

STATE BANK OF INDIA

PROBATIONARY OFFICERS MODEL PAPER

No. of Questions: 100

Maximum Marks: 100

Time: 1 hour

ENGLISH LANGUAGE

Directions (1 – 8): Read the following passage carefully and answer the questions given below it. Certain words/ phrases have been printed in bold to help you locate them while answering some of the questions.

In February 2010 the Medical Council of India announced a major change in the regulation governing the establishment of medical colleges. With this change, corporate entities were **permitted** to open medical colleges. The new regulation also carried the following warning: "permission shall be withdrawn if the colleges resort to commercialization". Since the regulation does not elaborate on what constitutes "resorting to commercialisation", this will presumably be a matter left to the discretion of the Government. A basic requirement for a new medical college is a pre-existing hospital that will serve as a teaching hospital. Corporate entities have hospitals in the major metros and that is where they will have to locate medical colleges. The earlier mandated land requirement for a medical college campus, minimum of 25 acres of contiguous land, cannot be fulfilled in the metros. Not surprisingly, yet another tweak has been made in the regulation, prescribing 10 acres as the new minimum campus size for 9 cities including the main metros. With this, the stage is set for corporate entities to enter the medical education market. Until now, medical education in India has been projected as a not-for-profit activity to be organised for the public good. While private bodies can run medical colleges, these can only be societies or trusts, legally non-profit organizations. In opening the door to corporate colleges, thus, a major policy change has been effected without changing the law or even a discussion in Parliament, but by simply getting a **compliant** MCI to change the regulation on establishment of medical colleges. This and other changes have been justified in the name of addressing the shortage of doctors. At the same time, over 50, existing medical colleges, including 15 run by the government, have been prohibited from admitting students in 2010 for having failed to meet the basic standards prescribed. Ninety percent of these colleges have come up in the last 5 years. Particularly **shocking** is the phenomenon of government colleges **falling short** of standards approved by the Government. Why are state government institutions not able to meet the requirements that have been approved by the central government? A severe problem faced by government -run institutions is attracting and retaining teaching faculty, and this is likely to be among the major reasons for these colleges failing to satisfy the MCI norms. The crisis building upon the faculty front has been **flagged** by various commissions looking into problems of medical education over the years. An indicator of the crisis is the attempt to conjure up faculty when MCI carries out inspections of new colleges, one of its regulatory functions. Judging by news reports, the practice of presenting fake faculty - students or private medical practitioners hired for the day -during MCI inspections in private colleges is common. What is interesting is that even government colleges are adopting **unscrupulous** methods. Another indicator is the extraordinary scheme, verging on the ridiculous that is being put in place by the MCI to make inspections 'fool-proof'. Faculty in all medical colleges are to be issued an RFID based smart card by the MCI with a unique Faculty Number. The card, it is argued, will eliminate the possibility of a teacher being shown on the faculty of more than one college and establish if the qualifications of a teacher are genuine. In the future it is projected that biometric RFID readers will be installed in the colleges that will enable a Faculty Identification, Tracking and Monitoring System to monitor faculty from within the college and even remotely from MCI headquarters.

The picture above does not even start to reveal the true and pathetic situation of medical care especially in rural India. Only a fraction of the doctors and nursing professionals serve rural areas where 70 percent of our population lives. The Health Ministry, with the help of the MCI, has been active in proposing yet another 'innovative' solution to the problem of lack of doctors in the rural areas. The proposal is for a

three-and-a-half year course to obtain the degree of Bachelor of Rural Medicine and Surgery (BRMS). Only rural candidates would be able to join this course. The study and training would happen at two different levels -Community Health Centers for 18 months, and sub-divisional hospitals for a further period of 2 years and be conducted by retired professors. After completion of training, they would only be able to serve in their own state in district hospitals, community health centres, and primary health centres. The BRMS proposal has invited sharp criticism from some doctors' organisations on the grounds that it is discriminatory to have two different standards of healthcare - one for urban and the other for rural areas, and that the healthcare provided by such graduates will be compromised. At the other end is the opinion expressed by some that "something is better than nothing", that since doctors do not want to serve in rural areas, the government may as well create a new cadre of medics who will be obliged to serve there. The debate will surely pick up after the government formally lays out its plans. What is apparent is that neither this proposal nor the various stopgap measures adopted so far address the root of the problem of healthcare. The far larger issue is government policy, the low priority attached by the government to the social sector as a whole and the health sector in particular, evidenced in the paltry allocations for maintaining and upgrading medical infrastructure and medical education and for looking after precious human resources.

1. What solution is being offered by the Health Ministry for the shortage of doctors in rural areas?
 - 1) Increase the number of government run hospitals in the rural areas thereby increasing the number of doctors catering to the people in these regions.
 - 2) Make it mandatory for doctors serving in the urban areas to serve in the rural areas for a specific number of years.
 - 3) Set up increasing number of community health centres in rural areas.
 - 4) Hire retired professors of medicine to offer medical help to people living in the rural areas till the time more doctors are appointed.
 - 5) Run a separate medical course for three and a half years which can be taken up only by rural candidates who would ultimately serve in the rural areas.
2. Why have some existing medical colleges been prohibited from admitting students?
 - 1) As these have adopted corrupt practices and have been taking huge donations from their students
 - 2) As all these colleges were illegally set up and were not approved by the government in the first place
 - 3) As the course offered by these colleges is not in line with the course offered by the government run colleges
 - 4) As these have failed to meet the norms set by the central government for running the college.
 - 5) As there are absolutely no faculty members left in these colleges to teach students.
3. Which of the following is/are the change/s announced by the MCI in the regulation governing the establishment of medical colleges?
 - A) Allowing the commercialisation of medical colleges.
 - B) Reducing the earlier mandated land requirement for a medical college campus for metros.
 - C) Allowing corporate bodies to open medical colleges.
 - 1) Only (B)
 - 2) Only (A) and (B)
 - 3) Only C
 - 4) Only (B) and(C)
 - 5) Only (A), (B) and (C) are true

9. Drugs worth Rs.3 lakhs werefrom the apartment by the police.

- A) manufactured B) ruptured C) seized D) confiscated
E) bought F) compared
1) (A) and (D) 2) (B) and (C) 3) (C) and (E) 4) (E) and (F)
5) (C) and (D)

10. A man reportedly two passports with the same photograph, but under different names was arrested by the commissioner's Task Force.

