### TM244965N

Reg. No :	•
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Name :.....

# MASTER'S DEGREE (C.S.S) EXAMINATION, MARCH 2024 2022 ADMISSIONS REGULAR

# SEMESTER IV - M. Voc. Food Processing Technology VFPT4E04TM20 - Food Extrusion Technology

Time: 3 Hours Maximum Weight: 30

### Part A

### I. Answer any Eight questions. Each question carries 1 weight

(8x1=8)

- 1. Classify extruders based on the position of screw and direction of rotation.
- 2. Define extrusion.
- 3. Define dry extruders.
- 4. How extrusion gained popularity in food industry?
- 5. Comment on benefits of pre-conditioning.
- 6. Point out the raw materials used in extrusion process.
- 7. Write a short note on application of extrusion technology in food industry.
- 8. What are the third generation snacks?
- 9. Define texturized vegetable protein.
- 10. List the second and third generation extruded products.

#### Part B

# II. Answer any Six questions. Each question carries 2 weight

(6x2=12)

- 11. What are the main components of extruders?
- 12. Illustrate the uses of extrusion technology in food industry.
- 13. Explain the following terms: a) pellet snacks b) macaroni c) pasta
- 14. Comment on maillard reaction and gelatinization of starch.
- 15. Give an account on nutritional changes in food during extrusion.
- 16. Explain in detail about traditional batch processing.
- 17. Give an account on process of macaroni production.
- 18. Explain in detail about TVP and its process.

### Part C

# III. Answer any Two questions. Each question carries 5 weight

(2x5=10)

- 19. Illustrate on advantages and limitations of extrusion technology.
- 20. Elaborate on quality testing of extruded products.
- 21. Comment on extrusion system for baby foods.
- 22. Define texturised vegetable protein, Explain the processing techniques in detail and its advantages.

