

QP Code: PV25B002

Reg. No :

Name :

ST MARY'S COLLEGE (AUTONOMOUS), THRISSUR-20

II SEMESTER (CBCSS-VPD) DEGREE EXAMINATION, MARCH 2025

M Voc Applied Biotechnology

GEC2AB05 : FOOD AND DAIRY BIOTECHNOLOGY

2024 Admission Onwards

Time:3 Hours

Maximum Weightage:30

Part A

*Short answer type questions: Answer **any four** questions. Weightage 2 for each question.
(4x2 = 8 Weightage)*

1. Define Biosensors. [BTL1]
2. Explain the principle of reverse osmosis and its application in dairy processing. [BTL1]
3. Explain the chief methods of food preservation. [BTL2]
4. Define milk. Explain the general composition of buffalo's milk. [BTL2]
5. How do canning and retorting preserve food? [BTL3]
6. How is the hurdle process applied in the meat industry to reduce microbial load and enhance product stability? [BTL4]
7. How would you evaluate the effectiveness of different methods for controlling fat concentration in cream? [BTL5]

Part B

*Short essay-type questions: Answer **any four** questions. Weightage 3 for each question.
(4x3 = 12 Weightage)*

8. Enumerate the techniques used to quantify trace minerals like iron or zinc in fortified foods. [BTL1]
9. Differentiate between toned and flavoured milk. [BTL4]
10. Evaluate the effectiveness of thermization in reducing microbial load while preserving milk quality. [BTL5]
11. Explain the basic construction of an evaporator. How it affects efficiency in the dairy industry? [BTL3]
12. Assess the suitability of UHT milk for long-term storage under different environmental conditions. [BTL4]
13. How would you compare traditional methods of ghee production with advanced automated methods? What are the differences in quality and efficiency? [BTL4]
14. Analyze the key differences between batch and continuous methods in butter production. [BTL4]

Turn Over

Part C

*Essay-type questions: Answer **any two** questions. Weightage 5 for each question.
(2x5 = 10 Weightage)*

15. Briefly explain fermentation. [BTL1]
16. What are the common errors in the sampling process? Explain the methods to minimize it. [BTL2]
17. What are the advantages and limitations of single-stage versus two-stage homogenization? [BTL4]
18. How does sample storage affect the accuracy of food analysis? [BTL4]