- A) possessing B) examining C) surrendering D) mastering
E) holding F) fixating
1) (B) and (C) 2) (C) and (F) 3) (A) and (E) 4) (A) and (D)
5) (D) and (E)

Directions (11 – 15): Rearrange the following sentences (A), (B), (C),(D), (E) and (F) in the proper sequence to form a meaningful paragraph; then answer the questions given below them.

- A) Had it been not for them, Indian banks would have had their hands tied down too.
B) Today almost all the countries are facing the heat of recession.
C) One of these is the strict RBI and SEBI rules which regulated banking sector very efficiently.
D) This could have led to massive losses to them, which could have percolated to other sectors as well.
E) However there are a few things which help India in bouncing back from the state of recession.
F) Like others India too has not remained immune to the epidemic.

11. Which of the following sentence should be the **THIRD** after rearrangement?

- 1) A 2) E 3) D 4) F
5) C

12. Which of the following sentence should be the **FIRST** after rearrangement?

- 1) A 2) B 3) C 4) D
5) E

13. Which of the following sentence should be the **SECOND** after rearrangement?

- 1) A 2) B 3) D 4) E
5) F

14. Which of the following sentence should be the **SIXTH (LAST)** after rearrangement?

- 1) C 2) E 3) D 4) B
5) F

15. Which of the following sentence should be the **FIFTH** after rearrangement?

- 1) B 2) C 3) A 4) E
5) F

Directions (16 – 20): In the following passage there are blanks, each of which has been numbered. These numbers are printed below the passage and against each, five words/ phrases are suggested, one of which fits the blank appropriately. Find out the appropriate word/ phrase in each case.

The world is going through a deep recession. At such a time, one thing we need in abundance is jobs for the semiskilled and unskilled. This is the only way in which equal ...(16)... of wealth can take place. The healthcare industry is ideally poised to occupy this position. The IT industry hires people from the upper-middle strata and rich families, usually engineers, ...(17)... the healthcare industry hires nurses, to the tune of eighty percent of the jobs created, from the lower economic strata. Global healthcare is a \$ 4.5 trillion industry ...(18)... only to the agro industry. Even then healthcare reaches only eight percent of world's population. Policymakers should look at healthcare industry as not only an industry which addresses pain but also as one which can ...(19)... the economy. The last century was driven by machines that addressed human toil and it is strongly believed that this century will be driven by healthcare. This, however, will only happen if policymakers make a conscious effort to ...(20)... the right policies in place soon.

16. 1) earning 2) share 3) venture 4) delivery
5) distribution
17. 1) whereas 2) unlike 3) besides 4) although
5) despite
18. 1) encouraging 2) second 3) lesser 4) beating
5) greater
19. 1) persuade 2) ascertain 3) influence 4) impede
5) estimate
20. 1) derive 2) frame 3) figure 4) consider
5) put

Directions (21 – 25): Each question below has two blanks, each blank indicating that something has been omitted. Choose the set of words for each blank best fits the meaning of the sentence as a whole.

21. The organization.....to popularize Indian classical music among the youth which has lost with its cultural roots.
1) endeavours, touch 2) wishes, interest
3) efforts, experience 4) exerts, intrigue
5) need, relation
22. One of the major critiques of the examination system is that it to a spirit of competition among the students.
1) results, defective 2) accompanies, adequate
3) develops, intense 4) takes, severe
5) leads, unhealthy
23. Auroras are natural light displays in the sky, usually at night, in the Polar regions.
1) watch, upward 2) noticed, peculiar
3) observed, only 4) found, most
5) follows, mainly
24. After the board examinations, students are up for the various entrance examinations for next month.
1) ready, timed 2) gearing, scheduled
3) prepared, programmed 4) set, duration
5) geared, kept

25. The governmental spurred dramatic improvements in the way waste management is out in many hospitals.
- 1) rule, thrown
2) plans, conduct
3) crusade, done
4) efforts, carried
5) venture, disposed

Directions (26 – 30): Which of the phrases (1), (2), (3) and (4) given below each statement should replace the phrase printed in bold in the sentence to make it grammatically correct? If the sentence is correct as it is given and 'No correction is required,' mark (5) as the answer.

26. A twenty-first century economy cannot be held hostage by power cuts nor travel on nineteenth century roads.
- 1) cannot be hold
2) can either be held
3) can neither be held
4) can either be hold
5) No correction required
27. The company's philosophy is to make sure that the employees are happy, have the ability to be intellectually stimulated and contributes towards their growth.
- 1) contribute to their growth
2) contribute towards its growth
3) contributes towards its growing
4) contribute to its growing
5) No correction required
28. Even though many companies are now penetrating rural India, it would help to give India a real chance of witnessing a double digit GDP growth.
- 1) Despite many companies are
2) As many company is
3) Besides many companies are
4) Since many companies are
5) No correction required
29. Today, governments are introducing more and more technology into their system to address the needs of citizens at a pace fast than that of manual operations.
- 1) faster than that of
2) faster than those for
3) fast than that for
4) more than that in
5) No correction required
30. Making good school education a reality would require major changes in existing school system with expansion at both secondary and elementary levels.
- 1) should requires major changes
2) would requires major change
3) must require some changes
4) require major changes
5) No correction required

QUANTITATIVE APTITUDE

Directions (31 – 35): What will come in place of the question mark (?) in each of the following number series?

31. 2 8 26 ? 242

- 1) 78
2) 72
3) 82
4) 84
5) None

32. 3 4 12 ? 196
1) 45 2) 40 3) 41 4) 49
5) None
33. 9 17 ? 65 129
1) 32 2) 24 3) 35 4) 33
5) None
34. 7 13 ? 49 97
1) 27 2) 25 3) 23 4) 29
5) None
35. 5 3 6 ? 64.75
1) 15 2) 15.5 3) 17.5 4) 17.25
5) None of these
36. Harshita 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 Rs.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 Harshita pay to the shopkeeper?
1) Rs.1,381 2) Rs.1,815 3) Rs.1,667 4) Rs.1,572
5) None of these
37. 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?
1) 56 2) 55 3) 57.5 4) 58.5
5) None of these
38. In a test, minimum passing percentage for girls and boys is 30% and 45% respectively. A boy scored 280 marks and failed by 80 marks. How many more marks did a girl require to pass in the test if she scored 108 marks?
1) 132 2) 140 3) 160 4) 112
5) None
39. 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?
1) 107.6 2) 131.1 3) 115.4 4) 143.8
5) None of these
40. In an Entrance Examination Seema scored 56 percent marks, Nitya scored 92 percent marks and Meena scored 634 marks. The maximum marks of the examination are 875. What are the average marks scored by all the three girls together?
1) 1939 2) 817 3) 680 4) 643
5) None of these

Directions (41–45): Study the following table carefully and answer the questions given below.

