\therefore Average marks scored by all the three together = $\frac{490 + 805 + 634}{3} = \frac{1929}{3} = 643$

49. C

Sol. Present age of Parineeta = $33 - 9 = 24$ years

Present age of Manisha = $24 - 9 = 15$ years

Present age of Deepali = $24 + 15 = 39$ years

$\therefore 5 : X = 15 : 39$

$\therefore X = \frac{5 \times 39}{15} = 13$

50. C

Sol. Cost of one pencil box = $7 + 22 + 14 = ₹ 43$

\therefore Required amount = $(20 \times 7) + (8 \times 22) + (6 \times 175) + (7 \times 43) = 140 + 176 + 1050 + 301 = ₹ 1667$

51. A

Sol. $n(S) = {}^{14}C_4 = \frac{14!}{(14-4)!4!} = 1001$

$n(E) = {}^5C_2 \times {}^2C_2 = 10$

\therefore Required probability = $\frac{n(E)}{n(S)} = \frac{10}{1001}$

52. C

Sol. $n(S) = {}^{14}C_8 = \frac{14!}{(14-8)!8!} = 3003$

$n(E) = {}^4C_2 \times {}^5C_2 \times {}^2C_2 \times {}^3C_2 = 180$

\therefore Required probability = $\frac{180}{3003} = \frac{60}{1001}$

53. D

Sol. $n(S) = {}^{14}C_2 = 91$

\therefore Probability of at least one red ball = $1 - \frac{{}^{12}C_2}{{}^{14}C_2} = 1 - \frac{66}{91} = \frac{25}{91}$

54. B

Sol. $n(S) = {}^{14}C_3 = 364$

\therefore Required probability = $1 - \frac{{}^{11}C_3}{{}^{14}C_3} = 1 - \frac{165}{364} = \frac{199}{364}$

55. D

Sol. Required probably = $\frac{n(E)}{n(S)} = \frac{{}^{10}C_3}{{}^{14}C_3} = \frac{120}{364} = \frac{30}{91}$

56. D

Sol. Required ratio = $34560 \times \frac{55}{100} : 45640 \times \frac{45}{100} = 19008 : 20538 = 1056 : 1141$

57. D

Sol. Required percentage = $\frac{55500 \times \frac{41}{100}}{34560 + 65900 + 45640 + 55500 + 42350 + 59650} \times 100$
 $= \frac{22755}{303600} \times 100 = 7.49\% \approx 7.5\%$

58. D

Sol. Required percentage = $\frac{45640 \times \frac{20}{100}}{59650 \times \frac{14}{100}} \times 100 = \frac{9128}{8351} \times 100 = 109.30\%$

59. C

Sol. Required number = $65900 \times \frac{20}{100} + 55500 \times \frac{33}{100} = 13180 + 18315 = 31495$

60. A

Sol. Required Average number
 $= 34560 \times \frac{55}{100} + 65900 \times \frac{43}{100} + 45640 \times \frac{45}{100} + 55500 \times \frac{26}{100} + 42350 \times \frac{70}{100} + 59650 \times \frac{62}{100}$
 $= \frac{19008 + 28337 + 20538 + 14430 + 29645 + 36983}{6} = \frac{148941}{6} = 24823.5$

61. B

Sol. Required percentage = $\frac{14.4^\circ}{122.4^\circ} \times 100 = 11.765 \approx 12\%$

62. A

Sol. Required number = $\frac{57.6^\circ + 64.8^\circ}{360^\circ} \times 6800 = 2312$

63. C

Sol. Difference = $\frac{(79.2^\circ + 14.4^\circ) - (122.4^\circ + 21.6^\circ)}{360^\circ} \times 6800 = -952$

Required difference = 952

64. D

Sol. Required percentage = $\frac{64.8^\circ + 21.6^\circ}{360^\circ} \times 100 = \frac{86.4^\circ}{360^\circ} \times 100 = 24\%$

65. A

Sol. Required ratio = $21.6 : 79.2 = 3 : 11$

66. D

Sol.

Input:	84	why	sit	14	32	not	best	ink	feet	51	27	vain	68	92
Step I:	14	84	why	sit	32	not	ink	feet	51	27	vain	68	92	best
Step II:	27	14	84	why	sit	32	not	ink	51	vain	68	92	best	feet
Step III:	32	27	14	84	why	sit	not	51	vain	68	92	best	feet	ink
Step IV:	51	32	27	14	84	why	sit	vain	68	92	best	Feet	ink	not
Step V:	68	51	32	27	14	84	why	vain	92	best	feet	ink	not	sit
Step VI:	84	68	51	32	27	14	why	92	best	feet	ink	not	sit	vain
Step VII:	92	84	68	51	32	27	14	best	feet	ink	not	sit	vain	why

There is no such step.

