

58. Find the ratio in which water and wine are to be mixed, so that there is 20% profit, even on selling the mixture at the cost price.

- (1) 2 : 8 (2) 4 : 1
 (3) 2 : 5 (4) 1 : 4
 (5) 1 : 5

59. A tank can be filled by pipes A and B in 10 minutes and 12 minutes respectively. Another pipe can drain out a full tank in 20 minutes. How much time will it take to fill the whole tank if all the taps are open?

- (1) 15 minutes (2) 8 minutes
 (3) 5 minutes (4) $\frac{30}{7}$ minutes
 (5) None of these

60. A man goes to his office from home, on cycle, at 20 km/hr and returns on motorcycle with his friend, at 40 km/hr. His average speed (km/hr) is: (approx.)

- (1) 25 (2) 27
 (3) 30 (4) 33
 (5) 35

61. A boy is trying to ascend a slippery pole, 14 m high. He ascends 2 m in the 1st minute and slips down 1 m in the next minute. If this process continues, how much time will it take him to go to the top (in minutes)?

- (1) 13 (2) 12
 (3) 24 (4) 25
 (5) 26

62. Two equal glasses are $\frac{1}{2}$ and $\frac{1}{3}$ full of milk. They are filled with water and mixed in a jar. What is the ratio of milk to water now?

- (1) 2 : 3 (2) 3 : 4
 (3) 4 : 5 (4) 6 : 5
 (5) 5 : 7

63. A train, 100m long, can cross a 200m long platform in 20 seconds. What is the speed of the train in km/hr?

- (1) 15 (2) 10
 (3) 36 (4) 54
 (5) 108

64. A speaks truth in 60% cases and B in 40% cases. An event occurs. Both give their own statements. What are the chances that they will give contradictory statements?

- (1) 50% (2) 52%
 (3) 45% (4) 58%
 (5) 100%

65. The price of a new brand of motorcycle is increased by 10% before budget and 20% after the budget. What is the net % increase?

- (1) 32 (2) 30
 (3) 28 (4) 25
 (5) 22

66. 22% gain on SP is how much gain?

- (1) 20% (2) 25%
 (3) 15% (4) Can't be said
 (5) None of these

67. In a mixed collection of peacocks and deer, if legs are counted they are 40 but if heads are counted, they are just 15. How many peacocks are there?

- (1) 5 (2) 7
 (3) 8 (4) 10
 (5) 12

68. 3 iron cubes of edges 10cm, 6cm and 8cm are melted and new, larger, single cube is formed. The edge of the new cube is:

- (1) 9 cm (2) 11 cm
 (3) 12 cm (4) 24 cm
 (5) 48 cm

69. X can finish a job in 40 days. Y is 60% more efficient than X. How much time will Y take?

- (1) 25 days (2) 24 days
 (3) 16 days (4) 20 days
 (5) 64 days

70. Which number should replace both the question marks in the following equation?

- $\frac{?}{1083} = \frac{75}{?}$
 (1) 255 (2) 295
 (3) 285 (4) 235
 (5) None of these

71. One-eighth of a number is 41.5. What will 69% of that number be?

- (1) 229.08 (2) 225.76
 (3) 219.12 (4) 232.4
 (5) None of these

72. By how much is $\frac{2}{9}$ th of 279 lesser than $\frac{7}{8}$ th of 216?

- (1) 131 (2) 139
 (3) 119 (4) 127
 (5) None of these

73. Samarth started a business investing Rs 55,000. After 4 months Vishal joined him with a capital of Rs 40,000. At the end of the year the total profit was Rs 33,957. What is the difference between the share of profits of Samarth and Vishal?

- (1) Rs 11,088 (2) Rs 22,781
 (3) Rs 11,781 (4) Rs 22,869
 (5) None of these

74. The compound interest accrued on an amount of Rs 16,800 at the end of two years is Rs 5,418. What would be the simple interest accrued on the same amount at the same rate in the same period?

- (1) Rs 5,070 (2) Rs 5,140
 (3) Rs 5,210 (4) Rs 5,280
 (5) None of these

75. The ages of Chinmay and Maulik are in the ratio of 5 : 2 respectively. After 7 years the ratio of their ages will be 4 : 3. What is age of Chinmay?

- (1) 10 years (2) 5 years
 (3) 6 years (4) 12 years
 (5) None of these

Questions 76-80: Study the table carefully to answer the questions that follow :

Year and Streamwise number of Students enrolled in Engineering Colleges

| Streams → Years ↓ | Electrical | Electronics | Mechanical | Civil | Information Technology |
|----------------------|------------|-------------|------------|-------|---------------------------|
| 2001 | 252 | 447 | 343 | 506 | 264 |
| 2002 | 260 | 470 | 369 | 590 | 241 |
| 2003 | 286 | 514 | 398 | 600 | 310 |
| 2004 | 332 | 545 | 447 | 678 | 340 |
| 2005 | 355 | 620 | 500 | 623 | 397 |
| 2006 | 421 | 646 | 485 | 640 | 416 |
| 2007 | 467 | 580 | 510 | 710 | 475 |

76. What is the difference between the average number of Students enrolled in Mechanical Stream over the given years and the average number of Students enrolled in Civil Stream

over the given years?

- (1) 282 (2) 185
 (3) 272 (4) 75
 (5) None of these

77. What is the difference between the total number of Students enrolled in Electrical Stream over the given years and the total number of Students enrolled in Information Technology Stream over the given years?

- (1) 70 (2) 225
 (3) 770 (4) 1379
 (5) None of these

78. What is the respective ratio of number of Students enrolled in Civil Stream to the number of Students enrolled in Mechanical Stream in the year 2006?

- (1) 4 : 3 (2) 127 : 98
 (3) 37 : 43 (4) 128 : 97
 (5) 97 : 128

79. Over the years, which stream has witnessed the maximum % increase?

- (1) Electrical (2) Electronics
 (3) Mechanical (4) Civil
 (5) Information Tech.

