2063
M.E. (Computer Science and Engineering)
Second Semester
CS-8202: Research Methodology

Time allowed: 3 Hours

Max. Marks: 50

NOTE: *Attempt* <u>*five*</u> *questions in all, including Question No. I which is compulsory and selecting two questions from each Unit.*

x-x-x

1	(i) Define the term population and sampling.	02
	(ii) What are various steps involved in sampling process?	02
	(iii) What are the points to be kept into mind while preparing an article to be submitted for the journal?	02
	(iv) What is the use of writing abstract and keywords for a research paper? What points to be kept into mind while writing both?	02
	(v) How primary and secondary sources are used in literature review?	02

Unit – I

2	List various electronics resources which can be part on any digital library. How search in these resources can be different from web search? Explain with an example of Literature search.	10
3	(i) What the difference is between stratified and cluster sampling?	02
	(ii) Given the following data: 102, 119, 350, 513, 60, 54, 61, 21, 30, 13, 10, 73, 102, 78, 87, 102 Calculate mode, median, mean and variance.	08

4 (i) Eight coins were tossed 256 times and the following results were obtained:

No. of Heads	0	1	2	3	4	5	6	7
Freq.	2	6	30	52	67	56	32	10

	Use chi-square test to find out whether the coins are biased or not? (Table value of chi-square for 8-degree of freedom at 5% level of significance is 15.507)	05
	(ii) Guests staying at PU Guest House were asked to rate quality of their accommodations as being **excellent**, **above average**, **average**, **below average**, or **poor**. Ratings provided by sample of 20 guests are: Below Average, Average, Above Average, Above Average, Above Average, Above Average, Above Average, Below Average, Below Average, Average, Poor, Poor, Above Average, Excellent, Above Average, Average, Above Average, Average, Above Average, Average Find out the frequency distribution and relative frequency of each parameter.	05

Unit – II

5	(i) How Google Docs are beneficial for collaborative writing as compare to desktop based word processing software like MS-Office?	05
	(ii) What do you understand by plagiarism? List some online tools to check the plagiarism.	05
6	(i) What is role of ArXive in research? How it is beneficial to a researcher?	05
	(ii) Write a note on statistical software tools.	05
7	What is the difference between research proposal and report? List main components of research proposal.	10