67. D

Sol.

Input:	84	why	sit	14	32	not	best	ink	feet	51	27	vain	68	92
Step I:	14	84	why	sit	32	not	ink	feet	51	27	vain	68	92	best
Step II:	27	14	84	why	sit	32	not	ink	51	vain	68	92	best	feet
Step III:	32	27	14	84	why	sit	not	51	vain	68	92	best	feet	ink
Step IV:	51	32	27	14	84	why	sit	vain	68	92	best	Feet	ink	not
Step V:	68	51	32	27	14	84	why	vain	92	best	feet	ink	not	sit
Step VI:	84	68	51	32	27	14	why	92	best	feet	ink	not	sit	vain
Step VII:	92	84	68	51	32	27	14	best	feet	ink	not	sit	vain	why

The word 'best' is at the fifth position from the right in Step V.

68. B

Sol.

Input:	84	why	sit	14	32	not	best	ink	feet	51	27	vain	68	92
Step I:	14	84	why	sit	32	not	ink	feet	51	27	vain	68	92	best
Step II:	27	14	84	why	sit	32	not	ink	51	vain	68	92	best	feet
Step III:	32	27	14	84	why	sit	not	51	vain	68	92	best	feet	ink
Step IV:	51	32	27	14	84	why	sit	vain	68	92	best	Feet	ink	not
Step V:	68	51	32	27	14	84	why	vain	92	best	feet	ink	not	sit
Step VI:	84	68	51	32	27	14	why	92	best	feet	ink	not	sit	vain
Step VII:	92	84	68	51	32	27	14	best	feet	ink	not	sit	vain	why

There are three elements – 27, 14 and best – between 'feet' and '32' in the last step of the output.

69. C

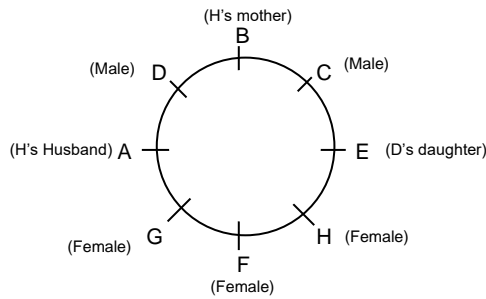
Sol.

Input:	84	why	sit	14	32	not	best	ink	feet	51	27	vain	68	92
Step I:	14	84	why	sit	32	not	ink	feet	51	27	vain	68	92	best
Step II:	27	14	84	why	sit	32	not	ink	51	vain	68	92	best	feet
Step III:	32	27	14	84	why	sit	not	51	vain	68	92	best	feet	ink
Step IV:	51	32	27	14	84	why	sit	vain	68	92	best	Feet	ink	not
Step V:	68	51	32	27	14	84	why	vain	92	best	feet	ink	not	sit

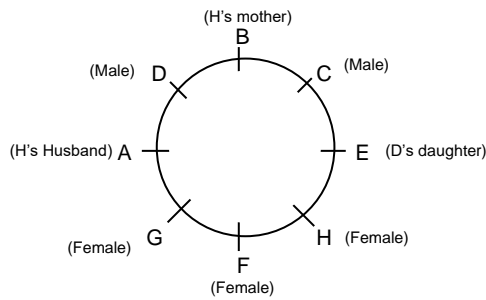
Step VI:	84	68	51	32	27	14	why	92	best	feet	ink	not	sit	vain
Step VII:	92	84	68	51	32	27	14	best	feet	ink	not	sit	vain	why

The word 'why' is sixth from the left and ninth from the right in the Step IV.

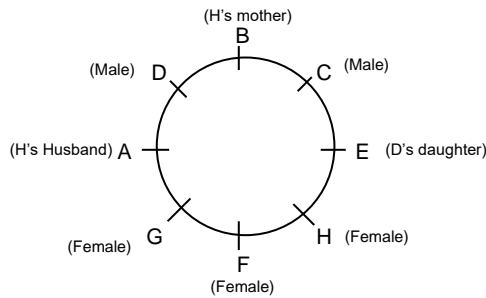
70.
Sol.



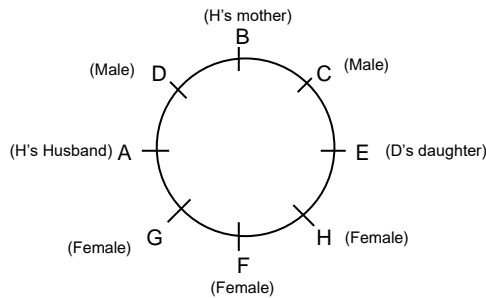
71.
Sol.



