

SECTION-B

2. How many odd numbers greater than 80000 can be formed using the digits 2, 3, 4, 5 and 8 if each digit is used only once in a number? (10)
3. Find a , b and n in the expansion of $(a + b)_n$ if the first three terms of the expansion are 729, 7290 and 30375 respectively. (10)
4. What sum will become Rs. 6,690 after three years and Rs. 10,035 after six years on compound interest? (10)
5. In a class of 25 students, 12 students have taken Economics, 8 have taken Economics but not Math. Find the number of students who have taken Economics and Math and those who have taken Math but not Economics. (10)
6. Find the values of X, Y, and Z using Crammer's Rule from the following :
- $$3x + 2y - z = 4$$
- $$-x - y + 3z = 6$$
- $$5x - 3y + z = 2 \quad (10)$$
7. a) Find dy/dx when
- $$Y = (ax^3 + bx^2 + cx + d)^{-7/3} \quad (4)$$
- b) Find maximum and minimum values of the function
- $$Y = 2x^3 - 9x^2 + 12x + 6 \quad (6)$$