80. In which year did mechanical stream witness the maximum increase?

- (1) 2007 (2) 2006
 (3) 2005 (4) 2004
 (5) None of these

Questions 81-85: These questions are based on the following information:

Seven persons A, B, C, D, E, F and G attended workshops on electronics in 7 different schools P, Q, R, S, T, U and V, on different days of the week from Monday to Sunday. B attends workshop in school S on Wednesday. D does not attend P or R and attends on the next day to E, who attends U, on Friday. G attends on Monday but not in R and V. C attends school P but not on Tuesday.

81. Who attends workshop on Saturday?

- (1) C (2) D
 (3) E (4) D or E
 (5) None of these

82. C attends workshop on which of these days?

- (1) Saturday (2) Sunday
 (3) Tuesday (4) Thursday
 (5) Friday

83. Who attends school R and on which day?

- (1) A, Thursday (2) A, Tuesday
 (3) D, Saturday (4) D, Sunday
 (5) E, Monday

84. On which day does D attend the school?

- (1) Sunday (2) Saturday
 (3) Tuesday (4) Can't be said
 (5) None of these

85. Which of these group is correct?

- (1) G—Q—Wednesday (2) A—Q—Monday
 (3) G—R—Monday (4) G—V—Sunday
 (5) None of these

Questions 86-90: Study the following table for the number of pass and fail students in various classes and schools and answer the Qs 86-90.

| Class→ | VI | VII | VIII | IX | X |
|---------|------------|------------|------------|------------|------------|
| School↓ | Pass, Fail | Pass, Fail | Pass, Fail | Pass, Fail | Pass, Fail |
| A | 20, 4 | 30, 3 | 36, 6 | 70, 5 | 80, 4 |
| B | 25, 5 | 20, 4 | 40, 5 | 60, 5 | 100, 1 |
| C | 30, 3 | 25, 5 | 46, 4 | 50, 6 | 120, 2 |
| D | 15, 1 | 25, 2 | 48, 5 | 40, 4 | 150, 3 |
| E | 60, 2 | 30, 1 | 50, 0 | 80, 10 | 100, 0 |

86. What is the overall fail % (approx)?

- (1) 10 (2) 8 (3) 6 (4) 5 (5) 4

87. What is the respective ratio of the total number of Pass Students of Class VI to that of Class VIII from all the Schools together?

- (1) 9 : 11 (2) 181 : 221
 (3) 81 : 123 (4) 21 : 32
 (5) None of these

88. Which Class has maximum number of Pass Students from all the Schools together?

- (1) VIII (2) VII
 (3) IX (4) X
 (5) None of these

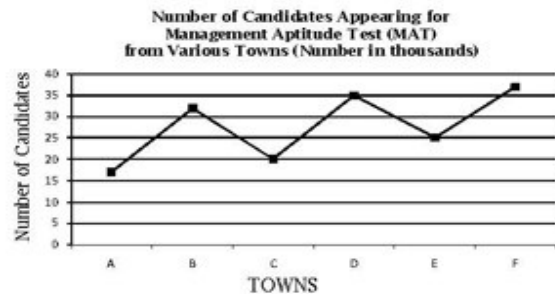
89. What is the average number of Pass students of all the classes together of School E?

- (1) 80 (2) 74 (3) 71
 (4) 64 (5) 60

90. What is the respective ratio of the total number of Fail students of Class IX to the total number of Fail students of Class X from all the Schools together?

- (1) 2 : 1 (2) 3 : 4 (3) 4 : 5 (4) 6 : 7
 (5) None of these

Questions 91-95: Study the following graph carefully to answer the questions:



91. What is the respective ratio of the number of candidates appearing for the MAT from Town B to Town E?

- (1) 11 : 8 (2) 13 : 10
 (3) 6 : 5 (4) 23 : 27
 (5) None of these

92. What is the approximate average number of candidates appearing for MAT from all the Towns together?

- (1) 29950 (2) 28900
 (3) 27920 (4) 26940
 (5) 30930

93. The number of candidates appearing for MAT from Town A is approximately what per cent of the number of candidates appearing for MAT from Town F?

- (1) 53 (2) 67
 (3) 39 (4) 71
 (5) 47

94. What is the respective ratio of the number of students

appearing for the MAT from Town A, B and C together to the number of students appearing for the MAT from Town D, E and F together?

- (1) 28 : 39 (2) 3 : 2
(3) 9 : 10 (4) 14 : 13
(5) None of these

95. The number of candidates appearing for MAT from Town C is approximately what per cent of the total number of candidates appearing for MAT from all the Towns together?

- (1) 13 (2) 17
(3) 21 (4) 12
(5) None of these

Questions 96-100: Each question below is followed by two statements A and B. You are to determine whether the data given in the statement is sufficient for answering the question. You should use the data and your knowledge of Mathematics to choose between the possible answers.

Give answer:

- (1) if the statement A alone is sufficient to answer the question, but the statement B alone is not sufficient.
(2) if the statement B alone is sufficient to answer the question, but the statement A alone is not sufficient
(3) if both statements A and B together are needed to answer the question.
(4) if either the statement A alone or statement B alone is sufficient to answer the question.
(5) if you cannot get the answer from the statement A and B together, but need even more data.

96. What is the rate p.c.p.a. on an amount of Rs 15,000 deposited in a Bank?

- (A) The simple interest for two years is Rs 3,600.
(B) The difference between the simple interest and compound interest is Rs 216.

97. What is the value of the two digit number?

- (A) The product of the digits is 28 and the difference between the digits is 3.
(B) The digit at the unit place is smaller than the other.

98. The ages of Neera and Shalu are in the ratio of 2 : 1. What is the age of Shalu?

- (A) The ages of Shalu and Sugandha are in the ratio of 2 : 1.
(B) After 4 years the ratio of Neera's and Shalu's ages will be 3 : 2.

99. What is the profit earned by selling a chair for Rs 250?

- (A) A cost price of 10 such chairs is equal to selling price of 8 such chairs.
(B) 25% profit is earned by selling 4 such chairs.