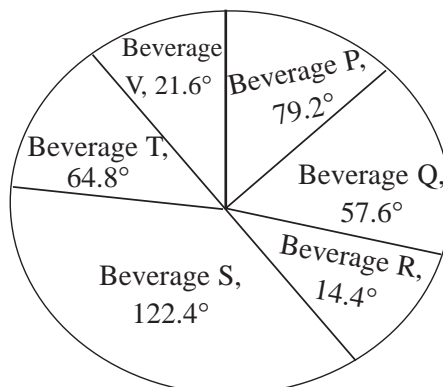
Monthly Expenditure (in thousands) by five people on Rent, Food, Children's Education, Clothes and Travelling

Expenditure → People ↓	Rent	Food	Children's Education	Clothes	Travelling
A	12.5	7.50	6.52	3.30	4.72
B	16.0	8.55	8.38	2.75	5.86
C	13.8	11.40	12.60	6.30	9.30
D	9.65	17.80	9.95	8.40	7.85
E	14.5	9.00	10.25	3.90	5.42

41. What is the total monthly expenditure made by D on rent, B on clothes and E on travelling together?
 1) Rs.18,720 2) Rs.1,78,200 3) Rs.17,800 4) Rs.1,84,720
 5) None of these
42. What is the average monthly expenditure on food by all the people together?
 1) Rs.1,08,500 2) Rs.10,850 3) Rs.54,250 4) Rs.52,450
 5) None of these
43. Whose monthly expenditure on all the heads together is the lowest among them?
 1) A 2) B 3) C 4) D
 5) E
44. If the monthly expenditure of C on children's education is increased by 5%, then what will be his yearly expenditure on children's education?
 1) Rs.1,58,760 2) Rs.15,87,600 3) Rs.13,230 4) Rs.1,32,300
 5) None of these
45. What is the respective ratio between the monthly expenditure made by A on travelling and the monthly expenditure made by D on clothes?
 1) 57 : 105 2) 105 : 59 3) 37 : 103 4) 59 : 105
 5) None of these

Directions (46 – 50): 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 No. of students = 6800



46. What is the difference between the total number of students who prefer Beverages P and R together and the total number of students who prefer Beverages S and V together?
1) 958 2) 953 3) 952 4) 957
5) None of these
47. What is the respective ratio between the number of students who prefer Beverage V and the number of students who prefer Beverage P?
1) 3 : 11 2) 4 : 13 3) 8 : 11 4) 5 : 13
5) None of these
48. The number of students who prefer Beverages T and V together are what percent of the total number of students?
1) 22 2) 16 3) 28 4) 24
5) None
49. The number of students who prefer Beverage R are approximately what percent of the number of students who prefer Beverage S?
1) 9 2) 12 3) 16 4) 24
5) 27
50. How many students prefer Beverage Q and Beverage T together?
1) 2312 2) 2311 3) 2325 4) 2328
5) None of these

Directions (Q.51 – 55): In the following questions two equations numbered I and II are given. You have to solve both the equations and Give answer

- 1) If $x > y$ 2) If $x \geq y$ 3) If $x < y$ 4) If $x \leq y$
5) If $x = y$ or the relationship cannot be established.
51. I) $x^2 - x - 12 = 0$
II) $y^2 + 5y + 6 = 0$
52. I) $x^2 - 8x + 15 = 0$
II) $y^2 - 3y + 2 = 0$
53. I) $x^2 - 32 = 112$
II) $y - \sqrt{169} = 0$
54. I) $x - \sqrt{121} = 0$
II) $y^2 - 121 = 0$
55. I) $x^2 - 16 = 0$
II) $y^2 - 9y + 20 = 0$

Directions (Q.56 – 60): Study the following pie-chart carefully to answer these questions.

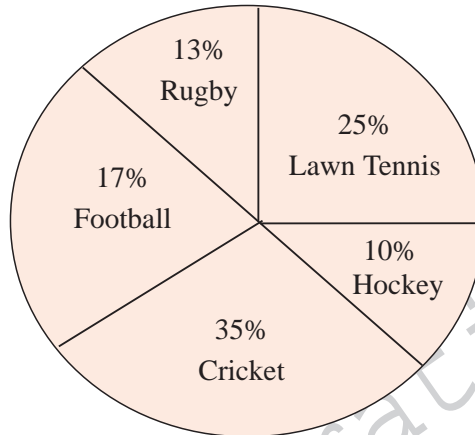
Percentage wise Distribution of Players Who Play Five Different Sports

Total Players are 4200 out of which Female Players are equal to 2000

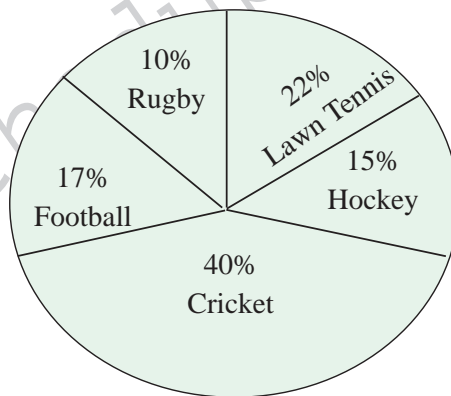
Total Players = 4200

Percentage of Players who play different sports

Female Players = 2000



Percentage of Female Players who play different sports



56. What is the average number of players (both male and female) who play football and rugby together?
 1) 620 2) 357 3) 230 4) 630
 5) None of these
57. What is the difference between the number of the female players who play lawn tennis and the number of male players who play rugby?
 1) 94 2) 84 3) 220 4) 240
 5) None
58. What is the respective ratio of the number of female players who play cricket and number of male players who play hockey?
 1) 20 : 7 2) 4 : 21 3) 20 : 3 4) 3 : 20
 5) None of these
59. What is the total number of male players who play football, cricket and lawn tennis together?
 1) 1,724 2) 1,734 3) 1,824 4) 1,964
 5) None of these
60. Number of male players who play rugby is **approximately** what percentage of the total number of players who play lawn tennis?
 1) 33 2) 39 3) 26 4) 21
 5) 43

