



- Notes :
1. Answer **three** question from Section A and **three** question from Section B.
  2. Due credit will be given to neatness and adequate dimensions.
  3. Assume suitable data wherever necessary.
  4. Illustrate your answer necessary with the help of neat sketches.
  5. Use of pen Blue/Black ink/refill only for writing the answer book.

**SECTION – A**

1. a) Define research? Explain the types of research briefly. 7  
b) Explain the steps in formulating the research problem. 6
2. a) Discuss the need for multi-disciplinary approach in research. 7  
b) Explain conceptualization in research survey of literature. 6
3. a) What is the meaning and importance of hypothesis? Describe. 7  
b) What is simulation? List a few advantages and disadvantages of simulation. 6
4. a) Explain analog computer simulation in detail. 7  
b) What do you mean by system modeling? Write difference between continuous and discrete system. 6
5. a) Explain the meaning and significance of a Research design. 7  
b) Describe some of the important research design used in experimental research study. 7

**SECTION – B**

6. a) What are the major steps involved in the process of construction of schedule or questionnaire? 7  
b) How does the case study method differ from the survey method? 6
7. a) Write a brief note on the 'task of interpretation' in the context of research methodology. 7  
b) Describe in brief, the layout of a research report, covering all relevant points. 6
8. a) Explain the meaning and significance of the concept of "standard error" in sampling analysis. 7  
b) State the reasons why sampling is used in the context of research studies. 6
9. Write short notes on the following :  
i) Footnotes and Bibliography. 7  
ii) Technical report. 7
10. a) State the basic assumptions of the analysis of variance. 7  
b) Write short note on "coding in context of analysis of variance". 6

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