100. What is the salary of A, in a group of A, C, E, G, H and J, whose average salary is Rs 25,000?

- (A) Total of the salary of C and E is Rs 54,000.
(B) Total of the salary of G and H is Rs 58,000.

SECTION III

INTELLIGENCE & LOGICAL REASONING

101. Four of the following five are alike in a certain way and so form a group. Which is the one that **does not** belong to the group

- (1) Tin (2) Gold
(3) Brass (4) Copper
(5) Silver

102. In a certain code LOAD is written as 3#%5 and VIDE

is written as @5\$6. How is DOVE written in that code?

- (1) 5@#6 (2) 5#\$6
(3) 5\$@6 (4) 5#@6
(5) None of these

103. How many such pairs of letters are there in the word DONATIVE; each of which have as many letters between them in the word, as they have in English alphabet?

- (1) None (2) One
(3) Two (4) Three
(5) More than three

104. If it is possible to make only one meaningful word from the first, the third, the fourth, the seventh and the eighth letters of the word DIAMETERICAL, second letter of that word is your answer. If more than one such word can be formed, your answer is P and if no such word can be formed your answer is N.?

- (1) R (2) M
(3) E (4) N
(5) P

105. AE : DH in the same way as JN : ?

- (1) MQ (2) LQ
(3) LP (4) MR
(5) None of these

Questions 106-110: In these questions the symbols @, #, \$, * and % are used with different meanings as follows:

- 'A @ B' means 'A is neither smaller than nor equal to B'.
'A # B' means 'A is not greater than B'.
'A \$ B' means 'A is neither greater than nor equal to B'.
'A * B' means 'A is neither greater than nor smaller than B'.
'A % B' means 'A is not smaller than B'.

In each of the following questions assuming the given statements to be true, find out which of the three conclusions I, II and III given below them is/are **definitely true**.

Statements:

106. H @ L, L * J, J \$ K, K % F

Conclusions:

- I L * F
II K @ L
III H @ K
(1) Only I is true
(2) Only II is true
(3) Only I and II are true
(4) All are true
(5) None of these

Statements:

107. R % M, M @ V, V # W, W @ T

Conclusions:

- I R @ V
II M # W
III R @ W
(1) Only I is true
(2) Either only I or II is true
(3) Only II and III are true
(4) None is true
(5) None of these

Statements:

108. D @ J, J * K, K % M, M \$ N

Conclusions:

- I D @ M
II M # J
III N * D

- (1) Only I is true
- (2) Only II is true
- (3) Only I and II are true
- (4) Either I or III and II are true
- (5) None of these

Statements:

109. F # R, R S T, T S V, W % V

Conclusions:

- I. R S W
 - II. W @ T
 - III. V @ F
- (1) None is true
 - (2) Only I and II are true
 - (3) Only I and III are true
 - (4) Only II and III are true
 - (5) All are true

Statements:

110. X @ Y, Y # T, T S V, V @ R

Conclusions:

- I. X @ V
 - II. X # V
 - III. V @ Y
- (1) Only I and II are true
 - (2) Only Either I or II is true
 - (3) Only III is true
 - (4) Only Either I or II and III are true
 - (5) None of these

Questions 111-115: In each of the questions below are given four 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.

Statements:

- 111.**
1. Some books are novels.
 2. All novels are stories.
 3. All stories are fictions.
 4. No fiction is poem.

Conclusions:

- I. No story is poem.
 - II. No novels are fictions.
 - III. Some books are fictions.
- (1) Only I and II follow
 - (2) Only II and III follow
 - (3) Only I and III follow
 - (4) Only I and either II or III follow
 - (5) All follow

Statements:

- 112.**
1. Some flowers are buds.
 2. All buds are petals.
 3. No petal is pollen.
 4. All pollen is fragrance.

Conclusions:

- I. No bud is pollen.
 - II. No flower is fragrance.
 - III. No petal is fragrance.
- (1) Only I follows
 - (2) Only I and III follow
 - (3) Only II and III follow
 - (4) None follows
 - (5) None of these

Statements:

- 113.**
1. Some gems are pearls.
 2. Some pearls are rings.
 3. All rings are bangles.
 4. All bangles are pendants.

Conclusions:

- I. Some pears are bangles.
 - II. Some pendants are pearls.
 - III. No pendant is pearl.
- (1) Only either II or III follows
 - (2) Only either I or III follows
 - (3) Only I and II follow
 - (4) Only I and III follow
 - (5) None of these

Statements:

- 114.**
1. All cells are batteries.
 2. All batteries are curtains.
 3. Some curtains are clothes.
 4. All clothes are shirts.

Conclusions:

- I. All cells are curtains.
 - II. Some batteries are shirts.
 - III. Some curtains are shirts.
- (1) Only I and II follow
 - (2) Only I and III follow
 - (3) Only I follows
 - (4) None follows
 - (5) None of these

Statements:

- 115.**
1. Some bottles are idols.
 2. Some idols are temples.
 3. No temple is room.
 4. All rooms are flats.

Conclusions:

- I. Some temples are flats.
 - II. No idol is room.
 - III. No temple is flat.
- (1) Only I follows
 - (2) Only I and II follow
 - (3) All I, II and III follow
 - (4) Only either I or III follows
 - (5) None of these

Questions 116-120: Given an input line the machine arranges the words and numbers step by step in a systematic manner as illustrated below:

Input : subsidy 76 48 follow 35 next 63 must

Step I : 35 subsidy 76 48 follow next 63 must

Step II : 35 subsidy 48 76 follow next 63 must

Step III : 35 subsidy 48 next 76 follow 63 must

Step IV : 35 subsidy 48 next 63 76 follow must

Step V : 35 subsidy 48 next 63 must 76 follow

Output in Step V is the final output and Step VI is the last step.

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

116. If the second step of an input is "21 white direct 72 status front 37 69", how many more steps are required to complete the arrangement?

- (1) Three
- (2) Four
- (3) Five
- (4) Six
- (5) None of these

117. What will be the third step for the input "17 85

pearls garland 67 93 restriction judgement”?

