17HS017 Mathematical Expectation and Probability Distributions Lab

COURSE DESCRIPTION AND OBJECTIVES

Learn and be able to apply the properties of mathematical expectation and how it will be used to find the characteristics of the given data. To learn different alternative ways of obtaining the characteristics of data and to find the characteristics of the standard distributions in discrete and continuous random variables

COURSE OUTCOMES

After the completion of the course, the student will be able to achieve the following outcomes:

COs	**Outcomes**
1	Able to apply mathematical expectation in real time situations
2	Obtain Population constants for different distributions
3	Apply different methods to find the population constants for a given data
4	Can find the characteristics of the standard populations
5	Compare the different alternative methods in finding the characteristics

SKILLS

- ✓ Choose appropriate method to find the characteristics of the data
- ✓ Apply an appropriate method for industrial applications
- ✓ Fit appropriate probability distribution to the given data

Conduct the following

1. Fitting of Binomial Distribution – Recurrence relation method.

2. Fitting of Poisson Distribution - Recurrence relation method.

3. Fitting of Negative Binomial Distribution.

4. Fitting of Geometric Distribution.

5. Fitting of Normal Distribution - Areas methods.

6. Fitting of Normal Distribution - Ordinates methods.

MS-Excel methods for the above Serial Numbers 1 and 2

Text Books:

1. V.K.Kapoor and S.C.Gupta: Fundamentals of Mathematical Statistics, Sultan Chand & Sons, New Delhi.