21U470 (Pages: 2) Name: …….

Reg. No: …….

FOURTH SEMESTER B.Voc. DEGREE EXAMINATION, APRIL 2023

(Food Processing Technology – Skill Component Course)

CC21U SDC4 FE12 – FOOD ENGINEERING

(2021 Admission - Regular)

Time: 2.5 Hours Maximum: 80 Marks

Credit: 4

PART A

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

1. Write a note on thermal properties of food.
2. Applications of rheological properties in food engineering.
3. What is meant by newtonian fluids?
4. Define air blast freezers.
5. Define freezing and what are the advantages of freezing.
6. What are the uses of evaporator?
7. Differenciate rising film and falling film evaporator.
8. Define drying.
9. What is cabinate drier?
10. What are the modes of heat transfer?
11. Define insulators.
12. Define pasteurization.
13. Expand LTLT, HTST and UHT.
14. What is water tube boiler?
15. Write any two advantages of fire tube boiler.

(Ceiling: 25 Marks)

PART B

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

16. Differentiate Newtonian and non Newtonian liquids.
17. Write the properties of a refrigerant.
18. Differentiate quick freezing and slow freezing.
19. Write advantages, disadvantages and application of horizontal tube evaporater.
20. Explain different methods of drying and breif anyone.
21. Write briefly about radiation mode of heat transfer.
22. Explain shell and tube heat exchanger with a neat diagram.
23. Explain working of fire tube boiler.

(Ceiling: 35 Marks)

PART C

Answer any ***two*** questions. Each question carries 10 marks.

24. Describe in detail the vapour compression refrigeration cycle.
25. Comment on modes of heat transfer.
26. Explain with a neat sketch working of scraped surface heat exchanger. Give its industrial applications.
27. Write about the different types of boilers.

(2 × 10 = 10 Marks)

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