Bachelor's Degree Programme
(BDP)

ASSIGNMENT

Course Code: EEC-13
Title of Course: Elementary Statistical Methods and Survey Techniques

2023-24

School of Social Sciences
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110 068

EEC-13
ELEMENTARY STATISTICAL METHODS AND SURVEY TECHNIQUES
2023-24

Dear Student,

As explained in the Programme Guide for BDP, you will have to do one assignment for this elective course in Economics (EEC -13). This is a Tutor Marked Assignment (TMA) and carries 100 marks.

It is important that you write answers to all the questions in your own words. The TMA is designed to enable you to answer different categories of questions. Here evaluation is made keeping in view your ability to present your answer in a systematic, precise, and coherent manner.

The assignment is divided into three sections. Remember that all questions are compulsory. Section A comprises two long answer questions of 20 marks each. Section B comprises four medium answer questions of 10 marks each while in Section C you have to answer two questions of 15 marks each.

Submission

Completed assignments should be submitted to the **Coordinator of your Study Centre** by:

For students appearing in December 2023 Term End Exam: **31.10.2023**
For students appearing in June 2024 Term End Exam: **30.04.2024**

EEC-13: ELEMENTARY STATISTICAL METHODS AND SURVEY TECHNIQUES

Answer all the questions.

A.   Long Answer Questions   **2 x 20 = 40 marks**

1) (a)   Calculate mean, median and mode from the following data.

Class Interval	Frequency
3-4	3
4-5	7
5-6	22
6-7	60
7-8	85
8-9	32
9-10	8

   (b)   Calculate the coefficient of variation from the data given above.

2.   Bring out the distinction between sample survey and census. Describe the steps you would follow in collecting data though a sample survey. Prepare a small questionnaire for collection of income and expenditure levels of households.

B.   Medium Answer Questions   **3 x 10= 30 marks**

3) a) The probability that Rajesh will score more than 90 marks in class test is 0.75. What is the probability that Rajesh will secure more than 90 marks in three out of four class tests?

   b) Bring out the major properties of binomial distribution. Mention certain important uses of this distribution.

4)   a) Fit a straight line $(Y = a + bX)$ to the following data. Compare the estimated values of the dependent variable with its actual values.

X	5	8	10	12	13	15	17	16
Y	8	12	14	10	13	16	14	17

   b) Define correlation coefficient. What are its properties?

5) What is a life table? Explain its uses and limitations.

C. Short Answer Questions   **2 x 15 = 30 marks**

6) Write short notes on the following:
    (a) Bayes' theorem of probability
    (b) Age specific birth and death rates

    (c) Measurement of skewness

7) Differentiate between the following:
    (a) Simple random sampling and Stratified random sampling
    (b) Type I and Type II errors in hypothesis testing

    (c) Estimator and Estimate