

U.G. 3rd Semester Examination-2025**STATISTICS****[Skill Enhancement Course (SEC)]****Course Code : ST-SEC-T-3****(Research Methodology)****[NEP-2020]**

Full Marks : 45 (35+10)

Time : $1\frac{1}{2}$ Hours*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.**Notations and symbols have their usual meaning.*

1. Answer any **five** questions: $1 \times 5 = 5$
- a) Define research.
 - b) What is unit of analysis?
 - c) State one characteristic of a good research problem.
 - d) What is hypothesis testing?
 - e) What is coding of data?
 - f) What is a frequency table?
 - g) Define model validation.
 - h) What is proof-reading?

[Turn over]

2. Answer any **two** questions: $5 \times 2 = 10$
- a) Explain briefly the process of research.
 - b) Distinguish between qualitative and quantitative research.
 - c) Explain classification and tabulation of data with example.
 - d) Why is bivariate data analysis useful? Discuss some approaches of such analysis.
3. Answer any **two** questions: $10 \times 2 = 20$
- a) Discuss different types of research in detail with suitable examples.
 - b) Explain model building, model development and model validation in research.
 - c) Describe graphical representation of data and its importance in statistical data analysis.
 - d) Describe elaborately research problem as hypothesis testing problem.

[Internal Assessment: 10]
