EEC-13

Bachelor's Degree Programme (BDP)

ASSIGNMENT

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

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

EEC-13
ELEMENTARY STATISTICAL METHODS AND SURVEY TECHNIQUES
2021-22

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 C**oordinator of your Study Centre** by:

For students appearing in June 2022 Term End Exam:	**30.04.2022**
For students appearing in December 2022 Term End Exam:	**31.10.2022**

EEC-13: ELEMENTARY STATISTICAL METHODS AND SURVEY TECHNIQUES

Programme Code: BDP
Course Code: EEC-13
Assignment Code: EEC-13/AST/TMA/2021-22
Maximum Marks: 100

Answer all the questions.

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

1. (a) What is a standard normal variable? What are its properties?

   (b) Find out the area under the standard normal curve for each of the following (use z-table). Sketch each one of them.

   (i) between z = 0 and z = 0.78

   (ii) between z = – 0.56 and z = 0

   (iii) between z = – 0.43 and z = 0.78

   (iv) between z = 0.44 and z = 1.50

   (v) to the right of z = – 1.33.

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

7) Write short notes on the following:

(a) Construction of consumer price index
(b) Age specific birth and death rates
(c) Sampling distribution

8) Differentiate between the following:

(a) Stratified random sampling and systematic random sampling
(b) Type I and Type II errors in hypothesis testing
(c) Statistic and parameter