PRN:		Course Code :	P01RM001

First Year **M. Sc.** Semester End Examination Summer 2024

Research Methodology

Day and Date: 29 MAY 2024, Wed Max Marks: **50**

Time : 10:30AM To 12:30PM Duration: **2** hrs

Instructions:

i) All questions are compulsory.

ii) Use of log table and scientific calculator is allowed

iii) Draw neat and systematic diagrams wherever necessary.

		Marks	Bloom's Level	CO
Q.1	**Attempt any two of the following**			
a)	What are the advantages of literature survey done in scientific research project? Discuss different sources for the literature survey.	5	L2	CO-1
b)	Discuss the objectives of the scientific research methodology. How to identify a research topic?	5	L3	CO-2
c)	What are the criteria for good research? Explain the qualities of a good researcher	5	L3	CO-2
Q.2	**Attempt any two of the following**			
a)	Discuss steps involved in technical report writing.	5	L3	CO-4
b)	Describe different stages involved in scientific research methodology.	5	L3	CO-4
c)	Explain in detail the statement of research work proposed for your project.	5	L2	CO-4
Q.3	**Attempt any two of the following**			
a)	Calculate the mean deviation from mean for the following data :	5	L2	CO3

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

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b) A die is rolled 30 times and the following distribution is obtained. Find the variance and standard deviation. 5 L2 CO-3

Score (x)	1	2	3	4	5	6
Frequency (f)	2	6	2	5	10	5

c) Calculate the correlation coefficient for the following data, 5 L2 CO-3

x	2	4	5	6	8	11
y	18	12	10	8	7	5

Q.4 **Attempt any two of the following**

a) 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, and 23. 5 L2 CO-1

b) Discuss ethics to be followed at different stages in scientific research. 5 L2 CO-3

c) Give a brief account of different processes of scientific research methodology. 5 L3 CO-4

Q.5 **Attempt any two of the following**

a) Write a brief comment on difficulties encountered by researchers in India. 5 L2 CO-4

b) Find the Harmonic Mean for the integers from 15 to 24. 5 L3 CO-4

c) Discuss the terms citations, h-index and i_{10} index as used in scientific research methodology. 5 L1 CO1

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