Statistics Practical 1
[CORE COURSE]

Semester I	Credits: 1.5	Subject Code: BSP12011	Lectures: 40

Course outcomes:
At the end of this course, the learner will be able to: • Tabulate and make frequency distribution of the given data. • To use various graphical and diagrammatic techniques and interpret. • To compute various measures of central tendency, dispersion, skewness and kurtosis. • To fit the Binomial and Poisson distributions. • To compute the measures of attributes. • The process of collection of data, its condensation and representation for real life data. • Study free statistical softwares and use them for data analysis in project.

Sr. No.	Title of the practical
1	Tabulation and construction of frequency distribution. (Use of at least two data sets more than 50 observations- each for constructing frequency distribution)
2	Diagrammatic and graphical representation using EXCEL and data interpretation. (problems on the basis of SET and NET examination in Paper I to be taken)
3	Summary statistics for ungrouped data and comparison for consistency using EXCEL.
4	Summary statistics for grouped frequency distribution. (Problems based on central tendency, dispersion, measures of skewness: Karl Pearson's and Quartile measure to be covered)
5	Measure of Skewness and kurtosis based on moments.
6	Fitting of Binomial distribution and computation of expected frequencies. (Use the observed and expected frequencies for the next semester χ^2 test)
7	Fitting of Poisson distribution and computation of expected frequencies. (Use the observed and expected frequencies for the next semester χ^2 for test.) (Give one data set for fitting both Poisson and Binomial distributions.)
8	Measure of attributes. (Two attributes only)
9	Study of free statistical softwares and writing a report on it. (individual activity)
10	Project (Part-I) -Data collection, its condensation and representation.

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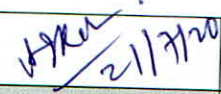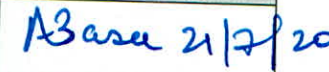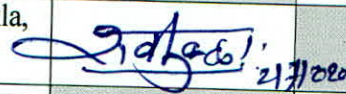
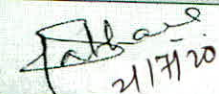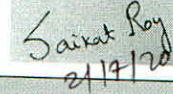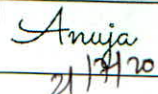**Recommended Text Books:**

- Gupta S. C.and Kapoor V. K. 1987, *Fundamentals of Applied Statistics (3rd Edition)* S. Chand and Sons, New Delhi.
- Kulkarni M.B., GhatpandeS.B.,Gore S.D. 1999, *Common Statistical Tests*, Satyajeet Prakashan, Pune
- Kulkarni M.B., Ghatpande S.B. 2007, *Introduction to Discrete Probability and Probability Distributions* SIPF Academy
- Sarma K.V.S. 2001 *Statistics Made Simple. Do it Yourself on P.C.s* Prentice Hall.

Reference Books:

- Agarwal B. L., *Programmed Statistics*, New Age International Publishers.
- Freund J.E., *Modern Elementary Statistics*, ,Pearson Publication, 2005.
- Ghatpande S.B., Gore S.D., *Common Statistical Tests Kulkarni M.B.*, Satyajeet Prakashan, 1999.
- Law A. M. and Kelton W.D., *Simulation Modeling and Analysis*, Tata McGrawHill, 2007.
- Medhi J., *Statistical Methods (An Introductory Text)*, New Age International 1992.
- Mukhopadhyay P., *Mathematical Statistics (3rdEdition)*, Books And Allied (P), Ltd., 2015.
- Ross Sheldon, *A First course in Probability*, Pearson EducationInc.
- Trivedi K.S., *Probability, Statistics, Design of Experiments and Queuing Theory with Applications of Computer Science*, Prentice Hall of India, New Delhi, 2001.

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