



# GEMS ARTS AND SCIENCE COLLEGE

An ISO 9001 : 2015 Certified Institution

(A Unit of Global Education and Management Studies Co-operative Ltd., No. M. 782)

(Affiliated to University of Calicut and UGC Recognized under Section 2 (f) of UGC Act 1956)

Ramapuram, Kadungapuram P.O, Malappuram Dt., Kerala. Pin - 679 321, Ph : 04933-256123, 255700

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## OUTCOME BASED EXAM REPORT

### PG DEPARTMENT OF GENERAL BIOTECHNOLOGY

#### SUBJECT: RESEARCH METHODOLOGY

Research Methodology refers to the systematic process and procedures employed by researchers to conduct a study or investigation. It outlines the overall approach, design, and techniques used to gather and analyze data in order to answer research questions or test hypotheses. A well-structured research methodology is essential for producing reliable and valid results.

Research Methodology exam for 28 students covered topics such types of research, research design, research proposal, literature for research, components of research, plagiarism, preparation of manuscript and presentation of research. The examination aimed to evaluate students' knowledge on the concept of research and their ability to understand, solve research problems and to design research process. 26 students achieved CO1, CO2, CO3, CO4, CO5 and CO6.



Dr. NAVEEN MOHAN  
PRINCIPAL

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SL NO	NAME OF STUDENT	SCORE OUT OF 10
1	ARSHIDA M	10
2	FAHMIDHA M	10
3	FATHIMA SHAHNA K	10
4	HANEENA	8
5	MINHA	10
6	MOHAMMED ARSHAD K K	7
7	SANJEED S SADATH	7
8	MOHAMMED HISHAM A	8
9	MUHAMMED JASIR HUSAIN	7
10	MUHAMMED THABSHEER	7
11	AFNA A K	10
12	ANSHA	10
13	SHIBLA K T	8
14	DILSHIDA	10
15	FARHANA NASREEN	10
16	FATHIMA NOOBA K V	10
17	FATHIMATH RISHANA	10
18	FATHIMATHU RASHIDHA N P	10
19	HIDHA FATHIMA	10
20	NIDHA N	10
21	NOUFIYA SHERIN C P	10
22	RIYA FATHIMA M P	10
23	SAHLA SHERIN T	10
24	SHAMNA SHARIN K	9
25	SHERIHAN P	9
26	THOYIBA	10
27	MUHAMMED SAINUL ABID K	4
28	RIHAN T	3



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**GEMS ARTS AND SCIENCE COLLEGE RAMAPURAM**  
**THIRD SEMESTER (CBCSS-UG) DEGREE INTERNAL EXAMINATION OCTOBER 2023**

(based on Bloom's taxonomy)

**BIOTECHNOLOGY**


**A.12 RESEARCH METHODOLOGY**

**Time: 1 Hour**

**Maximum : 50 Marks**

<b>PART A</b> <i>One-word type questions</i> <i>Each question carry 1 mark</i>		COs
1	-----consists of surveys and fact-finding enquiries of different types	CO4
2	Write the full form of ISSN Number.	CO1
3	How many digits are there in ISBN number	CO2
4	Write the formula for impact factor calculation for the years 2009 and 2010.	CO3
5	Observational research is a research technique where you observe participants and phenomena in their most natural settings then in - ----- research participants are not aware that they are being studied	CO4
<b>PART B</b> <i>Short answer type questions</i> <i>Each question carry 2 marks</i>		
6	What is meant by a protocol?	CO1
7	What is the role of keywords in a research paper?	CO5
8	What is ISBN. What does 3 <sup>rd</sup> digit of ISBN number denotes?	CO4
9	Propose a suitable topic for research in the field of biotechnology.	CO3
10	What are open-access journals?	CO1
<b>PART C</b> <i>Long answer type questions</i> <i>Each question carry 5 marks</i>		
11	Differentiate between observational and experimental research.	CO4
12	Briefly explain the significance of INFLIBNET.	CO2
13	Which are the different components of a thesis?	CO1
<b>PART D</b> <i>Essay type questions</i> <i>Each question carry 10 marks</i>		
14	Draw a flowchart and explain research process	CO1,CO6
15	Explain the different steps in the preparation of a manuscript and its publishing in a journal.	CO1,CO2,CO6



  
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CO1	<b>Remember:</b> Define research design and list different types.
CO2	<b>Understand:</b> Explain the purpose of a research design and how it influences the study.
CO3	<b>Apply:</b> Provide examples of research questions suitable for different types of research designs.
CO4	<b>Analyze:</b> Compare and contrast the strengths and weaknesses of various research designs.
CO5	<b>Evaluate:</b> Critically assess the impact of choosing an inappropriate research design on the validity of study results.
CO6	<b>Create:</b> Propose a research design for a specific research question, justifying your choice.



  
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