PRN:		Course Code :	PSS301

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

Research Methodology

Day and Date: 31 MAY 2024, Friday Max Marks: **100**

Time : 10:30AM To 01:30PM 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 wherever necessary.

		Marks	Bloom's Level	CO
Q.1	**Attempt the following**			
a)	What is scientific research methodology? Discuss fundamental research with relevant examples from science.	08	L2	CO-1
b)	Discuss the objectives of the scientific research methodology. How to identify a research topic?	08	L3	CO-2
c)	Why literature survey is essential? Write on sources of print media available for literature survey.	09	L3	CO-2
	Or			
d)	What are the criteria for good research? Explain the qualities of a good researcher	09	L3	CO-3
Q.2	**Attempt the following**			
a)	Discuss steps involved in technical report writing.	08	L3	CO-4
b)	Describe different stages involved in scientific research methodology.	08	L3	CO-4
c)	Explain in detail the statement of research work proposed for your project.	09	L2	CO-4
	Or			
d)	Write a note on online sources available for the literature survey of a scientific research problem.	09	L2	CO-4

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Q.3 **Attempt the following**

a) 1. Calculate the mean deviation and coefficient of M.D. for 8 the following data : **L3** **CO3**

Class	2-4	4-6	6-8	8-10
Frequency	3	4	2	1

b) A die is rolled 30 times and the following distribution is obtained. Find the variance and standard deviation. 08 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. 09 L2 CO-3

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

Or

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

Q.4 **Attempt the following**

a) Find the mean deviation about the median for the data, 6, 7, 10, 12, 13, 4, 8, 12, 16 08 L2 CO-1

b) Discuss ethics to be followed at different states in scientific research. 08 L2 CO-3

c) Give a brief account of different processes of scientific research methodology. 09 L3 CO-4

Or

d) Write a brief comment on difficulties encountered by researchers in India. 09 L2 CO-4

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