

QUANTITATIVE APTITUDE

DIRECTIONS (Qs. 1-10) : What will come in place of the question mark (?) in the following equations ?

1. $\frac{117 \times 117 \times 117 - 98 \times 98 \times 98}{117 \times 117 + 117 \times 98 + 98 \times 98} = ?$

- (a) 215 (b) 311 (c) 19 (d) 29
(e) None of these

2. If $\frac{a}{b} = \frac{4}{3}$, then $\frac{3a+2b}{3a-2b} = ?$

- (a) 6 (b) 3 (c) 5 (d) -1
(e) None of these

3. $\sqrt{\frac{?}{196}} = \frac{72}{56}$

- (a) 18 (b) 14 (c) 324 (d) 212
(e) None of these

4. $\frac{17.28 \div ?}{3.6 \times 0.2} = 200$

- (a) 120 (b) 1.20 (c) 12 (d) 0.12
(e) None of these

5. $\frac{(3.537 - 0.948)^2 + (3.537 + 0.948)^2}{(3.537)^2 + (0.948)^2} = ?$

- (a) 4.485 (b) 2.589 (c) 4 (d) 2
(e) None of these

6. $\frac{(272 - 32)(124 + 176)}{17 \times 15 - 15} = ?$

- (a) 0 (b) 2.25 (c) 300 (d) 240
(e) None of these

7. $\frac{50}{?} = \frac{?}{12\frac{1}{2}}$

- (a) $\frac{25}{2}$ (b) $\frac{4}{25}$ (c) 4 (d) 25
(e) None of these

8. $\frac{112}{\sqrt{196}} \times \frac{\sqrt{576}}{12} \times \frac{\sqrt{256}}{8} = ?$

- (a) 8 (b) 12 (c) 16 (d) 32
(e) None of these

9. $\frac{?}{\sqrt{2.25}} = 550$

- (a) 825 (b) 82.5 (c) 3666.66 (d) 2
(e) None of these

10. $\frac{\sqrt{5} - \sqrt{3}}{\sqrt{5} + \sqrt{3}} = ?$

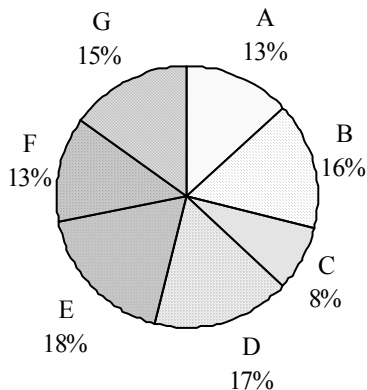
- (a) $4 + \sqrt{15}$ (b) $4 - \sqrt{15}$

- (c) $\frac{1}{2}$ (d) 1
 (e) None of these

DIRECTIONS (Qs. 11-15) : Study the following chart to answer the questions given below :

Villages	% population below poverty line
A	45
B	52
C	38
D	58
E	46
F	49
G	51

Proportion of population of seven villages in 1995



11. In 1996, the population of villages A as well as B is increased by 10% from the year 1995. If the population of village A in 1995 was 5000 and the percentage of population below poverty line in 1996 remains same as in 1995, find approximately the population of village B below poverty line in 1996.
 (a) 4000 (b) 45000
 (c) 2500 (d) 3500
 (e) None of these
12. If in 1997 the population of village D is increased by 10% and the population of village G is reduced by 5% from 1995 and the population of village G in 1995 was 9000, what is the total population of villages D and G in 1997?
 (a) 19770 (b) 19200
 (c) 18770 (d) 19870
 (e) None of these
13. If in 1995 the total population of the seven villages together was 55,000 approximately, what will be population of village F in that year below poverty line ?
 (a) 3000 (b) 2500
 (c) 4000 (d) 3500
 (e) None of these
14. If the population of village C below poverty line in 1995 was 1520, what was the population of village F in 1995 ?
 (a) 4000 (b) 6000

- (c) 6500 (d) 4800
 (e) None of these
15. The population of village C is 2000 in 1995. What will be the ratio of population of village C below poverty line to that of the village E below poverty line in that year ?
 (a) 207 : 76 (b) 76 : 207
 (c) 152 : 207 (d) Data inadequate
 (e) None of these
16. A train is moving at a speed of 132 km/h. If the length of the train is 110 metres, how long will it take to cross a railway platform, 165 metres long ?
 (a) 5s (b) 7.5 s (c) 10 s (d) 15 s
 (e) None of these
17. If 15 women or 10 men can complete a project in 55 days, in how many days will 5 women and 4 men working together complete the same project ?
 (a) 75 (b) 8 (c) 9 (d) 85
 (e) None of these
18. Ashu's mother was three times as old as Ashu, 5 years ago. After 5 years, she will be twice as old as Ashu. How old is Ashu at present?
 (a) 15 (b) 20 (c) 10 (d) 5
 (e) None of these
19. A conical flask has base radius 'a' cm and height 'h' cm. It is completely filled with milk. The milk is poured into a cylindrical thermos flask whose base radius is 'p' cm. What will be the height of the solution level in the flask ?
 (a) $\frac{a^2h}{3p^2}$ cm (b) $\frac{3hp^2}{a^2}$ cm (c) $\frac{p^2}{3h^2}$ cm (d) $\frac{3a^2}{hp^2}$ cm
 (e) None of these
20. A sum was put at simple interest at a certain rate for 2 years. Had it been put at 3% higher rate, it would have fetched ₹ 300 more. Find the sum.
 (a) ₹ 6000 (b) ₹ 8230 (c) ₹ 5000 (d) ₹ 4600
 (e) None of these

DIRECTIONS (Qs. 21-25) : Identify which number is wrong in the given series.

21. 2, 3, 4, 4, 6, 8, 9, 12, 16.
 (a) 3 (b) 9
 (c) 6 (d) 12
 (e) None of these
22. 3, 4, 10, 32, 136, 685, 41
 (a) 136 (b) 10
 (c) 4116 (d) 32
 (e) None of these
23. 69, 55, 26, 13, 5
 (a) 26 (b) 13
 (c) 5 (d) 55
 (e) None of these
24. 24576, 6144, 1536, 386, 96, 4
 (a) 386 (b) 6144
 (c) 96 (d) 1536

- (e) None of these
25. 11, 5, 20, 12, 40, 26, 74, 54
 (a) 5 (b) 20
 (c) 40 (d) 26
 (e) None of these

DIRECTIONS (Qs. 26-30): Find out the approximate value which should come in place of the question mark in the following questions. (You are not expected to find the exact value.)

