**Simplification**

1. If a \* b  =  a + b , find the value of 5 \* (5 \* -2) :

                      ab

a. -3 b. -10 c. -1.66 d. 3/5

 2. If (a – b) is 9 more than (c + d) and (a + b) is 3 less than (c – d), then (a – c) is:

a. 6 b. 2 c. 3 d. None of these

 3. The value of  1 + [1/(8 x 2)] + [1/(8 x 2²)] + [1/(8 x 2³)] is :

a. 71/64 b. 1/16 c. ¼ d. None of these

 4. If  a = b = c, then the value of  a + b + c  is : (SYNTEL)

        2     3    5                                 c

a. 1/√5 b. √2 c. 2 d. 5

 5. When simplified, the product (1 – 1/2) (1 – 1/3) (1 – 1/4)…… (1 – 1/n) gives:

a. 1/n b. 2/n c. 2(n – 1)/n d. 2/n(n + 1)

 6. The value of  (x – y)³ + (y - z)³ + (z – x)³ is equal to : (TCS)

                          12 (x – y) (y – z) (z – x)

a. 0 b. 1/12 c. 1 d. 1/4

7. The value of 99 95  x 99 is:

99

a. 9989 b. 9896 c. 9890 d. 9809

 8. (12)³ + (6)³ = 18

    (12)² + 6² - ?

a. 6 b. 18 c. 72 d. None of these

 9. If a \* b = 2a – 3b + ab, then 5 \* 7 + 7 \* 5 is equal to:

a. 33       b. 36 c. 34 d. 38

 10. If  x = a/(a – 1) and 1/(a – 1), then:

a. x is equal to y b. x is equal to y only if a < 1

c. x is greater than y d. x is greater than y only if a < 1

e. y is greater than x only if a < 1

 11. If  a, b, c are integers; a² + b² = 45 and b² + c² = 40, then the values of a, b and c respectively are : (SYNTEL)

a. 2, 6, 3 b. 3, 2, 6 c. 5, 4, 3 d. None of these

 12. A girl was asked to multiply a certain number by 43. She multiplied it by 34 and got his answer less than  the correct one by 1206. Find the number to be multiplied.

a. 130 b. 132 c. 134 d. 136

 13. In a garden, there are 12 rows and 14 columns of mango trees. The distance between two trees is 2  metres and a distance of one metre is left from all sides of the boundary of the garden. The length of the garden is (TCS)

a. 20m b. 22m c. 24m d. 26m

 14. In a group of donkeys and pigs, the numbers of legs are 16 more than twice the number of heads. The number of donkeys is (TCS)

 a. 6  b. 8  c. 11  d. 13

 15. The value of 40 coins of 10 p and 20 p is Rs. 5.50. The number of 20 p coins is (SYNTEL, TCS)

a. 15 b. 25 c. 30   d. 35

 16. An enterprising businessman earns an income of Re 1 on the first day of his business. On every subsequent day, he earns an income which is just double of that made on the previous day. On the 20thday of business, he earns an income of:

 a. Rs 219  b. Rs 220  c. Rs 20²  d. Rs 20

17. In an examination, a student scores 4 marks for every correct answer and loses 1mark for every wrong answer. If he attempts all 90 questions and secures 140 marks, the number of questions he attempts correctly, is:

 a. 35  b. 40  c. 42  d. 46