- (1) 17 restriction 67 pearls garland 85 93 judgement
- (2) 17 restriction 67 pearls 93 garland 85 judgement
- (3) 17 restriction 85 pearls 67 garland 93 judgement
- (4) 17 restriction 67 pearls 85 garland 93 judgement
- (5) None of these

118. If the fourth step of an input is “35 wealth 52 task 72 57 jogging playground” what will definitely be the first step?

- (1) task wealth 35 52 57 jogging 72 playground
- (2) wealth task 35 52 57 jogging 72 playground
- (3) wealth task 35 52 jogging 57 72 playground
- (4) Cannot be determined
- (5) None of these

119. If the second step of an input is “26 shop finance 48 game music 63 37”; what will be the fifth step?

- (1) 26 shop 37 music 48 finance game 63
- (2) 26 shop 37 music finance 48 game 63
- (3) 26 shop 37 music 48 game finance 63
- (4) There is no fifth step
- (5) None of these

120. How many steps are required to complete the arrangement for the input “56 punish 48 find design 29 lavish 36”?

- (1) Seven
- (2) Five
- (3) Four
- (4) Eight
- (5) None of these

Questions 121-125: In each of these questions a combination of digit/symbol is given followed by four combinations of letters codes numbered (1), (2), (3) and (4). Digits/Symbols are to be coded by the letter codes as per the scheme and conditions given below. The number of letter code combination which correctly represents digits/symbols combination is your answer. If none of the combinations is correct, your answer is (5) i.e. 'None of these'.

Digit/Symbol : # 1 5 8 \$ 3 7 2 9 @ % † 6 4 ©

Letter Code : P I A R J H F W L T Q E D U B

Conditions :

- i. If the first element is a symbol and the last element is an odd digit, their codes are to be swapped.
- ii. If the first as well as the last element is a symbol, both are to be coded by the code for the first element.
- iii. If the first element is an even digit and the last one is a symbol both are to be coded by X.

121. 57#8\$@

- (1) TFPRJA
- (2) AFPRJT
- (3) AFRPTJ
- (4) TFRPJA
- (5) None of these

122. ©84@39

- (1) LRUTHB
- (2) BRUTHL
- (3) BRTUHL
- (4) LRUHTB
- (5) None of these

123. †8413\$

- (1) JRUIHJ
- (2) JRUIHE
- (3) ERUIHE
- (4) ERUIHJ
- (5) None of these

124. 25@7#\$

- (1) WATFPJ
- (2) WATFPW
- (3) JATFPJ
- (4) XATFPJ
- (5) None of these

125. %43698

- (1) RUHDLQ
- (2) QUHDLR

- (3) QUHDLQ
- (5) None of these

(4) RUHDLR

Questions 126-130: Study the following information carefully to answer these questions.

Three families X, Y and Z comprising of ten members A, B, C, D, E, F, G, H, J & K. Each family has at least three members out of which at least one male and one female. They travel in three cars I, II and III in such a way that at least three members travel in each car and all the members of any of the families do not travel together. At least one female and one male travel in each car.

A is wife of J and mother of F and they belong to family X, E is sister of B who is son of C and belongs to family Y. G is father of H and husband of K. D is father of B. A and K travel in Car I only with H. E and B do not travel in the same car. G and C travel in Car II. B does not travel with D or F. J does not travel with F.

126. Which of the following group of people represent one complete family?

- (1) GJF
- (2) GKF
- (3) GKH
- (4) AJH
- (5) None of these

127. How is J related to F?

- (1) Father
- (2) Brother
- (3) Son
- (4) Cannot be determined
- (5) None of these

128. How is H related to K?

- (1) Daughter
- (2) Son
- (3) Mother
- (4) Cannot be determined
- (5) None of these

129. Four members travel in which Car

- (1) Car I
- (2) Car II
- (3) Car III
- (4) Car I or II
- (5) Car II or III

130. Which of the following combination of family and its members is correct?

- (1) X—A, F, H
- (2) Y—G, K, H
- (3) Z—A, J, F
- (4) X—G, J, H
- (5) Y—C, D, E, B

Questions 131-135: In each of the following questions two rows of numbers are given. The resultant number in each row is to be worked out separately based on the following rules and the questions below the rows of numbers are to be answered. The operations of numbers progress from left to right.

Rules:

- (i) If a two digit even number which is not a perfect square is followed by a prime number they are to be multiplied.
- (ii) If an even number is followed by another even number, the first number is to be divided by the second number.
- (iii) If an composite odd number is followed by another odd number they are to be added.
- (iv) If an even number which is a perfect square is followed by an odd number the second number is to be subtracted from the first number.
- (v) If a prime number is followed by an odd number, they are to be multiplied.
- (vi) If an odd number is followed by an even number the second one is to be subtracted from the first number.

131. 28 11 44
x 25 37

If x is the resultant of the first row. What is the resultant of the second row?

- (1) 212 (2) 138
(3) 202 (4) 198
(5) None of these

132. 64 15 m
17 21 76

If m is the resultant of the second row, what is resultant of the first row?

- (1) 303 (2) 330
(3) 230 (4) 406
(5) None of these

133. 48 16 15
256 a 60

If 'a' is the resultant of the first row what is the resultant of second row?

- (1) 251 (2) 271
(3) 171 (4) 151
(5) None of these

134. 23 15 95
x 10 17

If 'x' is the resultant of first row, what is the resultant of the second row?

- (1) 425 (2) 8
(3) 42 (4) 72
(5) None of these

135. 32 7 14
57 y 15

If 'y' is the resultant of the first row, what is the resultant of the second row?

- (1) 415 (2) 56
(3) 52 (4) 325
(5) None of these

Questions 136-140: 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.

Statements:

136. (A) Rise in petrol prices was announced recently.
(B) Number of cars on the road is increasing constantly.

Statements:

137. (A) A bandh was called on Monday in protest against land acquisition to set up SEZs.
(B) Violence and arson totally disrupted normal life on Monday.