61. Out of 5 women and 4 men a committee of three members is to be formed in such a way that at least one member is a woman. In how many different ways can it be done?
- 1) 80 2) 84 3) 76 4) 96
- 5) None
62. In how many different ways can the letters of the word TOTAL be arranged?
- 1) 120 2) 60 3) 48 4) 72
- 5) None
63. B and C together can complete a work in 8 days. A and B together can complete the same work in 12 days and A and C together can complete the same work in 16 days. In how many days can A, B and C together complete the same work?
- 1) $3\frac{9}{13}$ 2) $7\frac{5}{13}$ 3) $7\frac{5}{12}$ 4) $3\frac{5}{12}$
- 5) None
64. What will be the compound interest accrued on an amount of Rs.10,000 at the rate of 20 p.c.p.a. in two years if the interest is compounded half yearly?
- 1) Rs.4,400 2) Rs.4,600 3) Rs.4,641 4) Rs.4,680
- 5) None of these
65. Income of A is 150% of the income of B and income of C is 120% of the income of A. If the total income of A, B and C together is Rs.86,000, what is C's income?
- 1) Rs.30,000 2) Rs.32,000 3) Rs.20,000 4) Rs.36,000
- 5) None of these

REASONING ABILITY

66. An office bus driver starts from the office, drives 2 km towards North, takes a left turn and drives for 5 km. He then takes a left turn and drives for 8 km before taking a left turn again and driving for 5 km. The driver finally takes a left turn and drives 1 km before stopping. How far and towards which direction should the driver drive to reach the office again?
- 1) 3 km towards North 2) 7 km towards East
- 3) 6 km towards South 4) 6 km towards West
- 5) 5 km towards North

Directions (Q.67 – 68): Read the following information carefully and answer the questions which follow.

A, B, C, D, E and F live on different floors in the same building having six floors numbered one to six (the ground floor is numbered 1, the floor above it, number 2 and so on and the topmost floor is numbered 6).

A lives on an even numbered floor. There are two floors between the floors on which D and F live. F lives on a floor above D's floor. D does not live on floor number 2. B does not live on an odd numbered floor. C does not live on any of the floors below F's floor. E does not live on a floor immediately above or immediately below the floor on which B lives.

67. Who amongst the following live on the floors exactly between D and F?
- 1) E, B 2) C, B 3) E, C 4) A, E
- 5) B, A

68. On which of the following floors does B live?

- 1) 6th 2) 4th 3) 2nd 4) 5th
5) Cannot be determined

Directions (Q.69 – 70): Study the following information to answer the given questions.

In a five letter English word (which may or may not be a meaningful English word), there are two letters between L and P. S is not placed immediately next to L. There is only one letter between S and A. S is towards the right of A. S is not placed immediately next to E.

69. Which of the following is correct with respect to the word thus formed?

- 1) E is at one of the extreme ends of the word
2) P is not placed immediately next to A
3) There are two letters between A and E in the word thus formed
4) P is placed second to the right of E
5) None is correct

70. Which of the following words will be formed based on the given conditions?

- 1) SPAEL 2) PEALS 3) LEAPS 4) SEPAL
5) LAPSE

Directions (Q.71 – 75): Study the following information carefully and answer the questions given below.

P, Q, R, S, T and M are six students of a school, one each studies in Class I–VI. Each of them has a favourite colour from red, black, blue, yellow, pink and green, not necessarily in the same order. Q likes black and does not study in Class IV or V. The one who studies in class IV does not like green. P studies in class II. M likes blue and does not study in class IV. The one who likes yellow studies in class VI. S likes pink and studies in class I. R does not study in class VI.

71. In which class does R study?

- 1) V 2) III 3) IV 4) Data inadequate
5) None

72. Which colour does R like?

- 1) Black 2) Yellow 3) Green 4) Blue
5) None of these

73. Which colour does P like?

- 1) Green 2) Yellow 3) Red 4) Data inadequate
5) None of these

73. Which of the following combination is correct?

- 1) P – II – Yellow 2) Q – III – Green
3) S – I – Black 4) T – V – Yellow
5) None of these

75. In which class does M study?

- 1) IV 2) III 3) II 4) V
5) None of these

Directions (Q.76 – 80): Study the following information carefully and answer the given questions.

Representatives from eight different Banks viz. A, B, C, D, E, F, G and H are sitting around a circular table facing the centre but not necessarily in the same order. Each one of them is from a different Bank viz. UCO Bank, Oriental Bank of Commerce, Bank of Maharashtra, Canara Bank, Syndicate Bank, Punjab National Bank, Bank of India and Dena Bank.

F sits second to right of the representative from Canara Bank. Representative from Bank of India is an immediate neighbour of the representative from Canara Bank. Two people sit between the representative of Bank of India and B. C and E are immediate neighbours of each other. Neither C nor E is an immediate neighbour of either B or the representative from Canara Bank. Representative from Bank of Maharashtra sits second to right of D. D is neither the representative of Canara Bank nor Bank of India. G and the representative from UCO Bank are immediate neighbours of each other. B is not the representative of UCO Bank. Only one person sits between C and the representative from Oriental Bank of Commerce. H sits third to left of the representative from Dena Bank. Representative from Punjab National Bank sits second to left of the representative from Syndicate Bank.

76. Four of the following five are alike in a certain way based on the given arrangement and thus form a group. Which is the one that does not belong to that group?

- 1) H - UCO Bank
- 2) A - Canara Bank
- 3) D - Bank of Maharashtra
- 4) E - Syndicate Bank
- 5) F - Punjab National Bank

77. Which of the following is true with respect to the given seating arrangement?

- 1) B is the representative from Bank of Maharashtra
- 2) C sits second to right of H
- 3) The representative from Dena Bank sits to the immediate left of the representative from UCO Bank
- 4) A sits second to right of the representative from Bank of India
- 5) The representatives from Bank of Maharashtra and Syndicate Bank are immediate neighbours of each other

78. Who amongst the following sit exactly between B and the representative from Bank of India?

- 1) A and the representative from UCO Bank
- 2) F and G
- 3) H and the representative from Bank of Maharashtra
- 4) H and G
- 5) Representatives from Syndicate Bank and Oriental Bank of commerce

79. Who amongst the following is the representative from Oriental Bank of Commerce?

- 1) A
- 2) C
- 3) H
- 4) G
- 5) D

80. Who amongst the following sits second to left of B?

- 1) C
- 2) H
- 3) The representative from Canara Bank
- 4) The representative from Punjab National Bank
- 5) G

