# ASSIGNMENT SET - 3

**Department of Nutrition**

 **Mugberia Gangadhar Mahavidyalaya**



# Subject- B.Voc. in Food Processing

# Semester-I

# Paper Code: BVFPS201T: DAIRY PRODUCTS PROCESSING TECHNOLOGY

# (Theory)

**Answer all the questions**

**UNIT-1**

**Cream**

**Questions**:

1. How different factors affect for fat loss in skim milk? 5
2. What is skimming efficiency? 2
3. What is separator slime? 2
4. Define neutralization of cream? Write it’s objective? (1+2)

**BUTTER**

**Questions:**

1. Define ripening of cream, write it’s objective, it’s procedure. (1+2+2)

2. What is churning? 2

3. Write factors influencing churn ability of cream and body of butter. 5

4. Write on churning of cream and addition of butter colour. (2+2)

**Butter oil and ghee**

**Questions:**

1. Write the factors infulencing keeping quality of butteroil. (3)
2. What is the permitted level of BHA in ghee/butter and WMP/partly SMP? (2)
3. Write causes and prevention of following defects - Brownish colour, coarse texture, rancid flavour, oxidized/oily/ metalic/ tallowy flavour.

Question for ghee - follow in unit 5

**UNIT-2**

**Questions:**

1. What is the principle flavouring matter in vanilla? (1)

2. From which plant chocolate is obtained? (1)

3. Who invented chocolate flavour? (1)

4. Which flavour rank first and second most used in ice cream manufacture? (1)

5. What is the time and temperature combination for batch and HTST method pasteurization in icecream? (2)

6. Write a short note on - a. cooling and ageing b. freezing and mixing c. hardening

 d. Overrun related to ice cream manufacture. (3 for each)

7. What is the temperature of hardening of ice cream? (1)

8. Write a short note on softy. (3)

9. Write cause and prevention of following defects of ice cream –

 a . Flavour : High, low, acid/sour, bitter, cooked, flat, unnatural, rancid, oxidized/oily/metallic/tallowy,

b. Body: crimbly, soggy, weak

c. Texture : buttery, coarse/icy, fluffy, sandy,

d. Melting quality : curdy meltdown, foamy meltdown, slow melting, colour unnatural, miscellaneous shrinkage. (2 for each)

10. Prepare 10 kg of mix containing 12 % fat, 11 % fat SS , 15 % sugar and 0.4 % stabilizer, available ingredients are.

Milk containing 4.5 % fat and 9.0 % SS

Cream containing 4.0 % fat and 5.0% SS

SMP containing 0.7 % fat and 96 % SS

**UNIT-3**

**CONDENSED MILK**

**Questions:**

1. Write cooling and crystallization process in condensed milk preparation. (5)
2. Write seeding during condensed milk preparation. (5)
3. Write method to prepare evaporated milk. (8)
4. Write short note on Pilot sterilization test. (4)
5. Write purpose of Pilot sterilization test . (2)

**DRIED MILK**

**Questions:**

1. In roller drying system the product is in contact with the drum for..................... second or less at temperature of about.....................°C, depending on steam pressure. (2)

1. The requirement of steam is........................../kg of water evaporated. (1)
2. It may be necessary to resurface the drum after....................... to.......................... hour operation. (1)
3. The drum should be coated with............ or.......... when not in regular use. (1)
4. The knife must be reground regularly (after approximately every.......... hour) in drum drying. (1)
5. What is the name of knife which removes milk powder from drum dryer? (1)
6. Write flow diagram of drum drying system. (2)
7. ﻿ Write principle of spray drying system. (2)
8. Write advantages of spray drying system. (2)
9. Write disadvantages of spray drying system. (2)
10. Write classification of spray driers. (3)
11. Write different methods for milk automizing system. (6)
12. What is the pressure used in pressure spray atomizing? (1)

**DRIED MILK PRODUCTS**

**Questions:**

1. Write PFA standard of malted milk food. (2)

2. Write malted milk foods method of manufacture. (4)

3. Write Indian standard specifications for infant milk food. (3)

4. Write method of manufacture of infant milk foods. (6)

UNIT-4

**Questions:**

1. Rennet is sensitive at which environment? 1
2. Write factors effecting rennet action. 4
3. Write name of microbial rennet. 1
4. What is ideal temperature and time for rennet action? 1+1
5. Liquid rennet is added at the rate of\_\_\_\_\_ per 100 liters of milks. 1
6. How you will ensure that curd is ready for cutting during cheese making? 2
7. Describe curd knife during cheese making. 2
8. Write method of curd cutting during cheese making. 2
9. Write method of cheddaring. 3

**UNIT-5**

**Questions:**

1. 17What should be the strength of coagulating solution for Chhana making? (1)
2. 18. Write the cause and prevention for following defects in Chhana-

Flavor-Smoky, Sour, Rancid, Stale.

Body and texture-hard body, coarse texture.

Color and appearance- dry surface, visible dirt, mouldy surface. (Two each)

1. 19. What do you mean by makkhan? (2)
2. 20. Define saponification number, Iodine number, Reichert meissl number, polenske number (two each)
3. 21. Write method of manufacture of ghee making by
	1. Creamery butter method
	2. Direct cream method
	3. Pre- stratification method (three each)
4. 22. Compare different methods of ghee making. (5)
5. 23. Write short note on cooling and crystallization of ghee? (3)
6. 24. What should be the storage temperature of ghee? (1)
7. 25. What should be the permitted BHA lavel in ghee? (1)
8. 26. How adulteration of ghee can be detected? (2)
9. 27. Write full from of AGMARK. (1)
10. 28. Write AGMARK standard for ghee. (3)
11. 29. Write method manufacture of lassi making. (3)
12. 30. How recovery of ghee can be done from ghee residue? (2)
13. 31. Write uses of ghee residue. (2)
14. 32. What do you mean by makkhan? (2)

**UNIT-6**

**Questions:**

1. Write short note on Butter milk. [3]
2. Write short note on whevit, yeast whey, plain condensed whey, sweetened condensed whey, whey protein concentrates and whey paste.[3+3+3+3+3+3]
3. What are the temperatures used to precipitate skim milk by lactic, sulfuric and hydrochloric acid? [2]

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