Statements:

138. (A) The health department of the government of State 'X' ordered all the hospitals to store sufficient stock of medicines to handle the epidemics generally breaking out at the onset of monsoon.
(B) The health department of the government of State 'X' campaigned the need for maintaining cleanliness among public particularly those residing in slum areas.

Statements:

139. (A) Rupee has been consistently strengthening for past few months.
(B) Reserve Bank of India has recently reduced the interest rates.

Statements:

140. (A) An increase in number of cases of depression is being observed these days among the young students.
(B) Young students have to tackle with more competition than their counterparts faced in the past.

Questions 141-145: Study the following information carefully to answer these questions.

H, K, L, M, J, D, F, T and W are sitting around a circle facing the center. L is second to the right of T and third to the left of W. H is second to the left of T. J is fourth to the left of M who is not neighbour of L. F is to the immediate left of J. D is not neighbour of W.

141. Who is second to the right of D?

- (1) M (2) F (3) K
(4) K or F (5) None of these

142. Who is to the immediate left of H?

- (1) F (2) M (3) J
(4) K (5) None of these

143. Which of the following pairs of persons have the first person sitting to the immediate right of second person?

- (1) HT (2) MT (3) FJ
(4) WF (5) FL

144. Which of the following is the correct position of W with respect to L?

- (1) Second to the left (2) Third to the left
(3) Third to the right (4) Second to the right
(5) None of these

145. Four of the following five are alike in a certain way on the basis of their positions in the above arrangement and so form a group. Which is the one that does not belong to the group?

- (1) MDT (2) KWH
(3) FLJ (4) DTL
(5) MHT

Questions 146-150: Below is given a passage followed by several possible inferences which can be drawn from the facts stated in the passage. You have to examine each inference separately in the context of the passage and decide upon its degree of truth or falsity.

Mark Answer:

- (1) if the inference is "definitely true" i.e. it properly follows from the statement of facts given.
(2) if the inference is "probably true" though not "definitely true" in the light of the facts given.

- (3) if the data are inadequate *i.e.* from the facts given you cannot say whether the inference is likely to be true or false.
- (4) if the inference is "probably false" though not "definitely false" in the light of the facts given.
- (5) if the inference is "definitely false" *i.e.* it cannot possibly be drawn from the facts given or it contradicts the given facts.

Traditionally, man-made fibres have been subjected to very high levels of tax in India. The upstream industry of the domestic producers of these industrial inputs—used to be protected by abnormally high customs duties. This had undermined the ability of the downstream users of these goods to compete in the global market. Which is why India is a predominantly cotton-based (60 : 40) textile/garment industry, quite the mirror reflection of the world. This 'skewed fibre mix' has reduced India's playing field in the US and the EU markets which are synthetics rich. Recent years' rapid increase in cotton output—has caused—a revolution of sorts, further buttressing India's global competitiveness in cotton dominant cloth. First, the industry's scope for expanding exports due to cotton advantage has been limited and even that was further circumscribed by rupee's appreciation. In 60% of the US and EU markets, recent year's tax cuts have barely made an impact. And the strong rupee ensured it won't.

146. About 60% of the fibre, used by developed countries are man-made?

147. Strengthening of rupee has helped India to enhance its cotton exports?

148. India is the largest cotton exporter in the world.

149. Indian government has reduced the taxes on exports of cotton recently.

150. India has an edge over other countries in the cotton-made fabrics.

ANSWERS AND EXPLANATIONS

1. (5)
2. (5)...defined by the need for economic development above all else.
3. (5)...is beginning to replace that of the US and European powers.
4. (2) ...To ensure a stable ...flood of refugees, interrupting careful plans.
5. (3) ...critics who have expressed their unease at China's military.
6. (4) Despite this, when the Africa ...or the US...
7. (1) China's growing influence has caused a shift.
8. (4) "law enforcement" in 1st para, 2nd sentence → police.
9. (5) Para 2
10. (2) Para 4, A appears correct but is a too-far-reached conclusion.
11. (1)... All others Suggest Automatic returns.
12. (2)
13. (4) Para 4 ...provide speedy justice to women and be women...friendly as well.
14. (4)
15. (1) ...last para...while proposals...need to be attentive.
16. (2) 17. (1) 18. (3) 19. (2) 20. (4)
21. (4) 22. (1) 23. (5) 24. (2) 25. (4)
26. (5) 27. (4) 28. (2) 29. (2) 30. (3)
31. (3) 32. (5) 33. (1) 34. (4) 35. (2)
36. (5) 37. (1) 38. (3) 39. (5) 40. (2)
41. (3) $(198 - 87) \div (1.25 \times 2)$

$$= \frac{106}{2.5} = 42.4$$

$$42. (1) ? = \frac{3870}{516} = 7.5$$

$$43. (5) ? = 5389 + 4172 - 3868 - 2456 - 1130 = 2107$$

$$44. (2) ? = 88.80 + 8.08 + 0.08 + 88.08 + 0.80 + 888.00 = 1073.84$$

$$45. (2) ?^2 = 88^2 + 73^2 + 38^2 + 859 = 7744 + 5329 + 1449 + 859 = 15376$$

$$46. (5) \text{ Given Expression} = 157843 + \frac{56189 \times 14}{312} = 49. (\text{none})$$

$$47. (2) \text{ The given expression} = \frac{156 \times 156}{8} \times \frac{36}{x} = 117 \times 24 \rightarrow x = 39$$

$$48. (1) \rightarrow \frac{8.83}{100} \times 228 - \frac{2.65}{100} \times 104 \rightarrow 17.3764$$

$$49. (4) \rightarrow 23^{23-19} = 23^4 = (23)^2)^2 = (529)^2$$

$$50. (3) 8.496 - 1.384 + 3.462 + 2.801 = 13.375$$

$$51. (3) \sqrt{7} = 385 + 19^2 - 25^2 = 385 + 361 - 625 \rightarrow ? = 121^2 \rightarrow ? = 14641$$

$$52. (5) 4 \frac{4}{13} \times 9 \frac{1}{6} \div \frac{7}{78} = \frac{56}{13} \times \frac{55}{6} \times \frac{78}{7} = 440$$

$$53. (1) \frac{78.34 + 96.68 - 14.44}{4} = \frac{160.58}{4} = 40.145$$

54. (5) The last digit is 5.

