

CARMEL COLLEGE OF ARTS, SCIENCE AND COMMERCE, NUVEM – GOA

POST GRADUATE DEGREE STUDIES (AFFILIATED TO GOA UNIVERSITY)

M.Sc. (II) Food Technology (Semester III) Examination, January 2021

FT0 109 DAIRY TECHNOLOGY

Max. Marks: 45 marks

Duration: 2 hours

Date: 22 January 2021

INSTRUCTIONS:

1. **Section I** is compulsory.
2. Answer **any 3** questions from **Section II**.
3. Figures on the right indicate maximum marks assigned to the question.

SECTION I

Q1. A. Name the following:

(4 x 1 mark = 4 marks)

- a. The two proteins present in milk
- b. A dairy separation process based on pressure differences between retentate and permeate
- c. A cream containing 80% milk fat
- d. A cream containing 40% milk fat

Q1. B. Elaborate upon the commercial manufacture of any 3 of the following:

(3 x 3 marks = 9 marks)

- a. Yoghurt
- b. Dairy Whitener
- c. *Paneer*
- d. Shrikhand

Q1. C. Discuss any 1 of the following:

(2 marks)

- a. Stoke's Law and dairy cream production
- b. Toned Milk v/s Standardized Milk

SECTION II

Q2. A. Explain the differences between and the application of each of the following in the dairy industry:

(2 x 4 marks = 8 marks)

- a. Microfiltration, Nanofiltration, and Ultrafiltration
- b. Stabilizers and Emulsifiers

B. Elaborate upon the nutritive value of milk.

(2 marks)

Q3. Elaborate upon either 1 of the following:

(10 marks)

- a. 10 factors that affect the composition of milk
- b. Irradiation of Dairy Products

Q4. A. Answer the following:

(2 x 3 marks = 6 marks)

- a. Explain any 3 Platform Tests used in the Dairy Industry
- b. Discuss the use of Coagulant Enzymes in the Dairy Industry

B. Define the following, stating their importance:

(4 x 1 mark = 4 marks)

- a. Bactofugation
- b. Probiotics
- c. Acidophilus Milk
- d. Bifidus Milk

Q5. Write short notes on any 2 of the following:

(2 x 5 marks = 10 marks)

- a. Processing of Milk
- b. Manufacture of Cheese
- c. Manufacture of Butter
- d. Condensed & Evaporated Milk

Q6. A. Answer the following:

(2 x 3 marks = 6 marks)

- a. List and briefly explain any 3 flavour defects in milk
- b. Discuss the importance of “neutralization”, “vacreation”, and “standardization” of dairy cream.

B. Elaborate upon any 1 of the following:

(4 marks)

- a. Ice Cream Manufacture
- b. Dairy-based Indian Sweets
