

Roll No:

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B.Sc. Biochemistry, Semester-V Examination-2023
Paper Title: RESEARCH METHODOLOGY
Paper Code: BBC-DSE02

Time: 3 hour

Max Marks: 75

Note: This paper has 3 sections A, B, and C, Attempt all the three sections

Section A: Answer all the questions; Section B: Answer any 2 out of 4; Section C: Answer all the questions, each question has an internal choice

Abbreviations Used

CLO- Course Learning Outcome, PLO- Program Learning Outcome, BTL- Bloom Taxonomy Level: BT level 1-Remember; BT level 2-Understand; BT level 3-Apply; BT level 4-Analyse; BT level 5-Evaluate, BT level 6-Create

Section A (Attempt all questions)

(1X10=10 Marks)

Q. No	Questions	BTL	CLO	PLO
a	 research gathers fresh data; while research involves use of already collected data.	5	1	3
b	Data can be collected through and methods	5	2	2
c	 research is expressed in numbers and graphs; while research is expressed in words.	1	3	3
d	 and are two characteristics of a good research design.	5	2	2
e	The hypothesis proposes that no significant difference exists between a set of given observations.	4	4	2
f	 is the p-value, greater is the significance.	5	4	2
g	 is defined as the act of claiming the words or ideas of another person as your own.	1	1	3
h	Making, selling or taking financial benefits from copyright work without permission of the copyright owner is called as	3	4	2
i	 is the highest bio safety level.	1	2	2
j	 and are 2 of the several tools required for biomedical waste management.	3	2	2

SECTION B: Long type Questions (Attempt any two out of four)**(2X15=30 Marks)**

Q. No	Questions (Any Two)	BTL	CLO	PLO
1	Describe the four phases of research in detail.	1	1	3
2	Explain the important concepts related to good research design.	3	3	3
3	Explain the 4 methods of primary data collection	4	4	2
4	What do you mean by patent. Explain the 5 different ways of commercialization of patents.	5	2	2

SECTION C: Short-type Questions. (Attempt all questions, each question has an internal choice)**(7X5=35 Marks)**

Q. No	Questions	BTL	CLO	PLO
1	Differentiate between qualitative and quantitative research OR Differentiate between research methods and research methodology	1	3	3
2	Differentiate between basic and applied research. OR Highlight the objectives and motivation factors in research.	4	1	3
3	Highlight the need and features of a good research design. OR Explain the correlational and diagnostic research design.	3	3	3
4	Explain the 3 basic principles of experimental research design. OR Explain any 5 types of sample design.	3	2	2
5	Name the 4 statistical measures to analyze the data. Explain any 2 in detail. OR Write in detail about the different sections in writing of a research paper.	4	5	3
6	Explain IPR, trademark and copyright. OR Explain the chi-square test along with the steps to calculate the chi-square value.	4	2	2
7	Explain any 5 ethical issues in research OR Highlight the biohazards of recombinant DNA and genetically modified organisms.	5	4	2