26. $\sqrt{45689} = ?$
 (a) 180 (b) 415
 (c) 150 (d) 210
 (e) 300
27. $\frac{(10008.99)^2}{10009.001} \times \sqrt{3589} \times 0.4987 = ?$
 (a) 3000 (b) 300000
 (c) 3000000 (d) 5000
 (e) 9000000
28. $399.9 + 206 \times 11.009 = ?$
 (a) 2800 (b) 6666
 (c) 4666 (d) 2400
 (e) 2670
29. $\frac{2}{5} + \frac{7}{8} \times \frac{17}{19} \div \frac{6}{5} = ?$
 (a) 1 (b) $\frac{1}{2}$
 (c) $2\frac{1}{2}$ (d) $\frac{3}{4}$
 (e) $\frac{9}{11}$
30. $(299.99999)^3 = ?$
 (a) 27000000 (b) 9000000000
 (c) 180000 (d) 2.7×10^9
 (e) 2700000
31. A reduction of 20% in the price of sugar enables a purchaser to obtain $2\frac{1}{2}$ kg more for ₹ 160. Find the original price per kg of sugar.
 (a) ₹ 12 (b) ₹ 20 (c) ₹ 16 (d) ₹ 18
 (e) None of these
32. Mrs. X spends ₹ 535 in purchasing some shirts and ties for her husband. If shirts cost ₹ 43 each and the ties cost ₹ 21 each, then what is the ratio of the shirts to the ties, that are purchased ?
 (a) 1 : 2 (b) 2 : 1 (c) 2 : 3 (d) 3 : 4
 (e) None of these

33. Anish spends 25% of his salary on house rent, 5% on food, 15% on travel, 10% on clothes and the remaining amount of ₹ 22,500 is saved. What is Anish's salary ?
 (a) ₹ 40,000 (b) ₹ 40,500
 (c) ₹ 45,500 (d) ₹ 50,000
 (e) None of these
34. $\frac{2}{5}$ th of Anil's salary is equal to Bhuvan's salary and seven-ninth of Bhuvan's salary is equal to Chandra's salary. If the sum of the salary of all of them is ₹ 77,000, then, how much is Bhuvan's salary?
 (a) ₹ 45,000 (b) ₹ 18,000
 (c) ₹ 15,000 (d) ₹ 28,000
 (e) None of these
35. A tap can fill an empty tank in 12 hours and a leakage can empty the whole tank in 20 hours. If the tap and the leakage are working simultaneously, how long will it take to fill the whole tank?
 (a) 25 hours (b) 40 hours
 (c) 30 hours (d) 35 hours
 (e) None of these

REASONING ABILITY

36. Which is the third number to the left of the number which is exactly in the middle of the following sequence of numbers?
 1 2 3 4 5 6 7 8 9 2 4 6 8 9 7 5 3 9 8 7 6 4 3 2 1
 (a) 3 (b) 2
 (c) 5 (d) 6
 (e) None of these
37. In a certain code IDEAS is written as HEDBR and WOULD is written as VPTMC. How will RIGHT be written in the same code ?
 (a) QJHIS (b) QJFGS
 (c) SHHGU (d) QJFIU
 (e) QJFIS
38. If the alphabet is written in the reverse order and every alternate letter starting with Y is dropped, which letter will be exactly in the middle of the remaining letters of the alphabet.
 (a) M (b) N
 (c) O (d) M or O
 (e) None of these
39. In a row of girls, Rita and Monika occupy the ninth place from the right end and tenth place from the left end, respectively. If they interchange their places, then Rita and Monika occupy seventeenth place from the right and eighteenth place from the left respectively. How many girls are there in the row?
 (a) 25 (b) 26
 (c) 27 (d) Data inadequate
 (e) None of these
40. In a certain code language 'Ka Bi Pu Ya' means 'You are very intelligent'; 'Ya Lo Ka Wo' means 'They seem very intelligent'; 'La Pu Le' means 'You can see' and 'Sun Pun Yun Ya' means 'how intelligent she is', In that language, which of the following words means 'are'?
 (a) Ka (b) Bi
 (c) Ya (d) Pu

- (e) None of these
41. Ankit is related to Binny and Chinky, Daizy is Chinky's mother. Also Daizy is Binny's sister and Aruna is Binny's sister. How is Chinky related to Aruna?
- (a) Niece (b) Sister
(c) Cousin (d) Aunt
(e) None of these
42. Rama remembers that she met her brother on Saturday, which was after the 20th day of a particular month. If the 1st day of that month was Tuesday, then on which date did Rama meet her brother ?
- (a) 24th (b) 23rd
(c) 25th (d) 26th
(e) None of these
43. If it is possible to make only one such number with the first, the fourth and the sixth digits of the number 531697 which is the perfect square of a two digit even number, which of the following will be the second digit of the two digit even number. If no such number can be made, give '@' as the answer and if more than one such number can be made, give '©' as the answer.
- (a) 4 (b) 2
(c) 6 (d) @
(e) ©
44. In a certain code JOURNEY is written as TNISZFO. How is MEDICAL written in that code?
- (a) CDLJMBD (b) CDWDBM
(c) LDCJMBD (d) EFNJMBD
(e) None of these
45. If 'K' denotes '×', 'B' denotes '÷', 'T' denotes '-' and 'M' denotes '+', then –
- $$40 \text{ B } 8 \text{ T } 6 \text{ M } 3 \text{ K } 4 = ?$$
- (a) 19 (b) 11
(c) -31 (d) 23
(e) None of these

DIRECTIONS (Qs. 46-50): In each question below are three statements followed by three conclusions numbered I, II and III. You have to take the three given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the answers (a), (b), (c), (d) and (e) is the correct answer and indicate it on the answer sheet.

