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SEMESTER END EXAMINATION
B. Sc. (Hons) Agri.

Semester	:	V (NEW)	Term	:	I	Academic Year	:	2020-21
Course No.	:	AHDS-353	Title	:	Technology of Milk and Milk Products			
Credits	:	2(1+1)						
Day & date	:	SAT., 16.01.2021	Time	:	1.00 Hr.	Total Marks	:	40
Note :	1) Solve ANY FOUR questions from SECTION-A 2) Solve ANY SIX questions from SECTION-B 3) All questions from SECTION-C are compulsory 4) Send the PDF file of answer sheet to the email id of respective course teacher							

MODEL ANSWER

SECTION-A (Write the answers in 4-5 sentences only. Each question carries 4 marks)

Q.1. Describe in short about current status of milk production in India.

Ans: India is in first rank in milk. India has producing over 187 million tonnes of milk. India is first among all countries in both production and consumption of milk. The per capita availability of milk is 394 ml in India. Also expected to describe milk utilization pattern, employment generation.

Q.2 Classify indigenous milk products according to manufacturing methods with suitable examples and write in brief various advantages of fat rich dairy products.

Ans: Complete classification of various milk products on the basis of method of preparation with suitable examples is as follows,

1. Heat Desiccated milk products:- Basundi, khoa, pedha, kalakand etc.
2. Heat and acid coagulated milk product: - Channa, paneer, Rasogolla, Rasmalai etc.
3. Fermented milk product :- Dahi, Chakka, Srikhand, Lassi, Matta,
4. Fat rich milk product: - Cream, Butter, Ghee, etc.
5. Frozen milk products :- Kulfi, Ice-cream and milk shekes
6. Dried milk products: - Milk powder, Khoa powder etc.

Q.3 Write down about freezing point of milk?

Ans: 2. Freezing point of milk:-

Milk freezes at temperatures slightly lower than water due to the presence of soluble substances such as lactose, soluble salts etc, which lower or depress the freezing point. The average freezing point of cow milk may be taken as 0.547⁰C and buffalo milk 0.549⁰C. Freezing point depression lower than this value indicates added water.

Q.4 Enlist any four properties which should be considered for selection of packaging material.

Ans: Important properties of packaging materials are fallows-

1. Should not be alter the physico – chemical and microbial attributes of packed foods.
2. should be made from permitted ingredients,
3. It must barriers to light, temperature, gases and moisture.
4. The packing film must have adequate strength.

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5. Ease to labeling.
6. Should be convenience to contain, to protect and helps selling the products.
7. Facilitating the handling, storage and distribution.
8. Greater sealing properties,
9. Eco- friendly,
10. Should be easy for disposal i.e. solid waste disposal after use.

Q. 5 Give the advantages of Homogenization of milk.

Ans: Merits

1. No formation of cream layer
2. Does not churn the fat during transport / processing
3. Produce soft curd with better digestibility.
4. Improve brightness of milk.
5. Heavier body and richer flavour.

SECTION-B (Write the answers in one sentences only. Each question carries 2 marks)

Q. 6 (Do as directed)

a) Give the temperature and time of HTST pasteurization.

Ans: The temperature and time for HTST pasteurization of milk is 72 °C for 15 seconds.

b) Define Milk?

Ans: Milk is defined as the whole, clean, fresh lacteal secretion obtained by the complete milking of one or more healthy milch animal excluding that obtained within 15 days before or 5 days after calving.

c) What is the standard level of SPC counts require for very good grade of milk?

Ans: SPC count required not more than 2.0 lakh for very good grade of milk.

d) Lactose is also called as _____.

Ans: Lactose also called as **Milk Sugar**.

e) Give the name of any one method used in physical preservation of milk.

Ans: Heating, freezing, cooling and retort processing used in physical preservation of milk.

f) Give the full form of HACCP.

Ans: Hazard Analysis and Critical Control Points

g) Write down percent fat content in double toned milk?

Ans: 1.5 per cent fat contains in double toned milk.

SECTION-C (Choose the correct option. Each question carry 1 mark)

1. (a) **Standardization** means to the adjustment. i.e. raising or lowering, of the fat and/or SNF percentages of milk to a desired value
2. Chhana is a (b) **coagulated** milk product.
3. The ratio of density of the substance to density of a standard substance is called as (c) **specific gravity**.
4. Boiling point of milk is about (a) **100.17** °C.
5. Specific gravity of cow milk is (b) **1.028 to 1.030**.
6. (c) **Citric acid** used as coagulant for paneer preparation.
7. (d) **All of these** are the factors affecting the milk yield.

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8. Milk heated with direct steam to a temperature of 150 °C for a fraction of seconds is called as (c) **uperization**.
9. Organizational Network of BIS Headquarter situated at (a) **New Delhi**.
10. (a) **Clove** is used as herbal preservative for milk preservation
11. Placing a commodity in a protective wrapper or container for transport and storage is known as (d) **Packaging**.
12. Milk production is found maximum in (b) **UP** state.
