

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 February 2022

FTO 119 FOOD ADDITIVES, ADULTERATION AND TOXICOLOGY

Max. Marks: 45

Duration: 2 hours

Date: : / /2022

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.

(6 × 1 mark = 6 marks)

1. Which of the following systems is not involved in long-term storage of xenobiotics?
a. Liver
b. Blood
c. Kidneys
d. Bone and Joints
2. Chemicals associated with pungency:
a. Gingerol, Cinnamaldehyde, Eugenol
b. Capsaicinoids, Polyphenols, Menthol
c. Garlinol, Gingerol, Capsaicinoids
d. Piperine, Eugenol, Gingerol
3. Which of the following regulatory bodies are not involved in establishment of ADI?
a. USFDA
b. JECFA
c. Codex Alimentarius
d. FSSAI

Q2. Provide four suitable examples for each:

(3 × 1 mark = 3 marks)

- a. Colour compounds permitted for application in the food industry.
- b. Zero-calorie sugar alternatives to glucose and sucrose.
- c. Artificial flavouring compounds.

Q3. Answer any three of the following:

(3 × 3 marks = 9 marks)

- a. Three forms of flavour compounds.
- b. Intentional and unintentional adulteration using a suitable example.
- c. Contamination in RTE foods.
- d. Biotic Modifying Factors.

SECTION II

- Q3. a.** How does the human body process xenobiotic compounds? (4)
b. 'The human liver is an important emunctory'. Justify. (6)
- Q4.** List out ten food additives used in the food industry. Provide information on their function, their application, along with suitable examples. (10)
- Q5. a.** Briefly explain the mechanism of any one bacteria-mediated foodborne illness. (5)
b. What diagnostic methods are used in detection of presence of toxic compounds/organisms? (5)
- Q6.** Discuss the factors related to toxicity of a xenobiotic compounds. Provide a suitable example for each factor. (10)
- Q7.** Elaborate on:
- a.** Thermodynamics of flavour release and perception. (4)
b. Factors affecting flavour release and flavour delivery. (6)
