CLASS: XI

SUBJECT : STATISTICS (STAT)

COURSE CODE: PRACTICAL

FULL MARKS: 30 **CONTACT HOURS: 80**

PROBLEMS FOR PRACTICAL EXAMINATION: 18 (5×2+4×2)

LABORATORY NOTE BOOK : 04, PROJECT WORKS : 05, VIVA-VOCE : 03

List of Problem Sets :

1. Tabular Presentation of Data, Scrutiny of Data
2. Diagrammatic Representation of Data (Non-Frequency Type)
3. Construction of Frequency Distribution and Graphical Representation of them (Univariate Data only, both Discrete and Continuous Variables)
4. Calculations Relating to Measures of Central Tendency (Problems involving Open Ended Classes, Missing Frequencies, Pooling of Two Sets of Data, Checking Empirical Relations, Finding Median Graphically using Ogives, Finding Mode using Histogram, Checking the Correctness of the Measures etc.)
5. Calculations Relating to Measures of Dispersion (Problems involving Open Ended Classes, Missing Frequencies, Pooling of Two Sets of Data, Step Deviation Methods using shift of Origin and/or Change of Scale, Checking the correctness of the Measures etc.)
6. Calculations Relating to Moments and Measures of Skewness and Kurtosis

   (Comment on the Nature of Frequency Distribution, Verification of the Inequalities involving b_1 and b_2 is desirable)
7. Problems involving Polynomial, Δ-Operator, Finite Difference Table etc.
8. Calculations Relating to Index Numbers and their tests
9. Calculations Relating to Mortality Rates and Fertility Rates
10. **Project Works:** It will be based on Descriptive Statistics.

    Here, we propose some **mini-projects** :

    (a) Prepare a questionnaire for collecting data on age-sex composition of different families of the locality of a student.

    (b) Collect data on age, family size, place of residence (Urban/Rural) and religion of all the students of your class or other class. Construct frequency distribution of all the variables and represent them by suitable diagrams.

    (c) Collect data on height and weight of all the students of your class or other class. Construct frequency distribution of all the variables and represent them by suitable diagrams.

    (d) Collect the maximum daily temperature (℃) and minimum daily temperature (℃) of your city from weather report for consecutive 30 days. Then compare these two distributions using suitable diagrams.

    (e) Collect data on the percentage of marks obtained in the last public examination of all the students of your class and present the data using suitable diagrams.

    (f) Collect data on height/weight of a group of students. Calculate the different measures of Central Tendency. Comment on the nature of data (skewness) based on the result you obtained.