SECTION – II

Q. 4 Solve any 6 [12]

i) If b2 = ac, prove that log a + log c = 2 log b. V

ii) If N = 100 , (A) = 35 , (B) = 68 , (AB) = 22.Find ( ) , (A)

iii) If log 2 = 0.3010, find the number of digits in 2^{64}.

iv) Evaluate ——

V) Examine whether the following sets of data are consistent.

N = 1000, (A) = 525 , (B) = 109 , (C) = 28, (AB) = 34, (BC) = 13, (AC) = 14, (ABC) = 6.

vi) Given N = 100, (A) = 69, (B) = 49, (C) = 53, (AB) = 33, (BC) = 21, show that (ABC) 5

vii) Given ð = 3.142 , r = 2.307, h = 8.5. Find the value of V, if V = ð r^2 h.

viii) Prove that ——— + ———+ ——— = 2

Q.2 Solve any 3 [9]

i) If log x + log x + log x = —, find x .

ii)In a group of 100 employees in a firm , there were 80 males, The number of married employees was 60 among whom 30 were males. Examine whether the given data is consistent or not.

iii) If ——— = ——— = ———and $a^3 b^2 c = 1$. Find the value of k .

iv) From the following set of class frequencies, find ( ).
N = 1000 , (A) = 205 , (B) = 115 , (C) = 100, (AB) = 21, (A C) = 18 , (BC) = 17, (ABC) = 12

Q.3 Solve any 1 [4]

i) Show that if A and B are independent attributes , then and are also independent attributes.

ii) Find the value of $\sqrt{(35.285)^2 + (23.45)^3}$