46. **Statements:** Some chairs are tables.
Some tables are drawers.
all drawers are shelf.
- Conclusions:** I. Some shelves are tables.
II. Some drawers are chairs.
III. Some shelves are drawers.
- (a) Only I and III follow
(b) Only I and either II or III follow
(c) Only II and either I or III follow
(d) All I, II and III follow
(e) None of these
47. **Statements:** All trees are flowers.
Some flowers are leaves.
No leaf is bud
- Conclusions:** I. No bud is a flower

II. Some buds are flowers.
III. Some leaves are trees.

- (a) Only II and III follow
(b) Only III follows
(c) Only either I or II follows
(d) Either I or II and III follow
(e) None of these
48. **Statements:** All stones are rocks.
Some rocks are bricks.
Some bricks are cement.
- Conclusions:** I. Some cements are rocks.
II. Some bricks are stone
III. Some stones are cement.
- (a) Only I and either II or III follow
(b) Only either II or III follows
(c) Only I and II follow
(d) All follow
(e) None of these
49. **Statements:** All flats are buildings.
All buildings are bungalows.
All bungalows are apartments.
- Conclusions:** I. Some apartments are flats.
II. All flats are bungalows.
III. Some bungalows are flats.
- (a) None follows
(b) Only I and II follow
(c) Only II and III follow
(d) Only I and III follow
(e) All I, II and III follow
50. **Statements:** Some spectacles are lenses.
Some lenses are frames.
All frames are metals.
- Conclusions:** I. Some lenses are metals
II. Some metals are spectacles.
III. Some frames are spectacles.
- (a) Only III follows
(b) Only I follows
(c) Only I and either II or III follow
(d) Only I and II follow
(e) None of these

DIRECTIONS (Qs. 51 - 55) : Read the following information carefully and answer the questions that follow:

At a party, A, B, C, D and E are sitting in a circle. The group comprises a professor, an industrialist and a businessman. The businessman is sitting in between the industrialist and his wife D. A, the professor is married to E, who is the sister of B. The industrialist is seated to the right of C. Both the ladies are unemployed.

51. What is A to B ?
- (a) Brother (b) Uncle
(c) Brother-in-law (d) Can't be
(e) None of these
52. A is sitting to the right of

- (b) his wife
(c) D (d) Can't be determined
(e) None of these
53. Who is the industrialist ?
(a) D (b) A
(c) B (d) Can't be determined
(e) None of these
54. Who in the group is unmarried?
(a) Professor (b) Industrialist
(c) Businessman (d) Can't be determined
(e) None of these
55. Who among them must be graduate ?
(a) B (b) A
(c) C (d) E
(e) None of these

DIRECTIONS (Qs. 56-60): In the questions given below, certain symbols are used with the following meanings:

- A @ B means A is greater than B.
A * B means A is either greater than or equal to B.
A # B means A is equal to B.
A \$ B means A is either smaller than or equal to B.
A + B means A is smaller than B.

Now in each of the following questions, assuming the given statements to be true, find which of the two conclusions I and II given below them is/are definitely true?

- (a) If only conclusion I is true
(b) If only conclusion II is true
(c) If either conclusion I or II is true
(d) If neither conclusion I nor II is true
(e) If both conclusions I and II are true
56. **Statements** : B + D; E\$T; T * P; P@B
Conclusions : I. P\$D
II. P@D
57. **Statements** : E*\$F; G\$H; H#E; G@K
Conclusions : I. H@K
II. H*\$F
58. **Statements** : P\$Q; N#M; M@R; R*\$P
Conclusions : I. P + N
II. Q\$M
59. **Statements** : D + T; E \$V; F *T; E@D
Conclusions : I. D\$V
II. D + F
60. **Statements** : T*U; U\$W; V @L; W + V
Conclusions : I. V@T
II. L #W

DIRECTIONS (Qs. 61-65): Use the following series of elements (alpha-number-symbol) to answer these questions. Every two-digit number (given in brackets) is to be treated as single number.

2 ★ 8 5 6 B 9 \$ Q 3 E 1 7 R D 4 £ (13) U ● K (18) A (14) P

61. Four of the following five groups of elements are alike in a certain way and so form a group. Which is the one the **does not** belong to that group ?
(a) 2 ★ 8 (b) 5 6 B
(c) Q \$ 9 (d) 1 3 E
(e) DR 7
62. If each alphabet has a value of zero, each symbol (i.e., ★, \$

and ●) has a value equivalent to the square of the numeral that immediately precedes the symbol or the value of 1 if it is not immediately preceded by a numeral, what will be the sum of the values of the first 10 elements of the series starting from the left end ?

- (a) 118 (b) 46
(c) 79 (d) 107
(e) None of these
63. If each of the letters in the above series of elements is given a value equivalent to its serial number in the English alphabet, what will be the difference between the sum of the consonants and the sum of the vowels used in the series ?
(a) 109 (b) 41
(c) 82 (d) 27
(e) None of these
64. Which of the following groups of elements will come in the place of the question-mark in the series of elements given below?
6 8 2 \$ B 5 E Q 9 ? £ D 7
(a) ● (13) 4 (b) 4 (13) ●
(c) U £ D (d) ● (13) £
(e) None of these
65. BQ in the above series is related in ER in a similar way as AP is related to
(a) RD (b) U ●
(c) KA (d) Q 3
(e) 6 B

DIRECTIONS (Qs. 66-70) : Study the following information carefully to answer these questions.

A group of people has six family members and an advocate. These are L, M, N, O, P, Q and R and having different professions. Each one of them is a journalist, businessman, architect, doctor and pilot but not necessarily in this order. There are three males and three females in the family out of which there are two married couples. M is a businessman and is the father of P. N is a housewife and is daughter-in-law of O. L is neither a pilot nor a journalist. R is an advocate. N is not the mother of P and O is not married to M. No lady is a journalist.

66. Which of the following groups represents the three ladies in the group ?
(a) N, P, L (b) P, L, N
(c) L, N, O (d) O, P, L
(e) None of these
67. Who is married to Q ?
(a) N (b) O
(c) L (d) Can't be determined
(e) None of these
68. Who among the following family members is an architect ?
(a) L (b) O
(c) P (d) Can't be determined
(e) None of these
69. Which of the following is the profession of P ?

- (a) Architect (b) Pilot
 (c) Architect or pilot (d) Journalist
 (e) None of these
70. How is Q related to O ?
 (a) Father (b) Mother
 (c) Mother-in-law (d) Son - in - law
 (e) None of these

ENGLISH LANGUAGE

DIRECTIONS (Qs. 71-80): Read the following passage carefully and answer the questions given below it.

Long ago there was a poor Brahmin named Krishnan. He could not find enough work to do. Sometimes, he and his family had to go without food. At last Krishnan decided to leave his village in search of work. Early next morning, he left the house. He walked the whole day until he came to a thick jungle. He was tired, thirsty and hungry. While looking around for water to drink, he found a well. He went to the well and looked in. There he saw a jaguar, a monkey, a snake and a man. They had all fallen into the well. "O, noble Brahmin", the jaguar called out to him, "Please help me out, so that I can go back to my family."