81. Pointing to a girl, Mihir said "She is the only daughter of my grandfather's only child". How is the girl related to Mihir?
- 1) Daughter 2) Niece 3) Sister 4) Data inadequate
- 5) None of these
82. In a row of twenty-five children facing South R is sixteenth from the right end and B is eighteenth from the left end. How many children are there between R and B?
- 1) 2 2) 3 3) 4 4) Data inadequate
- 5) None
83. W walked 40 metres towards West, took a left turn and walked 30 metres. He then took a right turn and walked 20 metres. He again took a right turn and walked 30 metres. How far was he from the starting point?
- 1) 70 metres 2) 60 metres
- 3) 90 metres 4) Cannot be determined
- 5) None of these
84. How many such pairs of letters are there in the word POSITIVE each of which has as many letters between them in the word as in the English alphabet?
- 1) None 2) One 3) Two 4) Three
- 5) More than three

Directions (85 – 87): In each of the questions below are given three statements followed by three conclusions numbered I, II and III. You have to take the given statements to be true even if they seem to be at variance from commonly known facts. Read all the conclusions and then decide which of the given conclusions logically follows from the given statements, disregarding commonly known facts.

85. **Statements:** Some carrots are brinjals.

Some brinjals are apples.

All apples are bananas.

Conclusions: I. Some apples are carrots.

II. Some bananas are brinjals.

III. Some bananas are carrots.

- 1) Only I follows 2) Only II follows
- 3) Only III follows 4) Only either II or III follows
- 5) None of these

86. **Statements:** All keys are locks.

All locks are bangles.

All bangles are cars.

Conclusions: I. Some cars are locks.

II. Some bangles are keys.

III. Some cars are keys.

- 1) Only I follows 2) Only I and II follow
- 3) Only I and III follow 4) Only II and III follow
- 5) All I, II and III follow

87. **Statements:** All fruits are leaves.
Some leaves are trees.
No tree is house.

- Conclusions:** I. Some houses are fruits.
II. Some trees are fruits.
III. No house is fruit.

- 1) Only I follows
2) Only II follows
3) Only III follows
4) Only either I or III follows
5) None follows

Directions (88 – 90): Study the following information carefully and answer the questions given below.

P, Q, R, S, T, U, V and W are sitting around a circle facing at the centre. T is second to the left of P and third to the right of V. S is second to the right of W who is to the immediate right of T. Q is third to the right of U.

88. In which of the following pairs is the third person sitting in between the first and the second persons?
1) USP
2) VRU
3) TQW
4) WPS
5) None of these
89. Who is to the immediate left of T?
1) Q
2) W
3) R
4) Data inadequate
5) None of these
90. Who is second to the right of P?
1) S
2) V
3) U
4) Q
5) Data inadequate

Directions (91 – 95): Below in each question are given two statements (A) and (B). These statements may be either independent causes or may be effects of independent causes or a common cause. One of these statements may be the effect of the other statement. Read both the statements and decide which of the following answer choices correctly depicts the relationship between these two statements. Mark answer

- 1) If statement (A) is the cause and statement (B) is its effect.
2) If statement (B) is the cause and statement (A) is its effect.
3) If both the statements (A) and (B) are independent causes.
4) If both the statements (A) and (B) are effects of independent causes.
5) If both the statements (A) and (B) are effects of some common cause.
91. A. The average day temperature of the city has increased by about 2 degrees in the current year over the average of past ten years.
B. More people living in rural areas of the state have started migrating to the urban areas in comparison with the earlier year.
92. A. Most of the shopkeepers in the locality closed their shops for the second continuous day.
B. Two groups of people living in the locality have been fighting with each other with bricks and stones forcing people to stay indoors.

93. A. The Government has decided to increase the prices of LPG gas cylinders with immediate effect.
B. The Government has decided to increase the prices of kerosene with immediate effect.
94. A. A cyclonic storm is expected to hit the coastline in the state during the next 48 hours.
B. Warning has been issued that heavy rains are expected in the coastal region in the state during the next 48 hours.
95. A. Majority of the first year students of the engineering college failed in Mathematics in the semester examination.
B. The college authority terminated the contract of the professor who taught mathematics to the first year students.

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

In a certain code language,

'robots can become lawyers' is written as 'ju ac th eg'.

'all doctors can check' is written as 'bd np ju mo'

'many doctors and lawyers' is written as 'np rt qs ac'

'machine check of robots' is written as 'eg ik ux bd'

(Note : All codes are two letter codes only)

96. What does the code 'ac' stand for in the given code language?
1) robots 2) many 3) lawyers 4) become
5) of
97. If 'how and many' is written as 'qs ws rt' then what will be the code for 'how can'?
1) np qs 2) rt ju 3) qs rt 4) ws ju
5) bd ws
98. What is the code for 'machine' in the given code language?
1) rt 2) Either 'eg' or 'rt' 3) bd 4) eg
5) Either 'ik' or 'ux'
99. What is the code for 'robots' in the given code language?
1) ux 2) eg 3) ju 4) Either 'eg' or 'Ju'
5) Either 'ju' or 'ac'
100. What may be the possible code for 'will become doctor in the given code language'?
1) th zi np 2) zi ac bd 3) np th ux 4) zi np bd
5) bd ju ux

KEY

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

EXPLANATIONS

1. Run a separate medical course for three and a half years which can be taken up only by rural candidates who would ultimately serve in the rural areas.
2. As these have failed to meet the norms set by the central government for running the college.
3. Only (B) and (C)
4. All (A), (B) and (C)
5. The meaning of the word **Shocking (Adjective)** as used in the passage is: very bad; that offends or upsets people; that is morally wrong.

The word **Appalling (Adjective)** means: shocking; extremely bad.

Look at the sentences:

The prisoners were living in appalling conditions.

The bus service is shocking now.

6. Dearth of teaching faculty.
7. All (A), (B) and (C)
8. To bring to light the problems faced by the health care sector in India despite changes suggested and goad the government into attaching priority to the sector.
9. The word **Confiscate (Verb)** means : to officially take something away from somebody; seize; grab.
10. The word **Possess (verb)** means: to have or own something; hold.

