MS-08

Management Programme

ASSIGNMENT
SECOND SEMESTER
2014

MS-08: Quantitative Analysis for Managerial Applications

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

ASSIGNMENT

Course Code	**:**	**MS - 8**
Course Title	**:**	**Quantitative Analysis for Managerial Applications**
Assignment Code	**:**	**MS-8/SEM - II /2014**
Coverage	**:**	**All Blocks**

Note: Attempt all the questions and submit this assignment on or before 31st October, 2014 to the coordinator of your study centre.

1. What are quartiles, deciles, and percentiles? State the general equation of computing the i^{th} quartile, j^{th} decile, and k^{th} percentile.

2. In a railway reservation office, two clerks are engaged in checking reservation forms. On an average, the first clerk (A_1) checks 55 per cent of the forms, while the second (A_2) checks the remaining. While A_1 has an error rate of 0.03 that of A_2 is 0.02. A reservation form is selected at random from the total number of forms checked during a day and is discovered to have an error. Find the probabilities that it was checked by A_1, and A_2, respectively.

3. The weekly wages of 2000 workmen are normally distributed with mean wage of Rs 70 and wage standard deviation of Rs 5. Estimate the number of workers whose weekly wage are
   a. between Rs 70 and Rs 71
   b. between Rs 69 and Rs 73
   c. more than Rs 72, and
   d. less than Rs 65

4. A research organization claims that the monthly wages of industrial workers in district X exceeds that of those in district Y by more than Rs 150. Two different samples drawn independently from the two district yielded the following results:

   District X: $\bar{x}_1 = 648$, $s_1^2 = 120$, and $n_1 = 100$

   District Y: $\bar{x}_2 = 495$, $s_2^2 = 140$, and $n_2 = 90$

   Verify at 0.05 level of significance whether the sample results support the claim of the organization.

5. What do you mean by decomposition of a time series? State the essential characteristics of the additive and multiplicative models of time series analysis.