Management Programme

ASSIGNMENT
FIRST SEMESTER
(January to June)
2021

MS - 08: Quantitative Analysis for Managerial Applications

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THE PEOPLE'S
UNIVERSITY

School of Management Studies
INDIRA GANDHI NATIONAL OPEN UNIVERSITY
MAIDAN GARHI, NEW DELHI – 110 068

Course Code	:	**MS -08**
Course Title	:	**Quantitative Analysis for Managerial Applications**
Assignment No.	:	**MS-08/TMA/SEM-I/2021**
Coverage	:	**All Blocks**

Note : Attempt all the questions and submit to the coordinator of your study centre on or before 30th April, 2021.

1. The total cost, C(x) associated with producing and marketing x units of an item is given by

    $$C(x) = 0.005x^3 - 0.02x^2 - 30x + 3000$$

    Find   (i) Total cost when output is 4 units.

    (ii) Average cost of output of 10 units.

    (iii) Marginal cost when output is 3 units.

2. "The success of collecting data through a questionnaire depends mainly on how skillfully and imaginatively the questionnaire has been designed". Explain some important points to be kept in mind while drafting a questionnaire.

3. In a society of 5000 people, 1200 are above 30 years of age and 3000 are female. Out of the 1200 who are above 30, 200 are female. Suppose after a person is chosen you are told that the person is a female. What is the probability that she is above 30?

4. A sample size 25 is picked up at random from a population which is normally distributed with a mean of 100 and variance of 36. Calculate:-

    (a) $P_r\{\overline{X} \leq 99\}$

    (b) $P_r\{98 \leq \overline{X} \leq 100\}$

5. "Economic or business oriented time series are made up of various components". What are those components and also explain the relationship between them.