11. E 12. B

13. F

14. D

15. A

16. distribution

17. whereas

18. second

19. influence

20. put

21. endeavours, touch

22. leads, unhealthy

23. observed, only

24. gearing, scheduled

25. efforts, carried

26. Neither... nor is correct form of correlative.

27. contribute towards its growth

28. Since many companies are

29. Here, comparative degree should be used.

30. No correction required

31. The pattern is: $2 \times 3 + 2 = 6 + 2 = 8$

$$8 \times 3 + 2 = 24 + 2 = 26$$

$$26 \times 3 + 2 = 78 + 2 = 80$$

$$80 \times 3 + 2 = 240 + 2 = 242$$

32. The pattern is: $3 \times 1 + 1^2 = 3 + 1 = 4$

$$4 \times 2 + 2^2 = 8 + 4 = 12$$

$$12 \times 3 + 3^2 = 36 + 9 = 45$$

$$45 \times 4 + 4^2 = 180 + 16 = 196$$

33. The pattern is: $9 \times 2 - 1 = 18 - 1 = 17$

$$17 \times 2 - 1 = 34 - 1 = 33$$

$$33 \times 2 - 1 = 66 - 1 = 65$$

$$65 \times 2 - 1 = 130 - 1 = 129$$

34. The pattern is: $7 \times 2 - 1 = 14 - 1 = 13$

$$13 \times 2 - 1 = 26 - 1 = 25$$

$$25 \times 2 - 1 = 50 - 1 = 49$$

$$49 \times 2 - 1 = 98 - 1 = 97$$

35. The pattern is: $5 \times 0.5 + 0.5 = 2.5 + 0.5 = 3$

$$3 \times 1.5 + 1.5 = 4.5 + 1.5 = 6$$

$$6 \times 2.5 + 2.5 = 15 + 2.5 = 17.5$$

$$17.5 \times 3.5 + 3.5 = 61.25 + 3.5 = 64.75$$

36. C.P. of one pencil box = $7 + 22 + 14$

$$= \text{Rs.}43$$

\therefore Total amount paid by Harshita

$$= \text{Rs.}(20 \times 7 + 8 \times 22 + 6 \times 17.5 + 7 \times 43)$$

$$= \text{Rs.}(140 \times 176 + 1050 \times 301)$$

$$= \text{Rs.} 1667$$

37. Difference = $48 + 59 + 67 - 44 - 45 - 61$

$$= 24$$

$$\therefore \text{Correct average} = 56 + \frac{24}{24} = 57$$

38. If the maximum marks of examination be x , then $\frac{x \times 45}{100} = 280 + 80 = 360$

$$\Rightarrow x = \frac{360 \times 100}{45} = 800$$

$$\therefore 30\% \text{ of } 800 = \frac{800 \times 30}{100} = 240$$

$$= \text{Minimum marks to pass for girls}$$

$$\therefore \text{Required difference} = 240 - 108 = 132$$

39. Second number = $2400 \times \frac{1}{4} = 600$

If the first number be x , then

$$x \times \frac{6}{11} = 600 \times \frac{22}{100} = 132$$

$$\Rightarrow x = \frac{132 \times 11}{6} = 242$$

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

40. Total marks obtained by Seema = $\frac{875 \times 56}{100} = 490$

Total marks obtained by Nitya = $\frac{875 \times 92}{100} = 805$

Required average marks = $\frac{490 + 805 + 634}{3} = \frac{1929}{3} = 643$

41. Required monthly expenses = Rs.(9.65 + 2.75 + 5.42) thousand
= Rs.(17.82 × 1000) = Rs.17,820

42. Monthly expenditure on food (thousands) = $\left(\frac{7.50 + 8.55 + 11.40 + 17.80 + 9}{5} \right)$
= Rs.10.85 thousand = Rs.10,850

43. It is obvious from the table.

44. Required annual expenditure of C on education Rs. $\left(12 \times 12.60 \times \frac{105}{100} \right)$ thousand
= Rs. 158.76 thousand = Rs.1,58,760

45. Required ratio = 4.72 : 8.40 = 472 : 840 = 59 : 105

46. Difference of corresponding angles = $(122.4 + 21.6 - 79.2 - 14.4)^\circ = 50.4^\circ$

$$\therefore 360^\circ = 6800$$

$$\therefore 50.4^\circ = \frac{6800}{360} \times 50.4 = 952$$

47. Required ratio = 21.6 : 79.2 = 3 : 11

48. Required percentage = $\left(\frac{64.8 + 21.6}{360} \right) \times 100 = 24\%$

49. Required percentage = $\frac{14.4}{122.4} \times 100 = 11.76 = 12$

50. Number of students who prefer beverages B and E together = $\frac{57.6 + 64.8}{360} \times 6800 = \frac{122.4 \times 6800}{360}$
= 2312

51. I. $x^2 - x - 12 = 0$

$$\Rightarrow x^2 - 4x + 3x - 12 = 0$$

$$\Rightarrow x(x - 4) + 3(x - 4) = 0$$

$$\Rightarrow (x - 4)(x + 3) = 0$$

$$\therefore x = 4 \text{ or } -3$$

$$\text{II. } y^2 + 5y + 6 = 0$$

$$\Rightarrow y^2 + 3y + 2y + 6 = 0$$

$$\Rightarrow y(y + 3) + 2(y + 3) = 0$$

$$\Rightarrow (y + 3)(y + 2) = 0$$

$$\therefore y = -3 \text{ or } -2$$

Clearly, relation cannot be established.

$$52. \text{ I. } x^2 - 8x + 15 = 0$$

$$\Rightarrow x^2 - 5x - 3x + 15 = 0$$

$$\Rightarrow x(x - 5) - 3(x - 5) = 0$$

$$\Rightarrow (x - 3)(x - 5) = 0$$

$$\therefore x = 3 \text{ or } 5$$

$$\text{II. } y^2 - 3y + 2 = 0$$

$$\Rightarrow y^2 - 2y - y + 2 = 0$$

$$\Rightarrow y(y - 2) - 1(y - 2) = 0$$

$$\Rightarrow (y - 1)(y - 2) = 0$$

$$\therefore y = 1 \text{ or } 2$$

Clearly, $x > y$

$$53. \text{ I. } x^2 = 32 + 112 = 144$$

$$\therefore x = \sqrt{144} = \pm 12$$

$$\text{II. } y = \sqrt{169} = \pm 13$$

$$54. \text{ I. } x = \sqrt{121} = \pm 11$$

$$\text{II. } y^2 = 121$$

$$\therefore y = \sqrt{121} = \pm 11$$

$$55. \text{ I. } x^2 = 16$$

$$\Rightarrow x = \pm 4$$

$$\text{II. } y^2 - 9y + 20 = 0$$

$$\Rightarrow y^2 - 4y - 5y + 20 = 0$$

$$\Rightarrow y(y - 4) - 5(y - 4) = 0$$

$$\Rightarrow (y - 5)(y - 4) = 0$$

$$\therefore y = 5 \text{ or } 4$$

Clearly, $x \leq y$

$$56. \text{ Average number of players who play Football and Rugby} = \frac{1}{2} [(17 + 13\%) \text{ of } 4200]$$

$$= \frac{1}{2} \times 4200 \times \frac{30}{100} = 630$$

57. Number of players who play Rugby = $4200 \times \frac{13}{100} = 546$

Number of female players who play Rugby = $2000 \times \frac{10}{100} = 200$

\therefore Number of male players who play Rugby = $546 - 200 = 346$

Number of female players who play Lawn Tennis = $2000 \times \frac{22}{400} = 440$

