

CBCS SCHEME

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20MCA15

First Semester MCA Degree Examination, Feb./Mar. 2022 Research Methodology and IPR

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is the meaning of research? Explain the objectives of the research. (08 Marks)
- b. Distinguish between the Research methodology and scientific methods. (06 Marks)
- c. What are the criteria of a Good Research? (06 Marks)

OR

- 2 a. Explain the different types of Research in detail. (07 Marks)
- b. What is Sampling? Explain the different sample designs. (07 Marks)
- c. Explain the Research process with a neat diagram, in brief. (06 Marks)

Module-2

- 3 a. What is research problem? Define the main issues which should receive the attention of the researcher in formulating the research problem. Give suitable examples to elucidate your points. (08 Marks)
- b. "The task of defining the research problem often follows a sequential pattern." Explain. (06 Marks)
- c. What are the aspects you should follow and critically examine the literature reviewed? (06 Marks)

OR

- 4 a. Describe fully the techniques of defining the research problem. (08 Marks)
- b. Write short notes on :
 - (i) Experience Survey
 - (ii) Pilot Survey(04 Marks)
- c. How do you write the literature reviewed? Explain with an example. (08 Marks)

Module-3

- 5 a. Explain the meaning of the following in context of Research Design.
 - (i) Extraneous variables
 - (ii) Experimental and Control Groups
 - (iii) Latin Square Design
 - (iv) Simple factorial design(08 Marks)
- b. How would you differentiate between simple random sampling and complex random sampling designs? Explain clearly giving examples. (06 Marks)
- c. The following are the number of departmental stores in 10 cities : 35, 27, 24, 32, 42, 30, 34, 40, 29 and 38. If we want to select a sample of 15 stores using cities as clusters and selecting within clusters proportional to size, how many stores from each city should be chosen? (Use a starting point of 4). (06 Marks)

OR

- 6 a. What is research design? Discuss the basis of stratification to be employed in sampling public opinion on inflation. (06 Marks)

- b. Why probability sampling is preferred over non-probability sampling? Explain the procedure of selecting a simple random sample. (06 Marks)
- c. A certain population is divided into five strata so that $N_1 = 2000$, $N_2 = 2000$, $N_3 = 1800$, $N_4 = 1700$ and $N_5 = 2500$. Respective standard deviations are : $\sigma_1 = 1.6$, $\sigma_2 = 2.0$, $\sigma_3 = 4.4$, $\sigma_4 = 4.8$, $\sigma_5 = 6.0$ and further the expected sampling cost in the first two strata is Rs.4 per interview and in the remaining three strata the sampling cost is Rs. 6 per interview. How should a sample of size $n = 226$ be allocated to five strata if we adopt disproportionate sampling design considering (i) only the differences in stratum variability (ii) differences in stratum variability as well as the differences in stratum sampling costs. (08 Marks)

Module-4

- 7 a. Enumerate the different methods of collecting data. Which one is the most suitable for conducting enquiry regarding family welfare programme in India? Explain its merits and demerits. (08 Marks)
- b. How does the case study method differ from the survey method? Analyse the merits and limitations of case study method in sociological research. (06 Marks)
- c. "Interpretation is a fundamental component of research process." Explain. (06 Marks)

OR

- 8 a. Distinguish between an experiment and survey. Explain fully the survey method of research. (06 Marks)
- b. Explain the significance of a research report and narrate the various steps involved in writing such a report. (08 Marks)
- c. Explain the technique and importance of oral presentation of research findings. Is only oral presentation sufficient? If not, why? (06 Marks)

Module-5

- 9 a. What do you mean by Intellectual property? (06 Marks)
- b. Explain the different types of Intellectual property rights. (06 Marks)
- c. Summarize the Indian Patent Act 1970. (08 Marks)

OR

- 10 a. Differentiate between Trademark and Trade Secret with examples. (06 Marks)
- b. What is the rationale for protection of intellectual property? (06 Marks)
- c. Write short notes on:
 (i) Copy Right Act, 1957
 (ii) Trademark Act, 1999 (08 Marks)

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