

F-30A/2/10

11019/N J

M.Com (Semester I)  
MC 104: Research Methodology and Statistical Techniques

Time: 3 Hours

Max Marks: 70

Section A

Note: Attempt any two questions. Each question carries 10 marks.

- Q.1 Define Research. Discuss its utility in real life giving appropriate examples.  
Q.2 Explain in detail sources of collecting primary data. Also explain where primary data is mostly used.  
Q.3 Define Sampling design. How a researcher decides sampling frame. Elaborate non-probability methods of choosing sample.  
Q.4 (a) Define Hypothesis. Discuss sources of deriving hypothesis.  
(b) How can a researcher collect computer assisted information for secondary data? (5,5)

Section B

Note: Attempt any two questions. Each question carries 10 marks.

- Q.5 The result of a survey to know the educational attainment among 100 persons randomly selected in a locality are given below:

Can it be concluded that education depends on Gender?

	Education			
	Middle	High school	College	Total
Male:	10	15	25	50
Female:	25	10	15	50
Total:	35	25	40	100

- Q.6 The increase in weights due to two kinds of food are given below. Can it be said that food B is better than A?

Food A	49	53	51	52	47	50	52	53
Food B	52	55	52	53	50	54	54	53

- Q.7 Discuss important guidelines for effective report writing. Support with suitable example.  
Q.8 (a) The overall percentage of failures in a certain examination is 40. What is the probability that out of a group of 6 candidates at least 4 passes the examination?  
(b) The mean weight of 500 male students at a college is 151 lb. and the standard deviation is 15 lb. Assuming that the weights are normally distributed, find how many students weigh (i) between 119.5 and 155.5 lb, (ii) more than 160 lb.

(5,5)

Contd

**Section C**

**Note: Attempt any ten parts. Each part carries 3 marks.**

- Q.9
- i. Differentiate Longitudinal research and Cross sectional research
  - ii. What is the significance of research design in research process?
  - iii. Differentiate Open ended and Closed ended questions giving suitable examples
  - iv. What do you mean by Syndicated sources of data
  - v. Differentiate Sampling and Non-sampling errors
  - vi. Explain Systematic random sampling giving example
  - vii. Write any three applications of Poisson distribution
  - viii. What are important conditions/assumptions of parametric tests
  - ix. Write conditions for application of Chi square test
  - x. Explain Wald Wolfowitz test
  - xi. Differentiate Bibliography and References
  - xii. Write steps of Hypothesis testing

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