

M.Sc.(Computer Science)-II Third Semester Old  
**MSC23123-Paper-III : Research Methodology and Operational Techniques**

P. Pages : 2

Time : Three Hours



**GUG/W/18/2880**

Max. Marks : 80

- Notes :
1. All questions are compulsory and carry equal marks.
  2. Draw neat & labelled diagram and use supporting data wherever necessary.
  3. Avoid vague answers and write answers specific & related to question.

**1. Either**

- a) Differentiate between Primary Data and Secondary Data. **8**
- b) Explain Research design in detail. **8**

**OR**

- c) Write a note on- **8**
  - i) Mail survey.
  - ii) Personal Interview.
- d) Explain Questionnaire design in detail. **8**

**2. Either**

- a) What are the pre-writing consideration ? Explain. **8**
- b) Write a note on- **8**
  - i) System Random.
  - ii) Systematic Random.

**OR**

- c) What are the characteristics of good sample design? State different types of sample design. **8**
- d) Write a note on- **8**
  - i) Judgmental sampling Technique.
  - ii) Convenience sampling Technique.

**3. Either**

- a) Explain following- **8**
  - i) Testing of Mean
  - ii) Testing of differences between two means
- b) Explain Chi-square Test with an example. **8**

**OR**

- c) Define Hypothesis. Explain Null hypothesis in detail. 8
- d) Write a note on- 8
  - i) Type I error.
  - ii) Type II error.

**4. Either**

- a) Explain why Chi-square test as a Goodness of fit. 8
- b) Explain the concept of ANOVA Test in Latin square Design. 8

**OR**

- c) Explain in detail the Test of Goodness of fit. 8
- d) Write a note on Analysis of variance with its methods. 8

**5. Attempt all the questions.**

- a) Explain telephonic interview for data collection. 4
- b) Write criteria for sampling procedure. 4
- c) Explain the idea of Degree of freedom. 4
- d) Discuss the advantages of chi-square Test. 4

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