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Question Paper Code: 1086278

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV / DEC 2024

Sixth Semester

Agricultural Engineering

U20AG604 – FOOD AND DAIRY ENGINEERING

(Regulation 2020)

Time: Three Hours

Maximum: 100 Marks

Answer ALL questions

PART – A

(10 x 2 = 20 Marks)

1. Why is Concentration of Foods important?
2. List the different types of Viscometers.
3. What do you mean by Blanching?
4. State Caning of foods.
5. What do you mean by Dehydration of foods?
6. How do you control Water activity in drying of food?
7. Define Market milk.
8. What do you mean by HTST pasteurization?
9. List out AGMARK ghee specification.
10. Name the various Ghee making methods.

11. (a) Classify the Constituents of Food. Explain in detail about each with examples. (16)

(OR)

(b) What is Viscometry? Explain in detail about the various Viscometers used to measure the Viscosity of liquid foods. (16)

12. (a) Compare the principles and applications of Microwave and RF heating processes in food industry. (16)

(OR)

(b) Explain in detail about the following; (16)
(i) Decimal reduction time and Arrhenius equation
(ii) Non-thermal processing of foods

13. (a) Discuss the various Sorption isotherm methods in detail with neat drawings. (16)

(OR)

(b) Classify the various types of Dryers used in food industry and explain any two types with neat sketches. (16)

14. (a) Examine the following pasteurization techniques with data: (16)
(i) Low-temperature and Long-time (LTLT)
(ii) High-temperature and Short-time (HTST)
(iii) Ultra-High Temperature (UHT)

(OR)

(b) Explain the following in detail: (16)
(i) Properties of milk
(ii) Testing procedures for milk

15. (a) Classify the Homogenizers. Explain in detail about the High-pressure homogenization of milk and other food suspensions. (16)

(OR)

(b) Write a short note on the following dairy products in detail: (16)
(i) Ghee and Whey manufacturing techniques
(ii) Condensed milk and Ice cream freezers