PRN: Course Code : PSS002

First Year M. Sc. End Semester Examination Winter 2023

Research Methodology

Day and Date: Thursday, 21/12/2023 Max Marks: 100

Time : 10.30am to 1.30PM Duration: 03 hrs

Instructions:

i) All questions are compulsory.

ii) Use of log table and scientific calculator is allowed

iii) Draw neat and systematic diagrams where ever necessary.

			Marks	Bloom's Level	CLO
Q.1		**Attempt the following**			
	a)	What is the purpose of scientific research? Explain criteria for the good research.	08	L2	CLO-1
	b)	Why literature survey is essential? Discuss different sources available for the literature survey.	08	L3	CLO-1
	c)	What is basic type of research? Give a brief account of basic research citing examples from science.	09	L3	CLO-2
		Or			
	d)	Discuss the terms h-index, impact factor and citation index of the research journal. How impact factor of a journal is calculated?	09	L3	CLO-1
Q.2		**Attempt the following**			
	a)	Discuss in detail the statement of research work proposed for your project.	08	L3	CLO-4
	b)	Write summary of the research article you have referred.	08	L3	CLO-4
	c)	Explain in detail how a research report can be organized?	09	L2	CLO-4
		Or			
	d)	Explain with examples how to write records in laboratory note book.	09	L2	CLO-4

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Q.3 **Attempt the following**

a)	Calculate the mean deviation from the median and the coefficient of mean deviation from the following data : Marks of the students : 86, 25, 87, 65, 53, 45, 12, 71, 35	08	L3	CLO3
b)	Determine the coefficient of correlation for the following data:	08	L2	CLO-3

X	12	16	20	24	28	32	36
Y	6	9	12	15	18	21	24

c)	Given below are the marks out of 25 of 5 students in mathematics test. Calculate the variance and S.D. of these observations : 10, 13, 17, 20, 23	09	L2	CLO-3

Or

d)	Find the Harmonic Mean for the integers from 15 to 24.	09	L2	CLO-3

Q.4 **Attempt the following**

a)	Explain the terms, Ethical and unethical research, Plagiarism and conflict of interest citing some examples. .	08	L2	CLO-1
b)	Discuss different steps involved in scientific research methodology.	08	L2	CLO-3
c)	Calculate the mean deviation from mean for the following data :	09	L3	CLO-4

X	12	9	6	18	10
f	7	3	8	1	2

Or

d)	Give a brief account of the difficulties encountered by researcher in India.	09	L2	CLO-4

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