\therefore Required difference = $440 - 346 = 94$

58. Number of female cricketers = $2000 \times \frac{40}{100} = 800$

Number of male Hockey players = $\frac{4200 \times 10}{100} - \frac{2000 \times 15}{100}$
 $= 420 - 300 = 120$

\therefore Required ratio = $800 : 120 = 20 : 3$

59. Number of male players who play Football, Cricket and Lawn Tennis

= $(17 + 35 + 25)\%$ of 4200 - $(13 + 40 + 22)\%$ of 2000

= $4200 \times \frac{77}{100} - 2000 \times \frac{75}{100}$

= $3234 - 1500 = 1734$

60. Number of male players who play Rugby = $4200 \times \frac{13}{100} - 200 = 346$

Number of players who play Lawn Tennis = $4200 \times \frac{25}{100} = 1050$

\therefore Required percentage = $\frac{346}{1050} \times 100 = 33$

61. The committee will be formed as follows :

(i) 1 woman and 2 men

(ii) 2 women and 1 man

(iii) 3 women

\therefore Required number of committees = ${}^5C_1 \times {}^4C_2 + {}^5C_2 \times {}^4C_1 + {}^5C_3$
 $= 5 \times \frac{4 \times 3}{1 \times 2} + \frac{5 \times 4}{1 \times 2} \times 4 + \frac{5 \times 4 \times 3}{1 \times 2 \times 3}$
 $= 30 + 40 + 10 = 80$

62. The word TOTAL has 5 letters in which T comes twice.

\therefore Total number of arrangements = $\frac{5!}{2!} = \frac{5 \times 4 \times 3 \times 2 \times 1}{2 \times 1} = 60$

63. (B + C)'s 1 day's work = $\frac{1}{8}$ (i)

(A + B)'s 1 day's work = $\frac{1}{12}$ (ii)

$$(A + C)\text{'s 1 day's work} = \frac{1}{16} \dots\dots (iii)$$

On adding all these three equations, 2 (A + B + C)'s 1 day's work

$$= \frac{1}{8} + \frac{1}{12} + \frac{1}{16} = \frac{6 + 4 + 3}{48} = \frac{13}{48}$$

$$\Rightarrow (A + B + C)\text{'s 1 day's work} = \frac{13}{96}$$

$$\therefore A, B \text{ and } C \text{ together can complete the work in } \frac{96}{13} = 7\frac{5}{13} \text{ days}$$

64. Interest is compounded half yearly.

$$\therefore R = 20\% \text{ p.a.} = 10\% \text{ half year}$$

$$T = 2 \text{ years} = 4 \text{ half years}$$

$$\begin{aligned} \therefore \text{C.I.} &= P \left[\left(1 + \frac{R}{100} \right)^T - 1 \right] \\ &= 10000 \left[\left(1 + \frac{10}{100} \right)^4 - 1 \right] \\ &= 10000 \left[\left(\frac{11}{10} \right)^4 - 1 \right] \\ &= 10000 \left[\left(\frac{121}{100} + 1 \right) \left(\frac{121}{100} - 1 \right) \right] \\ &= 10000 \times \frac{221}{100} \times \frac{21}{100} = \text{Rs. } 4641 \end{aligned}$$

65. Let B's income = Rs. x

$$\therefore \text{A's income} = \frac{150}{100} \times x = \text{Rs. } \frac{3x}{2}$$

$$\text{C's income} = \frac{120}{100} \times \frac{3x}{2} = \text{Rs. } \frac{9x}{5}$$

$$\therefore x + \frac{3x}{2} + \frac{9x}{5} = 86000$$

$$\Rightarrow \frac{10x + 15x + 18x}{10} = 86000$$

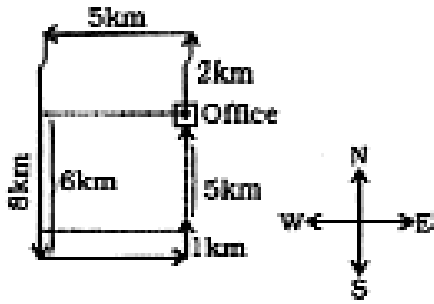
$$\Rightarrow 43x = 860000$$

$$\Rightarrow x = \frac{860000}{43} = 20000$$

\therefore C's income

$$= \text{Rs. } \left(\frac{9}{5} \times 20000 \right) = \text{Rs. } 36,000$$

66.



(Q.67 – 68):

No.	Floor	Person
6	Fifth floor	B
5	Fourth floor	C
4	Third floor	F
3	Second floor	E
2	First floor	A
1	Ground floor	D

67. A and E live on the floors exactly between D and F.

68. B lives on Fifth Floor numbered sixth.

(Q.69 – 70):

L P

L P S

L A P S

L E A P S

69. P is placed second to the right of E.

70. The word is LEAPS.

(Q.71 – 75):

P	Green	II
Q	Black	III
R	Red	IV
S	Pink	I
T	Yellow	VI
M	Blue	V

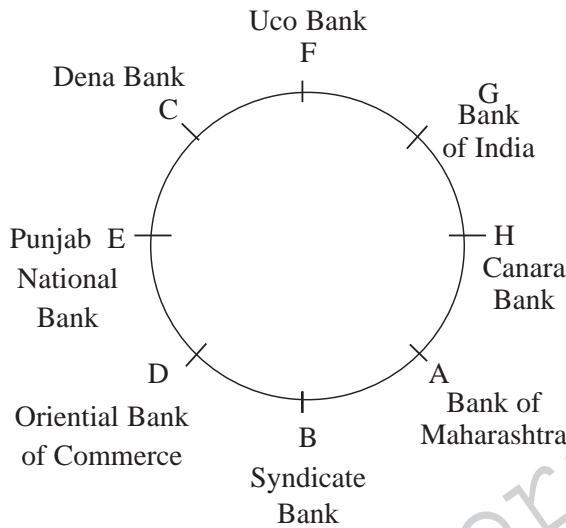
71. R does study in Class IV.