"But you are a jaguar", said Krishnan. "How do I know you will not kill me?" "Don't be afraid of me, I promise I will not do you any harm", replied the jaguar. Krishnan reached into the well and pulled out the jaguar. The jaguar thanked him and said, "I'm Shersingh. I live in a cave in the mountains. I shall be most delighted if I can repay my debt to you someday." Krishnan then heard the monkey calling out to him from the well. The Brahmin at once pulled the monkey out. The monkey thanked the Brahmin. "If you are ever in need of food, just drop in at my place below that big mountain. Bali is my name." Now the snake called out to him for help. "Help you!" exclaimed Krishnan. "You are a snake. What if you bite me?" "I shall never bite you", said the snake. So Krishnan pulled the snake out of the well. The snake said, "Remember, if you are ever in any difficulty, just call out my name-Naagesh, and wherever you are, I shall find you." The jaguar, the monkey and the snake took leave of the Brahmin. But before they left, they spoke to him about the man in the well. "Please do not help him," said Shersingh. "If you do", said Naagesh, "you will be in trouble yourself." As soon as they left, the man in the well began to call out for help. Krishnan felt sorry for the man and pulled him out of the well. "Thank you for your kindness", said the man. "I am Seth Ghanshyamdas. I am a goldsmith. If you ever need my help, don't hesitate to visit my humble house near the city." The goldsmith then left for home.

After some time, the Brahmin continued his journey. But he could not find any work. He then remembered Shersingh, Bali, Naagesh and Seth Ghanshyamdas. He thought it was time to seek their help. He first went to Bali. The monkey was overjoyed to see him. He gave him a warm welcome and offered him some really delicious fruits. The Brahmin told him how grateful he was. Now Krishnan went to see Shersingh, the jaguar. As soon as Shersingh saw Krishnan coming, he ran out to welcome him. He gave Krishnan a beautiful gold necklace and other precious jewellery. Krishnan thanked Shersingh for the jewellery and departed. His journey had at last brought him luck, he thought. He

would be able to sell the ornaments for a good price. But who could help him to sell the ornaments? He then remembered Seth Ghanshyamdas. He went to him. The goldsmith was glad to see Krishnan. "I have come to ask for your help", said Krishnan. "Here are some ornaments. Please give me a good price for them." Seth Ghanshyamdas took the jewellery and examined it carefully. "I shall certainly help you", he said. "But let me show them to another goldsmith. Please wait here, I will be right back." He then went out with the ornaments. Seth at once rushed to the Palace of the King. He said, "A man brought these ornaments to me and asked me to sell them. But they are the ornaments I made for the Prince who is missing." "Who is this man? Where is he?", thundered the King. "This rogue must have murdered my little Prince and robbed his jewels!" "He is a Brahmin named Krishnan, your Majesty", replied the goldsmith, and he is there, in my house. The king called for his most dreaded soldiers. "Arrest the Brahmin who is in the goldsmith's house and throw him into the darkest dungeons of the kingdom", roared the King. The King's guard stormed into the goldsmith's house and seized Krishnan. Krishnan was thrown into a dark dungeon to await his execution. He then remembered the words of Naagesh, the snake. So he called out to him.

Suddenly, almost like magic, Naagesh slithered his way down a narrow window into the dingy cell. "O, Lord!" hissed Naagesh, "how did you manage to get yourself arrested?" Krishnan cried and then told the snake what had happened. "I have a plan", hissed Naagesh. "I shall creep into the Queen's room and bite her", said Naagesh. "She will faint. No matter what they do, she will remain asleep. The poison will remain in her body until you place your hand on her forehead", explained Naagesh. He then left Krishnan and went to the palace. He crept into the Queen's room and bit her. The Queen fainted. The sad news that the Queen had been bitten by a snake spread all over the Kingdom. Vaidyas came from far and near, but their medicines had no effect. No one could revive the Queen. Finally, the King declared that anyone who could cure the Queen would be handsomely rewarded. Many people went to the palace but all of them failed. "I can cure the Queen", Krishnan told the guards. At once they took him to the Queen. Krishnan sat beside the Queen and placed his hand on her forehead. Soon, she opened her eyes and sat up. The King was overjoyed and shed tears of happiness. He embraced Krishnan and thanked him. "Your Majesty", said Krishnan. "I was sent to prison for a crime I did not commit." Krishnan told the King the whole story. The King was fuming with rage when he heard what the goldsmith had done. He at once had the goldsmith arrested. The King then presented Krishnan with a large house and a thousand pieces of gold. Krishnan sent for his family and they all lived happily ever after.

71. Why did Krishnan decide to leave his village?
 (a) As he could not find much work in his own village and his family had to starve sometimes because of it.
 (b) As his family had requested him to do so.
 (c) As his village people had asked him to leave their village and look for work somewhere else.
 (d) As he wanted to search for food in a village different from his own.
 (e) None of the above
72. Why did the jaguar, the monkey and the snake tell Krishnan

