

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:
 i. Hypothesis ii. Thesis iii. Law iv. Construct v. Postulate **10**
- B**
 a. What do you mean by research? Explain its significance in modern times. **05**
 b. Mention the criteria of good research. **05**
- 2 A** “Empirical research in India in particular creates so many problems for the researchers”. State the **10**
 problems that are usually faced by such researchers.
- B** What is t-test? Explain its significance in statistical analysis. **10**
- 3 A** What is a literature review in a research study? **10**
- B** Find out two types of mean deviation for the following data- **10**
 4, 7, 10, 11, 13, 5, 8, 12
- 4 A**
 a. Doctors believe that the average teen sleeps on average no longer than 10 hours per day. A researcher believes that teens on average sleep longer. Write Null and alternative hypothesis for given situation and calculate level of significance? **05**
 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? **05**
- B** Why interpretation is necessary? Discuss two major aspects of it. **10**
- 5 A** Mention various measures of central tendency with examples. **10**
- B** Discuss different steps followed in writing reports. **10**
- 6 A** Which are various points to be kept in mind related to ethics in our research? **10**
B Explain the research process with a flow chart. **10**