$$55. (4) \frac{1728}{48} \times 5 + 12 = \sqrt{7} \rightarrow 36 \times 5 + 12 = \sqrt{7} \rightarrow 192 = \sqrt{7} \rightarrow \dots ? = 192^2 = 56864$$

$$56. (4) \text{ Let ages} = 3x, 2x, \dots \rightarrow 3x + 2x = 5x = 60 \rightarrow x = 12 \rightarrow 3x = 24$$

$$57. (2) \text{ Volume of wall} = \text{Volume of 'n' bricks} \rightarrow 800 \times 600 \times 22.5 = (25 \times 11.25 \times 6) \times n \rightarrow n = \frac{800 \times 600 \times 22.5}{25 \times 6 \times 11.25} = 32 \times 100 \times 2 = 6400$$

$$58. (5) \text{ If CP} = \text{Rs } 100, \text{ SP} = 100 + 20\% = \text{Rs } 120 \text{ Now, CP of water} = \text{Rs } 0 \therefore \text{Water : Wine} = 20 : 100 = 1 : 5$$

59. (5) Let the no. of mins be x

$$\begin{aligned} \rightarrow \frac{1}{x} &= \frac{1}{10} + \frac{1}{12} - \frac{1}{20} \\ &= \frac{12+10-6}{120} = \frac{8}{120} \\ \rightarrow x &= \frac{60}{8} = 7.5 \text{ mins} \end{aligned}$$

60. (2) Use average speed = $\frac{\text{Total d}}{\text{Total t}} = \frac{x+x}{\frac{x}{20} + \frac{x}{40}}$

$$= 26.67 \approx 27$$

OR, directly, average speed = $\frac{2 \times 30 \times 40}{20 + 40} = 26.67 \approx 27$

61. (4) He covers, 1m (=2-1) in 2mins
 \therefore He covers 12 m in $12 \times 2 = 24$ mins
 In the 25th minute, he covers another 2m distance i.e. $12 + 2 = 14$ m

62. (5) Required ratio = $\frac{\left(\frac{x}{2} + \frac{x}{3}\right)}{\left(\frac{x}{2} + \frac{2x}{3}\right)}$

$$= \frac{5x}{7x} = 5:7$$

63. (4) $s = \frac{\text{distance}}{\text{time}} = \frac{100+200}{20} = 15 \text{ m/s}$
 Now, $15 \frac{\text{m}}{\text{s}} = 15 \times \frac{18}{5} \text{ km/hr} = 54 \text{ km/hr}$

64. (2) They will contradict if A speak s truth and B tells lies or vice -versa.

$$A = \frac{60}{100}, A' = \frac{40}{100}, B = \frac{40}{100}, B' = \frac{60}{100}$$

Required probability = $\frac{60}{100} \times \frac{60}{100} + \frac{40}{100} \times \frac{40}{100}$

$$= \frac{52}{100} = 52\%$$

65. (1) Net increase = $\frac{110}{100} \times \frac{120}{100} = \frac{13200}{10000}$

Required% = $132 - 100 = 32$

or, directly, $10 + 20 + \frac{10 \times 20}{100} = 32$

66. (2) Let SP = x $\rightarrow 20\% x = \text{gain} = \frac{x}{5}$

Also, SP = CP + P $\rightarrow x = \text{CP} + \frac{x}{5} \rightarrow \text{CP} = \frac{4}{5}x$

$$\therefore \% P = \frac{\frac{x}{5}}{\frac{4x}{5}} \times 100 = 25\%$$

67. (4) $x + y = 15, 2x + 4y = 40$
 $\rightarrow x = 10, y = 5$

68. (3) New Volume, $V = V_1 + V_2 + V_3 = 10^3 + 6^3 + 8^3$

$$= 1000 + 216 + 512$$

$\rightarrow V = 1728 = a^3, a = \text{edge}$
 $\rightarrow \text{edge, } a = \sqrt[3]{1728} = 12 \text{ cm}$

69. (1) If X is 100% efficient,
 $Y = 100 + 60\% = 160\%$ efficient

Thus, ratio of times = inverse of efficiencies

$$= \frac{160}{100}$$

\rightarrow Time taken = $\frac{100}{160} \times 40 = 25$ days

70. (3) $\frac{?}{1083} = \frac{75}{?}$

$$\rightarrow ?^2 = 75 \times 1083$$

$$\rightarrow ? = \sqrt{5 \times 5 \times 3 \times 3 \times 19 \times 19}$$

$$= 5 \times 3 \times 19$$

$$= 285$$

71. (1) Let the no. = x

$$\rightarrow \frac{x}{8} = 41.5$$

$\rightarrow \frac{69}{100}x = ?$ Use unitary method (cross-multiply)

Thus, $? = \frac{69}{100} \times 41.5 \times 8 = 229.08$

72. (4) Required no. = $\frac{7}{8} \times 216 - \frac{2}{9} \times 279$

$$= 7 \times 27 - 2 \times 31$$

$$= 189 - 62 = 127$$

73. (3) Ratio of profits = $\frac{55,000 \times 12}{40,000 \times 8} = \frac{33}{16}$

Sum of parts = $33 + 16 = 49$ and difference = $33 - 16 = 17$

$\therefore \frac{17}{49} (33957) = 11781$

74. (5) $CI = 5418 = 16800 \left(\frac{1+R}{100} \right)^2 - 16800$

$$R = 15\% \text{ SI} = 16800 \times 2 \times \frac{15}{100}$$

$$= 5040$$

75. (2) Present ages = $5x, 2x$
 and Ages after 7 years = $5x + 7, 2x + 7$

From the given condition, $\frac{5x+7}{2x+7} = \frac{4}{3}$

$$\rightarrow 15x + 21 = 8x + 28$$

$$\rightarrow x = 1$$

\therefore C's age = $5x = 5 \times 1 = 5$ years

76. (2) Required difference = $4347 - \frac{3052}{7} = 185$

77. (X) - Delta = 71

78. (4) Required ratio = $\frac{640}{485} = \frac{128}{97}$

79. (1) It can be easily seen that the maximum increase is either for electrical or I.T.