- not to save the man in the well?
- (a) As the man in the well was a goldsmith
 (b) As the man in the well had cheated the snake, the monkey and the jaguar
 (c) As the man in the well was a thief
 (d) As the snake, the monkey and the jaguar hated the man as they had known him for a very long time
 (e) None of the above
73. Why was krishnan afraid to save Naagesh from the well?
 (a) As Naagesh had threatened him with dire consequences.
 (b) As he thought Naagesh would eat him.
 (c) As he thought Naagesh would bite him once he was out of the well.
 (d) As he thought that Naagesh would capture him as soon as he got out of the well.
 (e) None of the above.
74. Why did Krishnan go to meet Seth Ghanshyamdas?
 (a) As he thought that Seth Ghanshyamdas could help him in selling the ornaments gifted to him by Shersingh.
 (b) As he knew that Seth Ghanshyamdas had contact with the King which could prove to be beneficial.
 (c) As Seth Ghanshyamdas had requested krishnan to sell ornaments only to him
 (d) As Krishnan was extremely fond of Seth Ghanshyamdas
 (e) None of the above.
75. What did Bali do after seeing Krishnan at his house?
 (1) He gave Krishnan directions to Shersingh's house.
 (2) He welcomed Krishnan to his house.
 (3) He offered tasty fruits to Krishnan.
 (a) Only 1 (b) Only 2
 (c) Only 3 (d) Only 2 and 3
 (e) 1 and 3
76. What plan did Naagesh have to save Krishnan from the dungeon?
 (a) That he would sneak Krishnan out of the dungeon without anyone noticing
 (b) That he would bite the King and make him unconscious
 (c) That he would bite Krishnan and make everyone believe that he was dead
 (d) That he would enter the Queen's chamber and scare her
 (e) None of the above
77. What did Seth Ghanshyamdas tell the King about Krishnan?
 (a) That Krishnan had brought fake ornaments for selling
 (b) That krishnan was an honest Brahmin who had left his village
 (c) That Krishnan had killed the Prince
 (d) That Krishnan had brought those ornaments for selling which had been made for the missing Prince
 (e) None of the above
78. What did the King do on learning the truth about Krishnan and Seth Ghanshyamdas?
 (a) He put Krishnan back in the dungeon as he still held Krishnan responsible for the Prince's death
 (b) He called for Krishnan's wife and family
 (c) He presented gold to Krishnan and also a house to live in
 (d) He congratulated the snake on his efforts to save Krishnan
 (e) None of the above
79. What did the King do to save the Queen after even the Vaidyas failed to revive her?
 (a) He punished the snake for having harmed the Queen
 (b) He announced a reward to anyone who could cure the Queen
 (c) He immediately called for Krishnan to cure the Queen
 (d) He asked his guards to immediately look for someone who could cure the Queen
 (e) None of the above
80. What can possibly be the moral of the story?
 (a) Trust oneself before trusting others
 (b) A good deed never goes in vain
 (c) You cannot change people but you can change yourself
 (d) Try and try until you succeed
 (e) One must be the change one wishes to see in this world
-
- DIRECTIONS (Qs. 81-85): In each question below, a sentence with four words printed in bold type is given. These are numbered as (a), (b), (c) and (d). One of these four words printed in bold may be either wrongly spelt or inappropriate in the context of the sentence. Find out the word which is wrongly spelt or inappropriate, if any. The number of that word is your answer. If all the words printed in bold are correctly spelt and also appropriate in the context of the sentence, mark (e) i.e. 'All correct' as your answer.**
81. The **whole** (a)/ time she walked with her child in her arms, the only **thing** (b)/ that **worried** (c)/ her was her son's **feature**. (d)/ All correct (e)
82. When the young artist **returned** (a)/ to his village, his family held a **festive** (b)/ dinner on its lawn to celebrate his **triumphant** (c)/ **homecoming**. (d)/ All correct (e)
83. Had she not **suppressed** (a)/ all the details of her Company's **project** (b)/ her Company would have **bagged** (c)/ the **contract**. (d)/ All correct (e)
84. She trusted Mira with all her **heart** (a)/ and thus **handled** (b)/ over her **life's** (c)/ savings to her **instantly**. (d)/ All correct (e).
85. It is **difficultt** (a)/ to see the **picture** (b)/ when you are **inside** (c)/ the **frame**. (d)/ All correct (e)
-
- DIRECTIONS (Qs. 86-95): 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 are suggested, one of which fits the blank appropriately. Find out the appropriate word in each case.**
- One day a father of a very wealthy family (86) his son on a trip to the country with the purpose of (87) his son how the poor people live so he could be thankful for his wealth. They spent a (88) of days and nights on the farm of what would be considered a (89) poor family. On their (90) from the trip, the father asked his son, "How was the trip?" "It was great, Dad." "Did you see how poor people can be?", the father asked. "Oh yeah", said the son. So what did you (91) from the trip?", asked the father. The son

answered, "I saw that we have one dog and they had four. We have a pool that (92) in the middle of our garden and they have a creek that has no end." "We have imported lanterns in our garden and they have the stars at night." "Our patio reaches to the front yard and they have the (93) horizon." "we have a small piece of land to live on and they have fields that go beyond our sight." "We have (94) who serve us, but they serve others." "We buy our food, but they grow theirs." "We have walls around our (95) to protect us; they have friends to protect them."

With this the boy's father was speechless. Then his son added, "Thanks dad for showing me how poor we are".

86. (a) took (b) beat
(c) drag (d) mould
(e) showed
87. (a) presenting (b) requesting
(c) tell (d) trusting
(e) showing
88. (a) two (b) couple
(c) much (d) few
(e) many
89. (a) major (b) some
(c) sorrow (d) very
(e) astutely
90. (a) lane (b) journey
(c) leave (d) return
(e) walking
91. (a) reveal (b) think
(c) saw (d) believe
(e) learn
92. (a) stands (b) reaches
(c) swims (d) leak
(e) watery
93. (a) more (b) scene
(c) whole (d) last
(e) lucky
94. (a) servants (b) mother
(c) computers (d) relatives
(e) man
95. (a) minds (b) selves
(c) property (d) pillars
(e) country

DIRECTIONS (Qs. 96 - 100): In each of the following sentences, an idiomatic expression or a proverb is highlighted. Select the alternative which best describes its use in the sentence.

96. He resigned the post of his **own accord**.
(a) which he liked
(b) according to his convenience
(c) voluntarily and willingly
(d) according to his judgement
(e) None of these
97. As a politician he is used to being **in the limelight** all the time.
(a) giving speeches
(b) the object of admiration
(c) the centre of attraction
(d) an object of public notice
(e) None of these
98. I **ran out of** money on my European tour.
(a) exhausted my stock of (b) did not have enough
(c) lost (d) carried a lot
(e) None of these
99. Madhuri might **scream blue murder**, but I feel Deepali should get the promotion since she is better qualified for the job.
(a) someone has been murdered with some blue liquid
(b) someone is being murdered and has become blue
(c) suffer from persecution complex
(d) make a great deal of noise and object vehemently
(e) None of these
100. In modern democratic societies **lynch law** seems to have become the spheres of life.
(a) law of the mob (b) law of the underworld
(c) law of the constitution (d) law of the parliament
(e) None of these

