ROLL NO- _____

B.TECH FOOD TECHNOLOGY
V Semester Examination 2018
Course Code- BFTC-502
Course Title - Technology of milk and milk products

B.Tech. 2018 5th Sem.

TIME: 3 hours **Max. Marks: 70**

Note: ***1. It is compulsory to answer all the questions of Section-A.***
2. Answer any four questions in Section- B.

Section-A (5*6=30)

Q1. (a) Classify khoa on the basis of its moisture content. (2M)
(a) Name different types of driers and evaporators used in dairy industry. (2M)
(b) Differentiate between cottage cheese and paneer. (2M)

Q2. (a) Draw flow chart giving technological aspects for manufacturing butter. (3M)
(b) Give the principle of working of centrifugal separators in milk (1M)
(c) Distinguish between recombined and reconstituted milk. (2M)

Q3. (a) Give a brief account of properties of infant foods and formulas. (3M)
(b) What do you mean by instantization of milk powder and how is it done? (3M)

Q4. (a) Fill in the blanks: (3M)
i. Adhesion of bacteria to surface of dairy equipment may lead to formation of _____
ii. Sweetened condensed milk shall contain not less than _____% fat and _____% TMS.
iii. Ice cream sold without hardening as drawn from the freezer is known as_____
(b) Write down steps involved in industrial manufacture of *rosogolla*. (3M)

Q5. (a) Mention different defects related to butter, their causes and prevention. (3M)
(b) Give details of HTST pasteurization of milk. (3M)

Section- B (4*10=40)

Q1. Define processed cheese. Name different types of processed cheese products. Give important steps in manufacture of processed cheese products with advantages.
Q2. Why is two stage homogenization often recommended for milk? Elaborate on the various theories of homogenization of raw milk.
Q3. Write a short note on flavor generation in raw, heat treated and fermented milk products.
Q4. (a) Define ice cream and give its average composition.
(b) Give flow diagram of preparation of ice cream.
(c) What is the purpose of adding stabilizers and emulsifiers in ice cream.

Q2. **Answer any three of the following** **5x3=15**

(i) Explain the process of development of rigor mortis. How does it influence meat quality?

(ii) Explain types of microorganism which can grow on meat. How can their growth be controlled?

(iii) Explain the defects in meat.

(iv) Discuss the methods and benefits of meat tenderization.

(v) Discuss the current scenario of hygiene and sanitary conditions of meat vendors in the marketplaces of Delhi and NCR. Suggest methods to implement and improve the current scenario.

Q3. **Answer any three of the following** **5x3=15**

(i) What do you mean by the term "Modern Abattoir"? Explain.

(ii) Write in detail about the different CCPs in the process of Buffalo meat production (with flow diagram).

(iii) Write about the different pre-slaughter and post-slaughter factors which affect the quality of meat.

(iv) Explain the complete process of conversion of muscle into meat.

(vi) Give the flow chart for processing of any two: (a) Sausages (b) Kebab (c) Salami

Q4. **Write short notes on the following** **5x3=15**

(i) Emulsification

(ii) Structure and composition of fish

(iii) Restructuring of meat

(iv) Curing and smoking process of meat for the purpose of preservation

(v) Halal, Jhatka and Kosher meat processing

Q5. **Answer any three of the following** **5x3=15**

(i) Explain the process of slaughtering and dressing of Poultry (with flow diagram).

(ii) Write about the factors considered for the grading of the poultry carcass.

(iii) Write in detail about the Scenario of Indian Poultry Industry and its contribution to Indian Economy and Employment generation.

(iv) What are the different pre-slaughter factors which affect the poultry meat quality? Explain.

(v) Discuss the changes that occur in eggs during storage.

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