

Indian Statistical Institute
Documentation Research and Training Centre
M.S. in Library and Information Science
Paper-8, Elements of Statistics and Research Methodology
2nd Semester
Mid-Semester Examination 2016

Time: 1:30 Hours
Date: 24/02/2016

Marks: 50

Part- A

Answer any five of the following questions:

(5x5=25)

1. According to you what is a Research?
2. "A research scholar has to work as a judge and derive the truth and not as a pleader who is only eager to prove his case in favour of his plaintiff." Discuss the statement pointing out the objectives of research.
3. "Impact of weather on the use of the traditional (print) library". Identify and Explain the various parts of an Experiment from given problem.
4. Explain Sampling and its types with examples.
5. "Girls search more efficiently than boys when they are searching for information on a topic of personal interest". From the hypothesis identify IV & DV and suggest the best experimental design according to you.
6. "Children with IT literate parents are more confident in using computer". From the hypothesis identify IV, DV and Intervening Variables/Mediator Variable according to you.
7. "Performance is improved by practice". From the hypothesis identify IV, DV, Constants and Extraneous Independent Variables according to you.

PART – B (25 marks)

This part carries 27 Marks. Answer as many questions as you can but the maximum marks you can score is "25"

1. Classify each of the following as Nominal, Ordinal, Interval or Ratio data
 - a. The Time required to produce each tire in an assembly line (1)
 - b. The ranking of four machines in your plant after they have been designated as Excellent, Good, satisfactory and Poor (1)

- c. The Telephone area code of clients in India (1)
- d. The age of each of your employees (1)
- e. The response time of an emergency Unit (1)
- f. The dollar sales at the local pizza house each month (1)
- g. An employees id no. (1)

2. Suppose that a real estate broker wants to determine the median selling price of 10 houses listed at the following prices in ,000 \$:

67, 91, 95,105,116,122,148,167,189, and 5250

Show that the median is unaffected by the magnitude of extreme values (3)

3. The following lists the number of fatal accidents by scheduled commercial airline over a 17-year period according to the Air Transport association of America.Using these data, compute mean ,median,and mode.What is the value of the Third Quartile? Determine P11 and P35.

4,4,4,1,4,2,4,3,8,6,4,4,1,4,2,3,3 (6)

4. The following observations have been arranged in the ascending order. If the median of the data 29, 32, 48, 50, X, X +2, 72, 78, 84, 95 is 63 then the value of X is _____ (2)

5. The distribution of number of articles returned per day to the “Lost and Found Bureau” of a large office building for a period of 423 days are given below:

No. of articles per day	Frequency
0	169
1	134
2	74
3	32
4	11
5	2
6	0
7	1

- (a) Use the data above to draw a Histogram (2)
(b) Calculate (i) On an average how many articles are returned per day (ii) Median (iii) Mode and (iv) The third Quartile (4)
(c) Calculate the coefficient of skewness for the data (3)