Roll No. | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 08

M.Sc.(Garment Manufacturing Technology) (2015 to 2017) (Sem.–1)

STATISTICS FOR APPAREL MANUFACTURING

Subject Code : MSc.GMT/FMM/STAT-104

Paper ID : [A2164]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. Attempt FIVE questions.
2. One from each unit.
3. All questions carry equal marks.

UNIT-I

Q1 An E-commerce company is trying to assess its efficiency in terms of its order turn over time measured as days spent between receipt and delivery of an order. The quality control manager comes out with the following data for deliveries made by the company :

6	12	8	10	11	4	7	11	13	11
14	10	9	14	10	15	14	7	19	6

Construct a frequency distribution using intervals of 3 days. Also construct both the Ogives for the data.

Q2 a) What do you understand by dispersion of data? Why is standard deviation the most widely used measure of dispersion?

b) Explain the relative merits and demerits of mean, mode, and median and also express the empirical relationship between them.

UNIT-II

Q3 Describe the assumptions behind linear regression analysis. Also define and interpret coefficient of determination.

Q4 A drug company that supplies hospitals with premeasured doses of certain chemicals uses different machines for medications requiring different dosages. One machine designed to produce 60 ml has a mean dose of 60 ml and standard deviation of 3 ml. Another machine produces premeasured does of 100 ml and has a standard deviation of 4.25 ml. Which machine has better accuracy?

UNIT-III

Q5 A fair coin is tossed 5 times. Find the probability that a head appears :

a) Exactly three times.

b) At least two times.

c) At the most two times.

Q6 A cosmetics manufacturing company is in the process of introducing a new line of face creams for ladies. The company intends to carry out a test marketing activity before a full scale launch of the new creams. Estimate the sample size needed to estimate the true proportion of customers satisfied with the new cream within ±0.03 at 95% confidence level. Assume you have no strong feelings about what the true proportion is.

UNIT-IV

Q7 A manufacturer of women's clothing believes that its brand is carried in 20% of women's clothing stores. He sampled 85 stores and found 15% of stores carrying his brand. At 1% level of significance, should he change his belief?

Q8 Briefly explain the following :

a) Type I error and Type II error.

b) Level of significance.