The changes are: $467 - 252 = 215$
 and $475 - 264 = 211$

$\% \text{ changes} = \frac{215}{252} \times 100$

and $\frac{211}{264} \times 100$

Here, $\frac{215}{252} > \frac{211}{264}$. Hence (1)

80. (3) The increase in various years is 26, 19, 49, 53, -15, 25 (from 2001 \rightarrow 2007)
 The max. is 53 in 2005

81. (3) The data can be arranged as:

| | | |
|---|-----------|---|
| A | Tuesday | R |
| B | Wednesday | S |
| C | Thursday | P |
| D | Sunday | V |
| E | Saturday | U |
| F | Friday | T |
| G | Monday | Q |

82. (4) 83. (2) 84. (1) 85. (5)

$$86. (3) \text{ Required \%} = \frac{15+15+20+30+10}{165+145+240+330+560} \times 100$$

$$= \frac{90}{1440} \times 100$$

$$= 6.3\%$$

$$*15 = 4 + 5 + 3 + 1 + 2 \text{ (from column 1)}$$

$$165 = 20 + 4 + 25 + 5 + \dots + 60 + 2$$

(from column 1), etc.

$$87. (5) \text{ Required ratio} = \frac{150}{220} = \frac{15}{22}$$

88. (4) Class X, 550

$$89. (4) \text{ Required average} = \frac{60+30+50+80+100}{5}$$

$$= \frac{320}{5} = 64$$

$$90. (5) \text{ Required ratio} = \frac{30}{10} = 3:1$$

$$91. (5) \text{ Required ratio} = \frac{32}{25} \approx \text{option (3)}$$

$$92. (4) \text{ Required average}$$

$$= \frac{(17+32+20+35+25+37) \times 000}{6}$$

$$= 26940 \approx 27,000$$

$$93. (5) \text{ Required \%} = \frac{17}{37} \times 100 \approx 47\%$$

$$94. (1) \text{ Ratio} = \frac{17+32+20}{35+25+37} = \frac{69}{97} \approx 70\%, \text{ or (1)}$$

$$95. (4) \frac{20}{166} \times 100 \approx 12$$

$$96. (1) A \rightarrow SI = 3600 = \frac{15,000 \times 2 \times R}{100}$$

$$\rightarrow \frac{3600 \times 100}{15,000 \times 2} = R$$

$$\rightarrow R = 12\%$$

B → No solution

$$97. (3) A \rightarrow xy = 28, x - y = 3$$

$$\rightarrow (x, y) = (7, 4) \text{ or } (4, 7)$$

$$\rightarrow \text{No.} = 74 \text{ or } 47$$

$$\text{and } B \rightarrow x > y \rightarrow \text{No.} = 74$$

Thus, both A and B are needed

$$98. (2) N : S = 2 : 1 \rightarrow N = 2x, S = x \text{ (say)}$$

$$A \rightarrow \text{Shalu} = 2 \times \text{Sugandha (?) } \rightarrow \text{No solution}$$

$$B \rightarrow \frac{2x+4}{x+4} = \frac{3}{2} \rightarrow 4x+8 = 3x+12 \rightarrow x = 4$$

$$\rightarrow \text{Ages} = 8 \text{ and } 4 \text{ years}$$

$$99. (4) A \rightarrow \text{CP of } 10 = \text{SP of } 8 = x \text{ (say)}$$

$$\rightarrow \text{CP} = \frac{x}{10}, \text{ SP} = \frac{x}{8}$$

$$\rightarrow \% P = \frac{\left(\frac{x}{8} - \frac{x}{10}\right)}{\frac{x}{10}} \times 100 = 25\%$$

$$\text{Now, } \frac{\text{CP}}{\text{SP}} = \frac{100}{100 + P\%} \rightarrow \frac{\text{CP}}{250} = \frac{100}{25} \rightarrow \text{CP} = 200$$

$$\therefore P = \text{Rs } 50$$

B → same answer (% already given as 25%)

100. (5) No information about J.

101. (3) It is an alloy (mixture) of metals.

Others are pure metals.

102. (4) L = 5, O = #, etc.

103. (5) 4 pairs, viz., D - - - A, ON, A - - - E, T - V

104. (1) DREAM; i.e. R

105. (1) A + 3 = D, E + 3 = H, J + 3 = M,

$$N + 3 = Q \rightarrow \text{MQ}$$

106. (2) A @ B → A < B → A > B

$$A \$ B \rightarrow A \geq B \rightarrow A < B$$

$$A \# B \rightarrow A \leq B \rightarrow A \leq B$$

$$A * B \rightarrow A = B$$

$$\text{and } A \% B \rightarrow A < B \rightarrow A \geq B$$

$$\text{Thus, } H > L, L = J, J < K, J \geq F$$

$$K > J, L \geq F$$

i.e. position of H and K is not clear / not sure

Now, I → L = F not sure / uncertain

II → K > L → certain

III → H > K..uncertain

107. (1) From the statements, R ≥ M, M > V, V ≤ W, W > T,

$$\rightarrow R \geq M > V$$

$$W \geq V$$

$$W > T$$

Thus, I → R > V → true

II → M ≤ W → uncertain

III → R > W → uncertain

108. (3) D > J, J = K, K ≥ M, M < N

i.e. D > (J, K) ≥ M, and N > M

$$I \rightarrow D > M \rightarrow \text{true}$$

$$II \rightarrow M \leq J \rightarrow \text{true}$$

III → N = K → uncertain

109. (5) F ≤ R, R < T, T < V, W ≥ V

i.e. F ≤ R < T < V ≤ W

I, II and III → R < W, W > T, V > F

→ all are correct.

