

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

MGU-UGP (HONOURS) FOURTH SEMESTER EXAMINATION (2024 ADMISSION ONWARDS)

Course Code: **MG5DSEBOTA05** Course Title: **Bio-Instrumentation and Quality Analysis 3**

Time: 2 Hrs

Maximum Marks: 70

Student should attempt at least one question from each course outcome to enhance their overall outcome attainability

Part A:

Answer in One or Two sentences

Answer 10 questions

Each question carries 2 mark

1	What are primary metabolites?	Remember	1
2	What are carbohydrates?	Remember	1
3	Write any two uses of protein in our body	Remember	1
4	What are alkaloids?	Remember	1
5	How will you calculate partitioning coefficient	Understand	2
6	How will you extract essential oil	Understand	2
7	What is eccentric starch grain?	Remember	3
8	Name the reagents used in Lowry's method	Remember	3
9	What is the use of Meyer's reagent?	Remember	3
10	What are coumarins?	Remember	3
11	What is freeze drying	Remember	4
12	How will you detect the volatile compounds in plant extract	Understand	4

Part B:

Short Answer Type Questions

Answer 8 Questions

Each question carries 5 marks

13	What are disaccharides? Draw the structure of maltose	Remember	1
14	What are the various structural organizations seen in protein?	Remember	1
15	Explain the classification of terpenoids	Understand	1
16	Explain the precautions to be taken to maintain metabolic integrity during extraction	Apply	2

17	Explain the principle and working of Soxhlet extractor	Understand	2
18	Explain the qualitative methods employed in detection of carbohydrates	Understand	3
19	Explain the quantitative methods in estimating protein	Understand	3
20	List out the methods used for qualitative estimation of alkaloids and phenolics	Apply	3
21	Explain the technique of rotary evaporation	Understand	4
22	List out the applications of HPLC	Apply	4

Part C:
 Essay Type Questions
 Answer any one question
 Each Question carries 10 marks

23	Explain the principle and working of Super Critical Extraction. Add a note on its applications	Apply	2
24	Explain the principle and working of NMR Spectroscopy. Add a note on its applications	Apply	4