

Sl. No. of Ques. Paper : 1780

GC-3

Unique Paper Code : 32201101

Name of Paper : Fundamentals of Food Technology

Name of Course : B.Sc. (Hons.) Food Technology (CBCS)

Semester : I

Duration : 3 hours

Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

*Attempt four questions in all. Question No. 1 is compulsory.
Attempt all parts of the question together.*

1. (a) Give *one* word answers for the following:

- (i) A non-enzymatic reaction responsible for development of dark brown colour and flavour in bread.
- (ii) Pigment responsible for the colour of meat.
- (iii) Enzyme responsible for hydrolytic rancidity in oils.
- (iv) Staling in starch rich foods.
- (v) Principal fatty acid in coconut.
- (vi) An antinutritional factor in legumes responsible for crippling in humans.
- (vii) Scientific name of red gram dal.
- (viii) Full form of BOAA.
- (x) Limiting amino acid in cereals.
- (xi) The process of breaking down fat globules in milk. 10×1=10

(b) Tick mark the most appropriate alternative:

- (i) Which is the predominant pigment present in tomatoes?

Lycopene / Carotenoids' Beta carotene / Anthocyanins

- (ii) Which of the following is a substitute of butter?

Hydrogenated vegetable oil Margarine / Lard / Butter oil

- (iii) Which of the following vegetable oils is a saturated fatty acid?

Cocount / Soy bean / Mustard / Sunflower

- (iv) Which of the following is not an antinutritional factor?

Trypsin inhibitors / Phytates / Saponins / Pectin

(v) Which of the following will not undergo enzymatic browning?

Potatoes / Turnip / Brinjal / Pears $1 \times 5 = 5$

2. Comment on the following statements: (any four)

- (a) Parboiled rice is nutritionally superior.
- (b) Germination improves digestibility and availability of nutrients.
- (c) Enzymatic browning can be arrested by inactivating the enzyme.
- (d) Maillard browning is desirable in baking.
- (e) Antioxidants are capable of extending the shelf life of fats and oils. $4 \times 5 = 20$

3. (a) Classify fruits and describe the post-harvest changes in fruits and vegetables. 8

(b) Define carcass and give the classes of meat. What are the characteristics of fresh fish? 8

(c) What type of wheat is best suited for bread making? Discuss briefly its characteristics. 4

4. Write short notes on: (any four)

- (a) Egg proteins
- (b) Rancidity and its prevention in oils
- (c) Post-mortem changes in meat
- (d) Gelatinization of starch
- (e) Homogenization in milk. $4 \times 5 = 20$

5. (a) Discuss the historical evolution of food processing industries. 8

(b) Write briefly on the process of refining of fats and oils. 8

(c) How can the toxic constituents in pulses and legumes be eliminated? 4

6. Draw only neatly labelled diagrams:

- (i) Structure of wheat
- (ii) Structure of egg
- (iii) Structure of seed
- (iv) Flow chart of milk processing. $5 \times 4 = 20$