110. (5) X > Y, Y ≤ T, T < V, V > R

Thus, all are incorrect

111. (5) All stories are fiction + No fiction is poem

→ No story is poem → (i)

→ All novels are stories + All stories are fictions

→ All novels are fictions → (ii)

→ Some Books are novels + All novels are stories

→ Some books are stories

→ and Now, Some books are stories + All stories are fictions

→ Some books are fictions → (iii)

112. (2) All buds are petals + No petal is pollen

→ No bud is pollen → (i)

and from all 4 statements → (ii) is wrong

and from statements 3 and 4

→ No petal is fragrance → (iii)

113. (3) (i) is correct from statements 2 and 3.

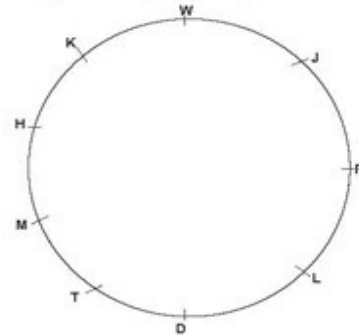
- (ii) is correct from statements 2 + 3 + 4 (reversed).
 (iii) is wrong as negation cannot follow from affirmatives.
114. (5) (i) follows from 1 + 2.
 (ii) follows from 1 (reversed)
 (iii) follows from 3 + 4
 → All follow, i.e. none of these
115. (3) (i) follows from 3 + 4
 (ii) follows from 2 + 3.
 (iii) follows from 3 + 4
116. (2) *For Qs. 116-120, study the pattern/logic.
 The digits are arranged in ascending order and the alphabets/words in descending order. First the digits and then the words are arranged in the lines..and so on..
 Step II → 21 white direct 72 status front 3769.
 Step III → 21 white 37 direct 72 status front 69.
 Step IV → 21 white 37 status direct 72 front 69.
 Step V → 21 white 37 status 69 direct 72 front
 Step VI → 21 white 37 status 69 front 72 direct.
 Thus, 4 more steps are required.
117. (4) Input : 17 85 pearls garland 67 93 restriction judgement.
 1st step : 17 restrictions 85 pearls garland 67 93 judgement
 Step II : 17 restrictions 67 85 pearls garland 93 judgement.
 Step III : 17 restrictions 67 pearls 85 garland 93 judgement.
118. (4) ...cannot be determined, as in this case back steps are not possible to determine.
119. (1) Step II: 26 shop finance 48 game music 63 37.
 Step III: 26 shop 37 finance 48 game music 63.
 Step IV: 26 shop 37 music finance 48 game 63.
 Step V : 26 shop 37 music 48 finance game 63.
120. (5) The 1st 5 steps are:
 29 56 punish 48 find design lavish 36.
 29 punish 56 48 find design lavish 36.
 29 punish 36 56 48 find design lavish.
 29 punish 36 lavish 56 48 find design lavish.
 29 punish 36 lavish 48 56 find design lavish.
 Step VI : 29 punish 36 lavish 48 find 56 design.
 The arrangement gets completed in the VII step.
121. (2) None of the conditions (i, ii, iii) applies, so, we use direct letter codes, i.e. 57#8\$@ = AFPRJT, i.e. (2).
122. (1) condition (i) applies, as the 1st element © is a symbol and the last one, i.e., 9 is an odd digit.
 * 'swapped' → exchanged, substituted.
 Thus, © 8 4 @ 3 9
 E R U T H L
 But, on swapping © and 9, we get L and B (interchanged)
 = L R U T H B
123. (3) condition (ii) applies. → E R U I H E
 124. (5) From condition (iii), X A T F P X
 125. (2) No condition applies. So, use direct letter codes, i.e.
 % 4 3 6 9 8 = Q U H D L R.
126. (3) * For Qs. 126-130, the data can be arranged as:

| Family ↓ | Male | Female | Children—Male/Female |
|----------|------|--------|----------------------|
| X | J | A | F—(?) |
| Y | D | C | E (female), B—(?) |
| Z | G | K | H—(?) |

and Car I = A, K, H; Car II = G, C, B, J; Car III = E, D, F

127. (1)
 128. (4) ...either son or daughter.
 129. (2)
 130. (5)
 131. (1) 212
 $28, 11 \Rightarrow 28 * 11 = 308$
 $308, 44 \Rightarrow \frac{308}{44} = 7 \Rightarrow x = 7$
 and 7, 25 $\Rightarrow 175$
 $175, 37 \Rightarrow 175 + 37 = 212$
132. (2) (17, 21) → Rule V → $17 * 21 \rightarrow 357$
 and (357, 76) → Rule VI → $357 - 76 = 281 = m$
 Thus, $R_1 = 64, 15, 281$
 Now, (64, 15) → Rule III → $64 - 15 = 49$
 and (49, 281) → Rule III → 330. i.e. option (2)
133. (4) (48, 16) → 48/16 (by II) = 3.
 and (3, 15) → $3 * 15$ (by V) = 45
 Now, (256, 45) = $256 - 45$ (by IV) = 211
 and (211, 60) = $211 - 60$ (by VI) = 151
134. (5) We get 748
 135. (5) $32, 7 \Rightarrow 32 * 7 = 224$
 $224, 14 \Rightarrow \frac{224}{14} = \frac{112}{7} = 16 = y$
 and 57, 16 $\Rightarrow 57 - 16 = 41$
 and 41, 15 $\Rightarrow 41 * 15 = 615$
136. (4) 137. (1) 138. (5) 139. (4)
 140. (2)

* For Qs. 141-145, the arrangement is given below.



141. (2) 142. (4) 143. (5) 144. (3)
 145. (1) In others, 1st one is in between the other 2.
 146. (5)... US and EU markets which are synthetic rich.
 147. (1) ...Last line.
 148. (3) No such hint.
 149. (2) ...consider the terms — traditionally, used to be, had undermined.
 150. (1) ...further buttressing → (supporting)