

Time: 3 hrs.

Marks:80

**NOTE:**

- I.** Question No. 1 is Compulsory
- II.** Attempt any **THREE** question from 2 to 6
- III.** **Group Question** must be **answered together**
- IV.** Assume any **additional** information but **justify the same**

- 1 A Write short note on:  
a. i. Construct      ii. Concept      iii. Law      iv. Principle      v. Postulate      **10**
- B a. Distinguish between Research methods and Research methodology.      **05**  
b. Describe Code of ethics?      **05**
- 2 A Discuss objectives and Characteristics of Research.      **10**
- B A company has stated that their straw machine makes straws that are 4 mm diameter. A worker believes the machine no longer makes straws of this size and samples 100 straws to perform a hypothesis test with 99% confidence. Write Null and alternative hypothesis for given situation and calculate level of significance?      **10**
- 3 A Enumerate the different methods of collecting data. Explain briefly.      **10**
- B Calculate Mean, Median and Mode for the following data-      **10**
- |        |       |      |       |        |
|--------|-------|------|-------|--------|
| Mamata | Sudha | Lata | Jyoti | Pushpa |
| 77     | 73    | 69   | 64    | 52     |
- 4 A a. What is measures of asymmetry?      **05**  
b. Define Skewness?      **05**
- B What is Chi-square test? Explain its significance in statistical analysis.      **10**
- 5 A What is a literature review in a research study?      **10**
- B Discuss different Qualitative and Quantitative Approaches of research      **10**
- 6 A Discuss different types of Sample Design.      **10**
- B Describe characteristics of research and research objectives.      **10**

\*\*\*\*\* ALL THE BEST \*\*\*\*\*