Answer Key

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

1. (c) Given Expression = $\frac{(a^3 - b^3)}{(a^2 + ab + b^2)}$,
 where $a = 117, b = 98$

$$= \frac{(a-b)(a^2 + ab + b^2)}{(a^2 + ab + b^2)} = (a-b) = (117-98) = 19.$$
2. (b) Dividing numerator as well as denominator by b , we get:

$$\frac{3a+2b}{3a-2b} = \frac{3 \times \frac{a}{b} + 2}{3 \times \frac{a}{b} - 2} = \frac{3 \times \frac{4}{3} + 2}{3 \times \frac{4}{3} - 2} = \frac{4+2}{4-2} = 3$$
3. (c) Let $\sqrt{\frac{x}{196}} = \frac{72}{56} = \frac{9}{7}$.
 Then, $\frac{x}{196} = \frac{9}{7} \times \frac{9}{7} = \frac{81}{49}$. So, $x = \frac{81 \times 196}{49} = 324$.
4. (d) Let $\frac{17.28 \div x}{3.6 \times 0.2} = 200$. Then, $\frac{17.28}{x} = 200 \times 3.6 \times 0.2$

$$\therefore x = \frac{17.28}{200 \times 3.6 \times 0.2} = \frac{1728}{200 \times 36 \times 2} = 0.12$$
5. (d) Given Expression = $\frac{(a-b)^2 + (a+b)^2}{(a^2 + b^2)} = \frac{2(a^2 + b^2)}{(a^2 + b^2)} = 2$
6. (c) Given Expression = $\frac{240 \times 300}{240} = 300$
7. (d) Let $\frac{50}{x} = \frac{x}{\left(\frac{25}{2}\right)}$ or $x^2 = 50 \times \frac{25}{2} = 625$.

$$\therefore x = \sqrt{625} = 25.$$
8. (d) Given Expression = $\left(\frac{112}{14} \times \frac{24}{12} \times \frac{16}{8}\right) = 32$
9. (a) Let $\frac{x}{\sqrt{2.25}} = 550$. Then, $\frac{x}{1.5} = 550$

$$\therefore x = (550 \times 1.5) = \left(\frac{550 \times 15}{10}\right) = 825$$
10. (b) $\frac{(\sqrt{5} - \sqrt{3})}{(\sqrt{5} + \sqrt{3})} = \frac{(\sqrt{5} - \sqrt{3})}{(\sqrt{5} + \sqrt{3})} \times \frac{(\sqrt{5} - \sqrt{3})}{(\sqrt{5} - \sqrt{3})} = \frac{(\sqrt{5} - \sqrt{3})^2}{(5-3)}$

$$= \frac{5+3-2\sqrt{15}}{2} = \frac{2(4-\sqrt{15})}{2} = (4-\sqrt{15})$$
11. (d) Population of village B in 1995 = $5000 \times \frac{16}{13} \approx 6150$
 Population of village B in 1996 = $6150 \times \frac{110}{100} = 6750$
 Population below poverty line = 52% of 6750 ≈ 3500
12. (a) Population of village D in 1995 = $9,000 \times \frac{17}{15} = 10,200$
 Population of village D in 1997 = $10,200 \times \frac{110}{100}$

$$= 11,220$$

 Population of village G in 1997 = $9,000 \times \frac{95}{100} = 8,550$

$$\therefore \text{Total population of village D and G in 1997} = 11,220 + 8,550 = 19,770$$
13. (d) Population of village F below poverty line

$$= 55000 \times \frac{13}{100} \times \frac{49}{100} \approx 3500$$
14. (c) Population of village F in 1995

$$= 1520 \times \frac{100}{38} \times \frac{13}{8} = 6500$$

15. (b) Population of village C below poverty line

$$= 2000 \times \frac{38}{100} = 760$$

Population of village E below poverty line

$$= \frac{2000}{8} \times 18 \times \left(\frac{46}{100}\right) = 2070$$

$$\therefore \text{Required ratio} = \frac{760}{2070} = 76 : 207$$

16. (b) Speed of the train = $132 \text{ km/h} = \frac{132 \times 5}{18} \text{ m/s}$

$$\text{Distance} = (110 + 165) = 275 \text{ m}$$

Time required to cross the railway platform

$$= \frac{275 \times 18}{132 \times 5} = 7.5 \text{ s}$$

17. (a) $15W = 10M$

$$\text{Now, } 5W + 4M = 5W + \frac{4 \times 15}{10} W = 5W + 6W$$

$$= 11W$$

Now, 15 women can complete the project in 55 days, then 11 women can complete the same project in

$$\frac{55 \times 15}{11} = 75 \text{ days}$$

18. (a) Let the present ages of Ashu's mother and that of Ashu be x and y , respectively.

$$\text{Then, } (x-5) = 3(y-5) \text{ or } x-5 = 3y-15$$

$$\text{or } x-3y = -10 \quad \dots(i)$$

$$\text{and } (x+5) = 2(y+5)$$

$$\text{And } x+5 = 2y+10 \text{ or } x-2y = 5 \quad \dots(ii)$$

From (i) and (ii), we have $x = 35$ and $y = 15$

Hence, the present age of Ashu = 15 years

19. (a) Volume of the conical flask = Volume of the cylindrical flask upto the required height (x) cm

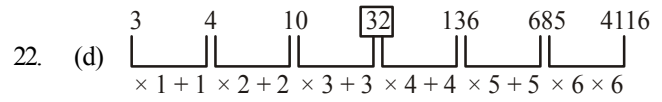
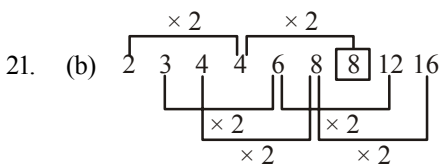
$$\frac{1}{3} \pi a^2 h = \pi p^2 \times x \Rightarrow x = \frac{ha^2}{3p^2} \text{ cm}$$

20. (c) Let the sum = Rs. x and original rate = $y\%$ per annum then, New rate = $(y+3)\%$ per annum

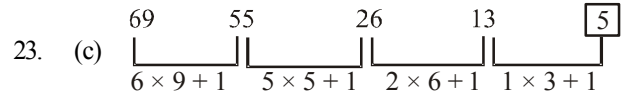
$$\therefore \frac{x \times (y+3) \times 2}{100} - \frac{x \times y \times 2}{100} = 300$$

$$xy + 3x - xy = 15000$$

$$\therefore x = 5000 \quad \text{Thus, the sum} = ₹ 5000$$



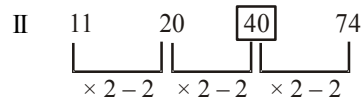
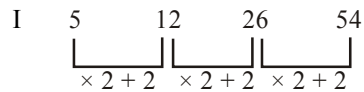
Thus, 32 is out of place and must be replaced by 33.



