MMS/D-15
BUSINESS STATISTICS
PAPER-CP-102

Time Allowed: 3 Hours   Maximum Marks: 70

Note: Attempt any eight questions from Part-A of 5 marks each and three questions of 10 mark each from Part B.

PART-A

1. Explain the step involved in the construction of X- chart.
2. What do you understand by Control chart for fraction defectives? Explain its construction.
3. Distinguish between Process control and Product control. How are they achieved?
4. Explain and illustrate one tail and two tails Test.
5. A card is drawn from a well shuffled pack of Playing card. Find the probability that it is either a Diamond or a King.
6. What do you mean by Conditional probability? Also explain Baye's theorem.
7. If the probability of a defective bolt is 1/10, find (i) the mean (ii) Variance; and moment coefficient of skewness for the distribution of defective bolts in a total of 400.
8. Define a Poisson distribution. How is it different from Normal distribution?
9. Explain sampling errors, non-sampling errors and type one error.
10. Describe the applications of t-test, F-test and Z-test.

PART-B

11   What is the need of Sampling? Describe merits and limitations of various sampling techniques. Also explain method of drawing a sample with example when Simple random sampling technique is used.
12   Illustrate the following tests: (a) Chi-square tests (b) Kruskal-Wall's test (c) Sign test.
13   In a big city 325 men out of 600 men were Smokers. Does this information support the conclusion that the majority of men in this city are smokers? Solve by showing all the steps clearly involved in the test of Hypothesis.
14   Fit a Binomial distribution to the following data ; x ; 0   1   2   3   4
     y ; 28   62   46   10   4
15   The Past records of a factory using Quality control methods show that on the Average 4 articles produced are defective out of a batch of 100. What is the maximum number of defective articles likely to be encountered in the batch of 100, when the production process is in a state of control?

-

B