TV206655W Reg. No :.....

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Hallie	

# B. Voc. DEGREE (C.B.C.S.) EXAMINATION, MARCH 2023 (2020 Admission Regular, 2019, 2018 Admissions Supplementary) SEMESTER VI - SKILL COURSE (FOOD PROCESSING TECHNOLOGY) VFPT6S16B18 - UNIT OPERATIONS IN FOOD INDUSTRY

Time: 3 Hours Maximum Marks: 80

### Part A

## I. Answer any Ten questions. Each question carries 2 marks

(10x2=20)

- 1. What is meant by heat conduction?
- 2. Define countercurrent heat exchanger.
- 3. Define Stefan's Boltzmans law.
- 4. Enumerate the considerations involved in evaporator selection.
- 5. Cite the term food evaporation.
- 6. List out the different types of distillation .
- 7. Define tank crystallizer.
- 8. Define mixer settler.
- 9. List the components of supercritical fluid extraction.
- 10. Define food extrusion.
- 11. List out the functions of bucket elevator.
- 12. Which are the considerations for selection of conveyors?

### Part B

### II. Answer any Six questions. Each question carries 5 marks

(6x5=30)

- 13. Explain the terminologies with equation of conductive, convective and radiation heat transfer.
- 14. Explain in detail tubular heat exchanger.
- 15. Describe the principle of vertical tube evaporator.
- 16. Describe the working of long tube evaporator.
- 17. Write short notes on scraped surface crystalliser.
- 18. Explain in detail crystallization theory.
- 19. Write short notes on single screw extruder.
- 20. Explain in detail the features of batch extractors.
- 21. Explain in detail pneumatic conveyor.

### Part C

# III. Answer any Two questions. Each question carries 15 marks

(2x15=30)

- 22. Describe in detail multiple effect evaporator with neat diagram.
- 23. Describe in detail the theory of crystallization.
- 24. Explain in detail liquid-liquid extraction equipments.
- 25. Describe with neat diagram the equipments for sedimentation.