72. R likes red colour.

73. P likes green colour.

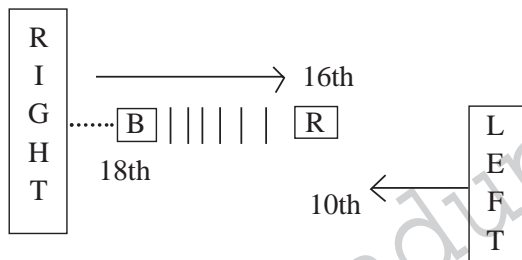
75. M does study in Class V.

(Q.76 – 80):



76. Except in A-Canara Bank pair, in all others the first person is second to the left of the second person.
77. B is the representative from Syndicate Bank. C sits third to the right of H. The representative from the Dena Bank, C is to the immediate right of the representative from the UCO Bank, F. A is second to the left of C, the representative from Bank of India. A, the representative from Bank of Maharashtra and B, the representative from Syndicate Bank are immediate neighbours of each other.
78. H, the representative from Canara Bank and A, the representative from Bank of Maharashtra, sit between B, the representative from Syndicate Bank and G, the representative from Bank of India.
79. D is the representative from Oriental Bank from Commerce.
80. E, the representative from Punjab National Bank sits second to the left from B, the representative from Syndicate Bank.
81. Mihir's grandfather's only child means mother or father of Mihir. The girl is only daughter of Mihir's mother or father. Therefore, the girl is sister of Mihir.

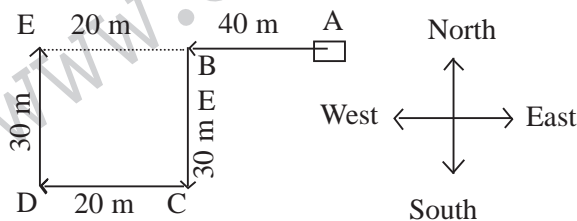
82.



$$\begin{aligned} \text{R's position from the left} &= 25 - 16 + 1 \\ &= 10^{\text{th}} \end{aligned}$$

Thus, there are 7 children between R and B.

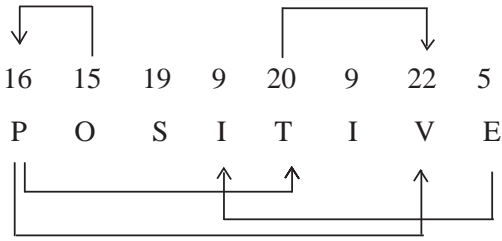
83.



$$\text{Required distance} = AB + BE$$

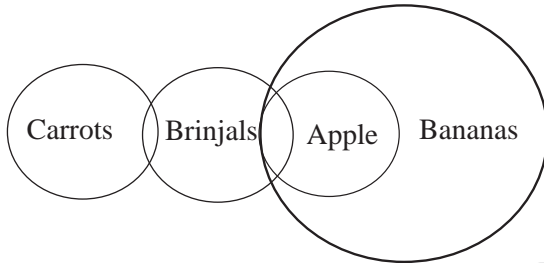
$$\Rightarrow 40 + 20 = 60 \text{ m}$$

84.



(Q.85 - 87):

85.



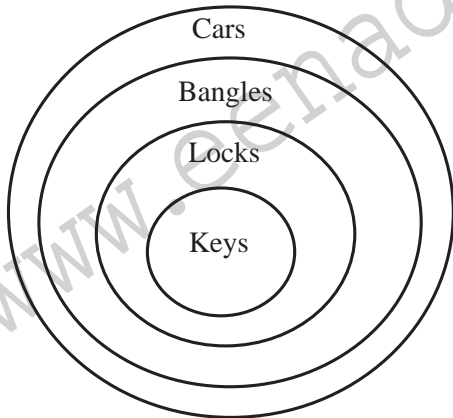
I) ×

II) ✓

III) ×

Only II follows.

86.



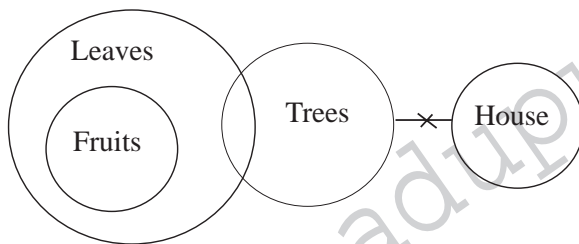
I) ✓

II) ✓

III) ✓

All follows.

87.

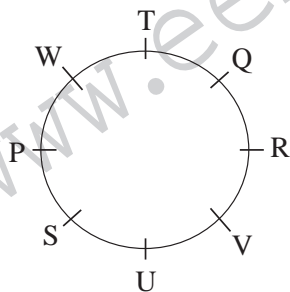


I) }

III) ✓ either I or III II) ×

Either I or III follow.

(Q.88 - 90): Sitting arrangement



88. In none of pairs the third person is sitting between the first and the second persons.
 89. Q is to the immediate left of T.
 90. U is second to the right of P.
 91. Both the statements (A) and (B) are effects of independent causes.
 92. Clearly statement (B) is the cause and statement (A) is its effect.
 93. Both the statements (A) and (B) are effects of some common cause.
 94. Clearly statement (A) is the cause and statement (B) is its effect.
 95. Clearly statement (A) is the cause and statement (B) is its effect.

(Q.96 – 100):

robots (can) become lawyers → (ju) ac th eg
 all (doctors) (can) (check) → (bd) (np) (ju) mo
 many (doctors) and lawyers → (np) rt qs ac
 machine (check) of robots → (eg) ik ux (bd)

96. ac ⇒ lawyers
 97. and many ⇒ rt qs
 how ⇒ ws
 how can ⇒ ws ju
 98. machine ⇒ ik/ux
 99. robots ⇒ eg
 100. become ⇒ th
 doctors ⇒ np
 The code for 'will' may be 'zi'.

(This model paper is prepared by subject experts of Race Institute, Hyderabad)