



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**M.Sc. DEGREE EXAMINATION – FOOD CHEMISTRY AND FOOD PROCESSING**

**THIRD SEMESTER – NOVEMBER 2019**

**18PFP3MC01 – DAIRY AND BEVERAGE PROCESSING**

Date: 29-10-2019

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

**Part A**

**Answer ALL the questions.**

**10 x 3 =30 marks**

1. State the goals of the National action plan for dairy development 2020 in India.
2. Write the abnormal taste and odour defects in milk.
3. Differentiate between skimmed milk, toned and double toned milk
4. Justify the reasons why every dairy farmer should strive to produce clean and wholesome milk.
5. Differentiate fermented and non-fermented dairy products with examples.
6. Give the types of cheeses based on the types of microorganisms.
7. Classify Beverages with suitable examples
8. Differentiate Coffeae Arabica and Coffeae Robusta.
9. Give the process flowchart for paneer and lassi.
10. Define indigenous milk with suitable examples.

**Part B**

**Answer the following questions.**

**5 x 8= 40 marks**

11. Describe the way forward for the Indian dairy industry from the operation flood movement to the second wave of dairy revolution and the future opportunities for the dairy sector.

**OR**

Comment on acidity, pH and buffering capacity of milk.

12. An upcoming dairy industry considers the composition of milk as an important parameter to be considered for milk payments to its vendors. Write the protocol for the two platform tests that needs to be performed in this regard.

**OR**

Explain Standardization of milk and using Pearsons square standardize the following sample with the given data:

A dairy manufacturer needs to manufacture 500 kg of milk testing 5% fat. How many parts of 30 % cream and 4% milk must be mixed to meet the above requirements?

13. Write a brief note on natural spring water, flavoured and carbonated water.

**OR**

What are the steps involved in the manufacture of ice cream? Give the process flowchart.

14. Explain the dairy effluent treatment processing operations.

**OR**

Describe the manufacturing process of packaged drinking water

15. Describe the lautering process in beer manufacture.

**OR**

Give an account on the classification of wine. Briefly discuss the types of wine based on its colour.

### **Part C**

**Answer any TWO questions.**

**2 x 15 = 30 marks**

16. Comment on i. Any ten factors that affect the composition of milk.

ii. Oxidation Reduction potential of milk

**(5+10 )**

17. You are assigned to set up a dairy cooperative in a nearby village. With your background as a student of food processing elaborate on the systems that you would establish for milk collection, transport and sampling of milk.

18. Explain the processing and flow diagram of condensed milk, dehydrated and evaporated milk.

19. Discuss the flow chart of dairy processing activities and sources of waste water

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