72.
Sol.

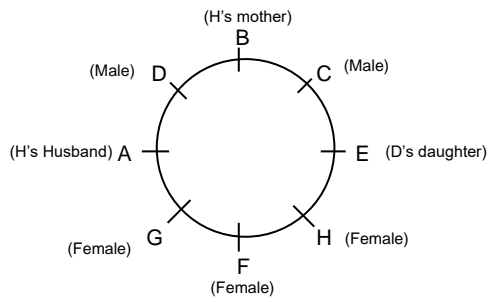


73.
Sol.

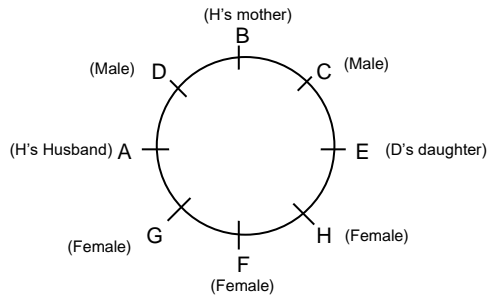


74.
Sol.

B



75. C
Sol.



76. D
Sol. The series is $x^2+1, x^2+2, x^2+3, x^2+4, x^2+5$

77. A
Sol. The series is

$$18 + 1^2 = 19$$

$$19 + 2^2 = 23$$

$$23 + 3^2 = 32$$

$$32 + 4^2 = 48$$

$$48 + 5^2 = 73$$

$$73 + 6^2 = 109$$

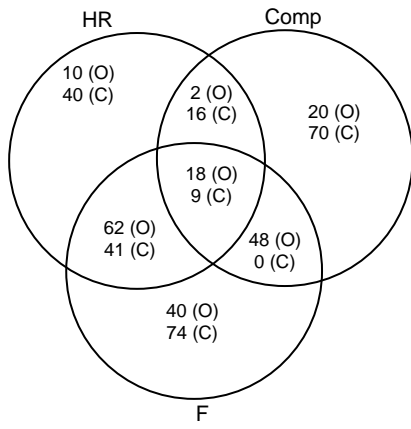
78. D
Sol. The series is $x0.5+0.5, x1+1, x1.5+1.5, x2+2, x2.5+2.5, x3+3$

79. B
Sol. The series is $x2-2, x2-2, x2-2, x2-2, \dots$

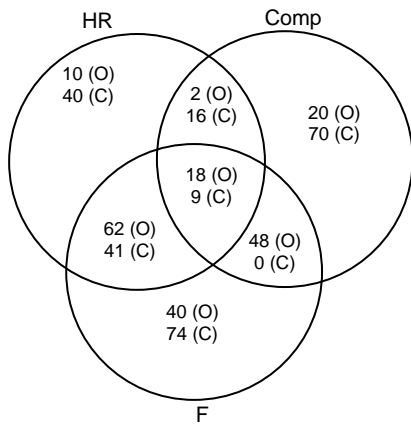
80. C
Sol. $(2 - 1) \times 7 = 7$
 $(7 - 2) \times 6 = 30$
 $(30 - 3) \times 5 = 135$
 $(135 - 4) \times 4 = 524$
 $(524 - 5) \times 3 = 1557$
 $(1557 - 6) \times 2 = 3102$

81. D

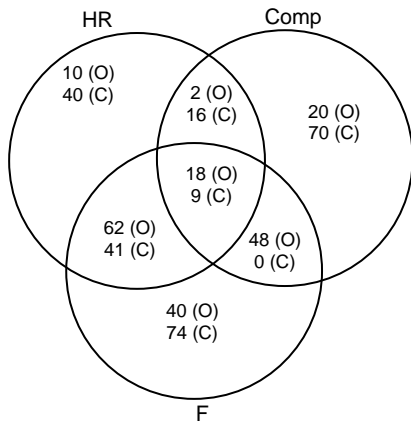
Sol.



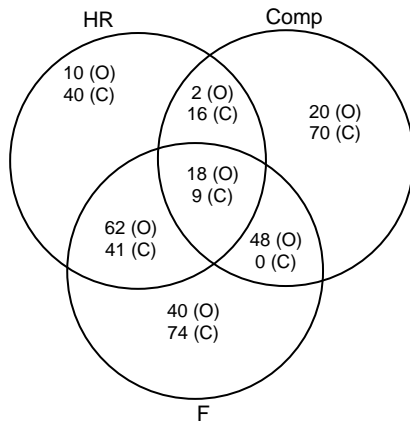
82. D
Sol.



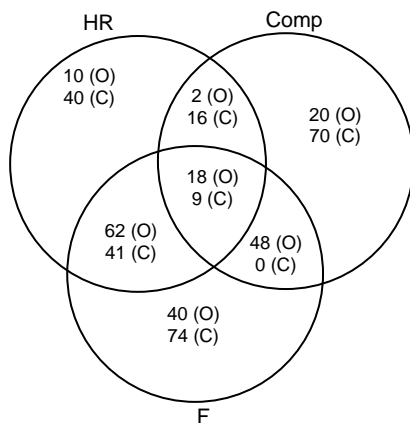
83. D
Sol.