Thus, 5 does not fit in the series and should be replaced by 4.

24. (a) The succeeding numbers are obtained by dividing the preceding numbers by 4. Therefore, the number 386 does not fit in the series and must be replaced by 384.

25. (c) There are two series in the given series :



Hence the wrong term is 40.

26. (d) $? = \sqrt{45689} = 213.75 \approx 210$

27. (b) $? = \frac{(10008.99)^2}{10009.001} \times \sqrt{3589} \times 0.4987$

$$= (10009)^2 \times \sqrt{3600} = 0.50$$

$$= 10009 \times 60 \times 0.50 \approx 300000$$

28. (e) $? = 399.9 + 206 \times 11.009$

$$= 400 + (200 + 6) \times 11 = 400 + 2200 + 66 = 2670$$

29. (a) $? = \frac{2}{5} + \frac{7}{8} \times \frac{17}{19} \div \frac{6}{5} = \frac{2}{5} + \frac{7}{8} \times \frac{17}{19} \times \frac{5}{6}$

$$= \frac{2}{5} + \frac{595}{912} = 0.40 + 0.65 \approx 1.05 \approx 1$$

30. (a) $? = (299.99999)^3 \approx (300)^3 = 27000000$

31. (c) Total amount used for purchasing = ₹ 160. A reduction of 20% in the price means, now a person gets $5/2$ kg for ₹ 32 and this is the present price of the sugar.

$$\therefore \text{Present price per kg} = \frac{32}{5} \times 2 = ₹ 12.8$$

Let the original price be ₹ x . Then new price is arrived after reduction of 20% on it.

$$\Rightarrow x \times 0.8 = 12.8 \text{ or } x = ₹ 16.$$

32. (b) Mrs. X spends = ₹ 535

$$\therefore \text{Total cost} = 43 \text{ shirt} + 21 \text{ ties} = 535$$

By hit and trial, S = 10, T = 5

$$\Rightarrow \text{Total cost} = 43 \times 10 + 21 \times 5 = 535$$

Hence, Ratio of shirts to ties = 10 : 5 = 2 : 1

33. (d) Total expense percentage = $(25 + 5 + 15 + 10)\% = 55\%$
Savings % = $100 - 55 = 45\%$

$$\therefore 45 \equiv 22500$$

$$100\% \equiv \frac{22500}{45} \times 100 = ₹ 50000$$

34. (b) Let Anil's salary be ₹ x .
 \therefore Bhuvan's salary = ₹ $\frac{2x}{5}$
 Chandra's salary = ₹ $\frac{2x}{5} \times \frac{7}{9} = \frac{14x}{45}$
 \therefore Anil : Bhuvan : Chandra = $x : \frac{2x}{5} : \frac{14x}{45} = 45 : 18 : 14$

\therefore Bhuvan's salary
 = ₹ $\left[\frac{18}{(45+18+14)} \times 77000 \right] = ₹ 18000$

35. (c) Part of the tank filled in an hour
 $= \frac{1}{12} - \frac{1}{20} = \frac{5-3}{60} = \frac{1}{30}$
 Hence, the tank will be filled in 30 hours

36. (b) There are 25 numbers in the given sequence.
 So, middle number = 13th number = 8.
 Clearly, the third number to the left of this 8 is 2.

37. (e) Coding for: I D E A S
 $-1\downarrow$ $+1\downarrow$ $-1\downarrow$ $+1\downarrow$ $-1\downarrow$
 H E D B R
 Coding for: W O U L D
 $-1\downarrow$ $+1\downarrow$ $-1\downarrow$ $+1\downarrow$ $-1\downarrow$
 V P T M C
 Similarly, R I G H T
 $-1\downarrow$ $+1\downarrow$ $-1\downarrow$ $+1\downarrow$ $-1\downarrow$
 Q J F I S

38. (b) Cancelling every second letter after reversing the alphabet the series becomes.
 Z X V T R P N L J H F D B
 The middle letter is N.

39. (b) Total no. of girls = $17 + 10 - 1$ or $18 + 9 - 1 = 26$.
 40. (b) From first 2 sentences 'Ka Ya' means 'very intelligent'.
 From 1st and 3rd sentences 'Pu' means 'you'
 \therefore In first sentence 'are' means 'Bi'

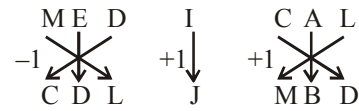
41. (a) $\begin{array}{c} \text{Daizy} \longrightarrow \text{Binny} \longrightarrow \text{Aruna} \\ \text{(Binny's sister} \qquad \qquad \qquad \text{(Binny's sister)} \\ \text{and Chinky's Mother)} \\ \downarrow \\ \text{Chinky} \end{array}$

42. (d) 1st of month was Tuesday, hence the date on first Saturday was 5th.
 Hence the other Saturdays of the month are 12, 19, 26. Rama met her brother on 26th.

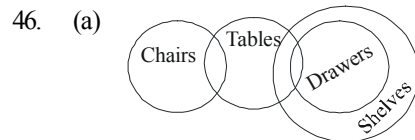
43. (a) $\boxed{5} 3 1 \boxed{6} 9 \boxed{7}$
 $576 = 24 \times 24$

44. (a) $\begin{array}{ccc} \text{J O U} & \text{R} & \text{N E Y} \\ -1 \swarrow \downarrow \searrow & +1 \downarrow & +1 \swarrow \downarrow \searrow \\ \text{T N I} & \text{S} & \text{Z F O} \end{array}$

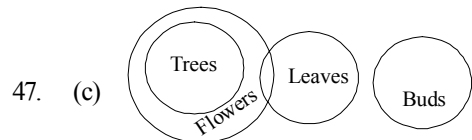
Similarly,



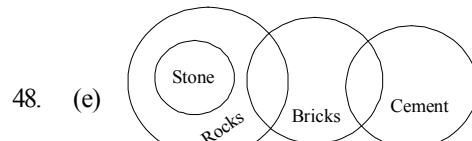
45. (b) $40 \text{ B } 8 \text{ T } 6 \text{ M } 3 \text{ K } 4 = ?$
 $\Rightarrow ? = 40 + 8 - 6 + 3 \times 4$
 $\Rightarrow ? = 5 + 6 - 12 = 11$



