2024
Skill Enhancement Course
STATISTICS FOR DATA ANALYSIS USING SOFTWARE PACKAGE
Paper Code : SEC0301203
Time : 1 Hour 30 Minutes
Full Marks : 30

(The figures in the margin indicate the full marks for the questions)

1. Answer the following questions as directed: 1×5=5
   a) Write one limitation of sampling.
   b) What is Census?
   c) Define level of significance.
   d) Simple random sampling is done in heterogeneous population. (State True / False)
   e) Large sample theory is based on _____ Distribution. (Fill in the blanks)

2. Answer the following. (***any five***) : 2×5=10
   a) Define sampling and non-sampling errors.
   b) Define population from the statistical point of view. What is sample?
   c) Define Scatter diagram.
   d) State simple random sampling with replacement and without replacement.

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e) Give the idea of Stratified random sampling with an example.

f) What are type-I and type-II error.

g) Write a short note on classification and tabulation of data.

h) Give the model for simple linear regression and state its terms.

i) Briefly describe the Chi-square test used in testing of hypothesis.

j) State the difference between type-I error and P value.

3. Answer the following (***any three***) : 5×3=15

a) Find the variance and sample mean under SRSWR and SRSWOR.

b) Prove that Karl Pearson's coefficient of correlation lies between -1 and 1.

c) Define Sampling distribution. Write the standard error for differences of means.

d) Write five differences between complete enumeration and sampling.

e) What is large sample theory? Write two small sample tests.

f) What are the merits and demerits of diagrammatic representation of data?

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