84. D
Sol.



85. D
Sol.



86. C
Sol. Analysing the table we find three villages L, O and Q for which the number of children can be the least.

Village	L	O	Q
No. of children	248	252	199

87. D

Sol. Required Ratio = $\frac{1240 \times \frac{45}{100} + 2060 \times \frac{40}{100}}{1240 \times \frac{35}{100} + 2060 \times \frac{40}{100}} = \frac{558 + 824}{434 + 824} = \frac{1382}{1258} = \frac{691}{629}$

88. D
Sol. Total number of children and women in village Q = 60% of 1990 = 1194

89. A
Sol. Required % = $\frac{1680}{10560} \times 100 = 16$

90. B
Sol. Required number = $2140 \times \frac{1}{4} + 1450 \times \frac{1}{5} = 535 + 290 = 825$

91. C
Sol. 'always create new ideas' → 'ba ri sha gi' ... (i)
 'ideas and new thoughts' → 'fa gi ma ri' ... (ii)
 'create thoughts and insights' → 'ma job a fa' ... (iii)
 'new and better solutions' → 'ki ri to fa' ... (iv)
 Using (i) and (iv),
 new → ri
 Using (i), (ii) and (iv),

ideas → gi
and → fa
thoughts → ma

Using (i) and (iii),

create → ba
always → sha
insights → jo

better solutions → ki to

92. D

Sol. 'always create new ideas' → 'ba ri sha gi' ... (i)
'ideas and new thoughts' → 'fa gi ma ri' ... (ii)
'create thoughts and insights' → 'ma job a fa' ... (iii)
'new and better solutions' → 'ki ri to fa' ... (iv)

Using (i) and (iv),

new → ri

Using (i), (ii) and (iv),

ideas → gi
and → fa
thoughts → ma

Using (i) and (iii),

create → ba
always → sha
insights → jo

better solutions → ki to

93. B

Sol. 'always create new ideas' → 'ba ri sha gi' ... (i)
'ideas and new thoughts' → 'fa gi ma ri' ... (ii)
'create thoughts and insights' → 'ma job a fa' ... (iii)
'new and better solutions' → 'ki ri to fa' ... (iv)

Using (i) and (iv),

new → ri

Using (i), (ii) and (iv),

ideas → gi
and → fa
thoughts → ma

Using (i) and (iii),

create → ba
always → sha
insights → jo

better solutions → ki to

94. B

Sol. 'always create new ideas' → 'ba ri sha gi' ... (i)
'ideas and new thoughts' → 'fa gi ma ri' ... (ii)
'create thoughts and insights' → 'ma job a fa' ... (iii)
'new and better solutions' → 'ki ri to fa' ... (iv)

Using (i) and (iv),

new → ri

Using (i), (ii) and (iv),

ideas → gi
and → fa

thoughts → ma
 Using (i) and (iii),
 create → ba
 always → sha
 insights → jo
 better solutions → ki to

95. D

Sol. 'always create new ideas' → 'ba ri sha gi' ... (i)
 'ideas and new thoughts' → 'fa gi ma ri' ... (ii)
 'create thoughts and insights' → 'ma job a fa' ... (iii)
 'new and better solutions' → 'ki ri to fa' ... (iv)

Using (i) and (iv),
 new → ri
 Using (i), (ii) and (iv),
 ideas → gi
 and → fa
 thoughts → ma

Using (i) and (iii),
 create → ba
 always → sha
 insights → jo
 better solutions → ki to

96. C

Sol.

	Standard	Subject
A	5 th	Maths
B	7 th	Hindi or English
C	5 th	Marathi
D	6 th	Economics
E	6 th	Civics
G	7 th	Hindi or English
I	7 th	History

97. A

Sol.

	Standard	Subject
A	5 th	Maths
B	7 th	Hindi or English
C	5 th	Marathi
D	6 th	Economics
E	6 th	Civics
G	7 th	Hindi or English
I	7 th	History

98. A

Sol.

	Standard	Subject
A	5 th	Maths
B	7 th	Hindi or English
C	5 th	Marathi
D	6 th	Economics

E	6 th	Civics
G	7 th	Hindi or English
I	7 th	History

99. C
Sol.

	Standard	Subject
A	5 th	Maths
B	7 th	Hindi or English
C	5 th	Marathi
D	6 th	Economics
E	6 th	Civics
G	7 th	Hindi or English
I	7 th	History

100. B
Sol.

	Standard	Subject
A	5 th	Maths
B	7 th	Hindi or English
C	5 th	Marathi
D	6 th	Economics
E	6 th	Civics
G	7 th	Hindi or English
I	7 th	History