Code No: 5403BZ

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
M. Tech II Semester Examinations, June/July - 2019
ENGINEERING RESEARCH METHODOLOGY
(Common to SE, EPS, VLSISD, CN&IS, DS&CE, ES, VLSI&ES, CSE, HE, PE&ED, EPE)

Time: 3hrs   Max.Marks:75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

5 × 5 Marks = 25

1.a)	What is 'case study approach' in research?	[5]
b)	What are 'refereed research articles'?	[5]
c)	What are the major types of experimental research design?	[5]
d)	What are the main differences between parametric and non parametric tests?	[5]
e)	What is the purpose of writing synopsis of a research report? What are its essential contents?	[5]

PART - B

5 × 10 Marks = 50

2.a) What is meant by formulation of research problem?
b) What is the significance of research to area of the particular discipline in general and society in particular?   [5+5]

OR

3.a) How do you define a research problem? Give an example to illustrate your point.
b) What is ex post facto research? What are the circumstances for resorting to this approach?   [5+5]

4.a) What is the role of online journals in enabling faster and easier literature survey?
b) What is the stage of research work when literature survey should be undertaken? Why?   [5+5]

OR

5.a) 'One should exhaust all the sources of secondary information before moving to primary sources.' Would you agree with the statement? What are the advantages of secondary sources? What are its disadvantages?
b) What are the problems of finding primary sources of research information? What are the problems in collection of data from primary sources?   [5+5]

6.a) Why should research design be prepared?
b) What is diagnostic study? How does it differ from descriptive study?   [5+5]

OR

7.a) Explain the terms : experimental and control group. What is the purpose of introducing control group?
b) What is descriptive study research design? What are the conditions favouring such design?   [5+5]

8. The nicotine contents in milligrams of two samples of tobacco were found to be as follows:

Sample A	20	16	26	27	23	22	---
Sample B	27	33	42	35	32	34	38

Can it be said that two samples come from normal population having the same mean? Defend your answer. [10]

OR

9.a) What are the essential requisites of a good measure of central tendency?
 b) 'Sample should be a good representative of the population'. How would you make sample as representative as the population? [5+5]

10. Explain the significance of research report and narrate the various steps involved in writing research report. [10]

OR

11.a) What is the procedure for writing Reference/Bibliography section in the project report?
 b) What are the various types of graphical presentations employed in writing a report? [5+5]

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