S Y B Sc Biotech

N.B. All questions are compulsory
Numbers to the right indicate marks
Draw neat labeled diagram wherever necessary
Duration: 2.5 hours **Total marks: 60**

Q.1 Answer **any four** of the following **16**

a What is the meaning of research? Discuss the objectives of research.

b Write a short note on descriptive and analytical research.

c What is sample design? Add a note on any two types of sample designing.

d Elaborate on the analysis of research data.

e What are the features of a good research design?

f What are the different methods involved in collecting data for carrying out good research?

g Compare and contrast between Research methods and Research methodology.

h Elaborate on the need to prepare a research design.

Q.2 Answer **any four** of the following **16**

a With the help of a flow chart, discuss the research process in brief.

b Elaborate on the importance of extensive literature survey in research.

c What is primary data ? Discuss the observation method of data collection.

d What are the advantages and disadvantages of the interview method of primary data collection ?

e Give a detailed account of the major aspects of a questionnaire form.

f What are schedules ? How can one utilize schedules for data collection ?

g Write a short note on warranty cards and pantry audits as data collection methods.

h Discuss in brief - Case study method for secondary data collection.

Q.3 Answer **any four** of the following **16**

a Explain the meaning of interpretation.

b What is the need of appropriate interpretation?

c Elaborate on different steps in report writing.

d Write a short note on the layout of the research report.

e State how oral presentations can benefit the researcher.

f. Give at least two examples of softwares used in Post-data analysis and explain their significance.

g What are the different types of reports?

h Explain the mechanics of the research report.

Q.4 Answer **any six** of the following **12**

a. What are independent and dependent variables?

b. State any two factors observed by researchers in selecting a research problem.

c. State any two postulates of scientific method involved in research.

d. Name the two types of research approaches.

e. Name any two sources used for the collection of secondary data.

f. Give any two disadvantages of the telephonic interview method.

g. State any two points of distinction between a research paper and a review article.

h. Give any two examples of mechanical/ electronic devices used for data collection.

i. Explain the term citation.

j. What are the full forms of e.g. and et.al ?

k. What is the section 'summary' included at the end of the main text?

l. What is IMRaD pattern observed in publication?

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