21U350 (Pages: 2) Name: .....

Reg.No: .....

THIRD SEMESTER B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

(CBCSS - UG)

(Regular/Supplementary/Improvement)

CC19U FTL3 B05 - FOOD ENGINEERING

(Food Technology - Core Course)

(2019 Admission onwards)

Time : 2.00 Hours Maximum : 60 Marks

Credit : 3

Part A (Short answer questions)

Answer ***all*** questions. Each question carries 2 marks.

1. Define angle of repose of food materials.
2. What is meant by Newtonian fluids?
3. Define evaporation and mention its applications.
4. Write a short note on extrusion used in food processing.
5. Define freezing rate.
6. Differenciate direct contact and indirect contact freezing equipment.
7. Name any two cryogens used in cryogenic freezing.
8. What is meant by steam economy in evaporation?
9. Differenciate horizontal tube and vertical tube evaporator.
10. What is fluidized bed drier?
11. Write a note on general classification of heat exchangers.
12. Write any two objectives of pasteurization?

(Ceiling: 20 Marks)

Part B (Short essay questions - Paragraph)

Answer ***all*** questions. Each question carries 5 marks.

13. Define viscosity. Explain how apparent viscosity is calculated? Give the classification of non Newtonian liquids.
14. Explain different methods of drying and breif anyone.
15. Explain working of cabinet dryer with a neat sketch.

16. Explain working principle of spray dryer with a neat sketch.

17. Describe the conductive method of heat transfer.

18. Describe working of plate heat exchanger with a neat diagram.

19. Write a note on utilization of stean in food processing.

(Ceiling: 30 Marks)

Part C (Essay questions)

Answer any ***one*** question. The question carries 10 marks.

20. Describe in detail the vapour compression refrigeration cycle.

21. With the help of a neat sketch explain the working of shell and tube heat exchanger.

(1 × 10 = 10 Marks)

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