# PSCST11 - Paper-III : Research Methodology and Operational Techniques

P. Pages : 1

**GUG/W/22/11234**

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Time : Three Hours

Max. Marks : 80

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Notes :
1. All questions are compulsory and carry equal marks.
2. Draw neat and labelled diagrams wherever necessary.
3. Avoid vague answers and write answers relevant and specific to questions only.

**Either:**

**1.** a) Define research. Briefly explain research methodology. **8**

b) Write a note on. **8**
   i) Six P's of research      ii) Mail survey.

**OR**

c) Explain Questionnaire design in detail. **8**

d) Discuss the different problems encountered in research process. **8**

**Either:**

**2.** a) Give the criteria for sampling procedure in detail. **8**

b) What are the pre-writing consideration? Explain. **8**

**OR**

c) Write the steps for sampling procedure. Explain the characteristics of Good sampling Design. **8**

d) Write a note on **8**
   i) Judgmental sampling Technique    ii) Convenience sampling Techniques.

**Either:**

**3.** a) Explain type-I and type-II errors with suitable example. **8**

b) Define Hypothesis. Explain null hypothesis in detail. **8**

**OR**

c) Explain Chi-square Test with an example. **8**

d) Write note on testing of equality of variances. **8**

**Either:**

**4.** a) What is ANOVA? Explain in detail. **8**

b) Explain why Chi-square test as a Goodness of fit. **8**

**OR**

c) Elaborate Chi-square test as a test of goodness of fit and as a test of independence. **8**

d) Write a note on Analysis of variance with its methods. **8**

**5.** Attempt all the questions.

a) What are the objectives of research? **4**

b) Explain system Random. **4**

c) Explain the idea of Degree of freedom. **4**

d) What are the applications of Yates's correction. **4**

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