

**CARMEL COLLEGE OF ARTS, SCIENCE AND COMMERCE, NUVEM – GOA**

**POST GRADUATE DEGREE STUDIES (AFFILIATED TO GOA UNIVERSITY)**

**M.Sc. (II) Food Technology (Semester III) Examination January 2021**

**FTO 117 SNACK FOOD TECHNOLOGY**

**Max. Marks: 45**

**Duration: 2 hours**

**Date: 25 January 2021**

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**INSTRUCTIONS:**

1. All questions in **Section I** are compulsory.
  2. Answer **any 3** questions from **Section II**
  3. Figures on the right indicate maximum marks assigned to the question
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**SECTION I**

**Q1. Pick the correct option from the choices given.**

**(3 x 1 mark = 3 marks)**

1. Glucosinolates, an anti-nutrient factor present in Canola, can be reduced during extrusion by
  - a. Increasing extrusion temperature
  - b. Increasing shear rate
  - c. Adding Ammonia
  - d. Adding Thiamine
2. Fruit-filled cereal are an example of
  - a. Directly Expanded Collets
  - b. Co-extruded Products
  - c. Unexpanded Collets
  - d. Half-Products
3. Single-Screw Extruders are more commonly used in preparation of various products except:
  - a. Half-products
  - b. Texturized protein
  - c. RTE breakfast cereals
  - d. Dehydrated soup base

**Q2. Define the following terms:**

**(3 x 1 marks = 3 marks)**

- a. Flaking
- b. Toasting
- c. Vacuum frying

**P.T.O.**

**Q3. Discuss the following with two suitable examples (any 3):**

**(3 x 3 marks = 9 marks)**

- a. Cereal-based fermented snacks
- b. Fruit-based snacks
- c. Coated-grain snacks
- d. Alcohol-preserved fruit snacks

## **SECTION II**

**Q4. a.** Comment on Roasting as a snack production process. (5)

**b.** Elaborate on the science of popcorn expansion. (5)

**Q5. a.** List the basic components of an extruder and briefly explain their function. (8)

**b.** Enlighten the impact of extrusion processing on food properties. (2)

**Q6. a.** Discuss use of Potatoes in manufacturing Second Generation Snacks. (3)

**b.** Using a flow diagram, describe the basic potato chip manufacturing process. (7)

**Q7. a.** What are the four main categories of seasoning formulators? Describe their effect using an example of each. (4)

**b.** Briefly elucidate the application of spray-dried dairy powders, dehydrated vegetable powders and spices in the snack industry. (6)

**Q8. Elaborate on the following:**

a. Vegetable-based snacks (3)

b. Sugar Panning of Nuts (3)

c. Potato-based Textured Snacks (4)

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