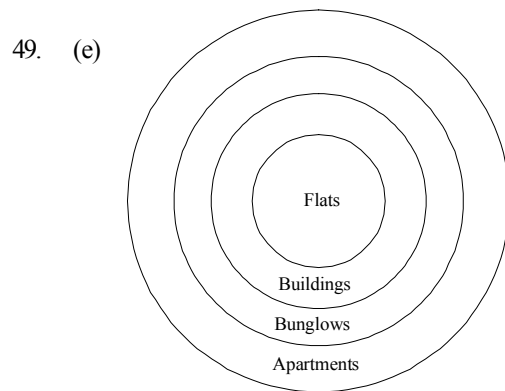
Hence conclusions I. ✓ II. ✗ III. ✓



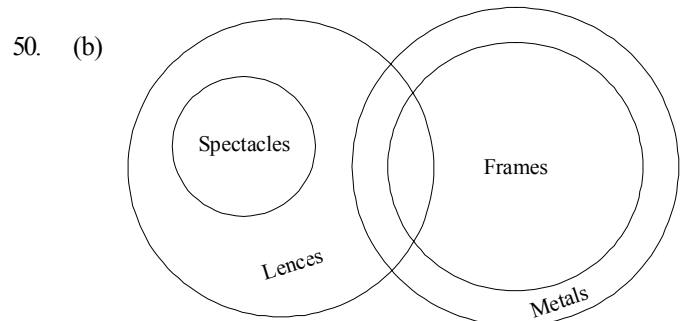
Hence conclusions I. ✗ II. ✗ III. ✗
 But I and II are complementary pairs.



Hence conclusions I. ✗ II. ✗ III. ✗

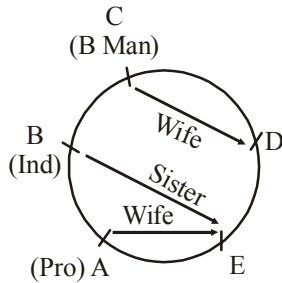


Hence conclusions I. ✓ II. ✓ III. ✓



Hence conclusions I. ✓ II. ✗ III. ✗

For (Qs. 51 to 55)



A, the professor is married to E and E is the sister of B. The wife of the industrialist is D. The industrialist is seated to the right of C. Thus, A and C cannot be industrialists. Therefore, B is the industrialist and C is the business man. Now, we come to the following deductions :

- A – Professor B – Industrialist
- C – Businessman D – Female, hence unemployed
- E – Female, hence unemployed

51. (c) A is the husband of E and E is the sister of B. Hence, A is the brother-in-law of B.
52. (d) It cannot be determined, as no information has been provided in the paragraph about the sitting position of A.
53. (c) As deduced earlier, B is the industrialist.
54. (d) It cannot be determined whether the businessman is married or unmarried.
55. (b) As A is a professor, he must be a graduate.
56. (c) $B < D \dots(i), E \leq T \dots(ii), T \geq P \dots(iii), P > B \dots(iv)$ From (i) and (iv), we get, $P > B < D \Rightarrow$ no conclusion. But the exhaustive possibilities are $P > D, P = D$ and $P < D$. Hence either I or II is true.
57. (e) $E \geq F \dots(i), G \leq H \dots(ii), H = E \dots(iii), G > K \dots(iv)$ From (ii) and (iv), we get, $H \geq G > K \Rightarrow H > K$. Hence I is true. From (i) and (iii), we get, $H = E \geq F \Rightarrow H \geq F$. Hence II is true.
58. (a) $P \leq Q \dots(i), N = M \dots(ii), M > R \dots(iii), R \geq P \dots(iv)$ From (ii), (iii) and (iv), we get, $N = M > R \geq P \Rightarrow N > P$ or $P < N$. Hence I is true. From (ii), (iv) and (i), we get, $M > R \geq P \leq Q \Rightarrow$ No conclusion about the relationship between M and Q can be established.
61. (d) Other groups consist of consecutive elements.
62. (a) $2 + 2^2 + 8 + 5 + 6 + 0 + 9 + 9^2 + 0 + 3 = 118$ Where value of alphabet = 0; symbol = square of the previous number; number = the value itself.
63. (b) The letters used in the series are $B Q E R D U K A P$. Sum of the positions of consonants according to alphabet = $2 + 17 + 18 + 4 + 11 + 16 = 68$. Similarly, sum of the vowels' positions = $5 + 21 + 1 = 27$. Hence required difference = $68 - 27 = 41$.
64. (e) First element of each group follows the order + 3, + 3, + 3... and so on.

Middle element and last element also follow the same trend. Hence (?) should be replaced by R 13.

65. (c) Number of elements between B and Q is the same as that between E and R. Similarly, number of elements between A and P is the same as that between K and A.

For (Qs. 66 - 70) : The given information can be tabulated as follows

Person	Sex	Relationship	Profession
L	Female	Wife of M	Architect
M	Male	Father of P.	Business man
		Husband of L.	
		Son of Q and O.	
N	Female	Daughter-in-law of O and Q.	Housewife
O	Female	Wife of Q	Pilot
P	Male	Son of M and L.	Journalist
Q	Male	Grandfather of P.	Doctor
		Husband of Q.	
		Father of M.	
R	-	-	Advocate

Two married couples : LM and QO.

71. (a) Refer to the sentence 'He could not find.....in search of work'.
72. (e) Refer to the sentence "Please do not help him".of the second para of the passage.
73. (c) Refer to the sentence "You are.....bite me?"of the second para of the passage.
74. (a) Refer to the sentence "He would be.....Ghanshyamdas"of the third para of the passage.
75. (d) ...Refer to the sentence, "He gave him.delicious fruits"of the third para of the passage.
76. (e) Refer to the sentence "I shall creepbite her..... hand on her forehead" of the fourth para of the passage.
77. (d) Refer to the sentence, "A man broughtprince who is missing"of the third para of the passage.
78. (c) Refer to the sentence "He at once.....pieces of gold" of the second last sentence of fourth para of the passage.
79. (b) Refer to the sentence "Finally, the king declared.....handsomely rewarded" of the fourth para of the passage.
80. (b) The moral of the story can possibly be "A good deed never goes in vain".
81. (d) It should be 'here was her son's future'.
82. (c) The correct spelling should be 'triumphant'.
83. (a) The word suppressed should be replaced by revealed or leaked in the sentence.
84. (b) It should be 'handed over' which means the act of moving power or responsibility from one person to another.
85. (a) The correct spelling is difficult.