

**Indian Statistical Institute**  
**Documentation Research and Training Centre**  
**MS(LIS) 2018-20, Semester II**  
**Paper 8: Elements of Statistics and Research Methodology**  
**Date: 26/02/2019**

**Time:** 11:30 – 13:00

**Maximum Marks:** 40

**Question paper has three parts. All the questions are compulsory.**

**Part A**

1. "Student's visit to the library is influenced by the availability of the Internet". Identify the variables in the given problem. (1)
2. Identify the type of research: (1X4)
  - a. The research conducted to study consumer behaviour in Gopalan Arcade.
  - b. A study of mathematician turned librarian.
  - c. Study on the health and attractiveness of well rested and sleep deprived people.
  - d. Use of web resources in Central Universities of India.
3. Identify the sampling technique used: (1X5)
  - a. 20 B.Math, 6 M.Math, 4 MS(QMS), 6 MS(LIS) and 7 Research Scholars are randomly selected from 98 B.Math, 23 M.Math, 16 MS(QMS), 24 MS(LIS) and 35 Research Scholars from ISI Bangalore.
  - b. Traffic police stop every 10th vehicle on the road to check the Vehicle Insurance and PUC.
  - c. Calling randomly generated telephone numbers, a study asked 855 Indian citizens regarding their job satisfaction.
  - d. A pregnancy study in Bangalore randomly selected 25 communities from the metropolitan area then interviewed all pregnant women in these communities.
  - e. A politician asked his neighbour's views on a controversial issue.

### **Part B**

4. Define the research problem. Write down the workflow of the inductive and deductive hypothesis. (1+1)
5. State True or False with Justification: (1+1)X4
  - a. Validity is more critical to measurement than reliability.
  - b. Stability and equivalence aspects of reliability essentially mean the same thing.
  - c. Content validity is the most difficult type of validity to determine.
  - d. Reliable measurement is necessarily a valid measurement.

### **Part C**

6. Attempt any two questions. (10X2)
  - a. Explain experimental research. Compare it with the Historical and Survey research methods.
  - b. Define Research Design. Explain its need and purpose. Enumerate the characteristics of good research design.
  - c. Explain and compare different data collection methods of the research.