

2056
B.Sc. Data Analytics (FYUP)
Fourth Semester
BDAD-401: Data Collection and Methodology Approaches

Time allowed: 3 Hours

Max. Marks: 90

NOTE: Attempt five questions in all, including Question No. 9 (Unit-V) which is compulsory and selecting one question from each Unit I - IV

x-x-x

Unit I

- I. (a) Define Data. Explain its role in analytics and decision making.
(b) What is Primary Data and how is it collected? Explain briefly.
(c) Differentiate between Longitudinal and Time Series Data. (6x3)
- II. (a) How and which type of data is generated by e-commerce and social media applications? Explain briefly.
(b) What are different data collection options available to the researcher?
(c) Explain the ethical issues involved in collecting data. (6x3)

Unit II

- III. (a) Define research design. Explain the need and features of a good research design.
(b) How are research designs classified? How is experimental research design different from descriptive and exploratory research design? (9, 9)
- IV. (a) Define Research Question and explain the techniques involved in formulating a Research Question.
(b) Explain the basic concept of Sampling. Explain the Probability Sampling with merits and demerits. (9, 9)

Unit III

- V. Differentiate the following: -
i. Open ended vs Closed-ended Questions
ii. Structured, Semi-structured and Unstructured Interviews
iii. Participant vs Non-Participant Observations (6x3)
- VI. (a) What is a Google Form? Explain different features of a Google Form. Write steps to create a Google Form for creating a Quiz having Multiple Choice Questions.
(b) What is ODK? What are its common question types? Explain with relevant examples (9, 9)

Unit IV

- VII. (a) What is the need for Data Cleaning? Explain different ways of cleaning the data.
(b) What is Data Dictionary? How is it created?
(c) What is Data Documentation? Explain its importance and necessary features. (6x3)
- VIII. (a) How is data structured in Spreadsheets? Explain briefly
(b) How is data exported to EXCEL? Write the steps.
(c) Write the steps to import data from JSON Format. (6x3)

Unit - V

- IX. Write short answers.
i. Define Research.
ii. What is Qualitative Research?
iii. What is the role of sensors IoT in data collection?
iv. What do you mean by Likert Scales?
v. Name the Non-Probability Sampling techniques.
vi. What is the importance of sample size in Sampling?
vii. Explain the features of a good Research Question.
viii. What is Kobo Toolbox?
ix. What is API? (9*2)

x-x-x