

BFTBE 4th Year Even Semester Examination 2022

Subject: NON THERMAL FOOD PROCESSING TECHNOLOGIES (HONS.)

Time: 4 hrs

Full Marks: 70

Use Separate Answer Script for each Part

Part I (35 marks)

Answer question no. 1 and any two from the rest.

1. What are the different types of cold plasma is available for Food use? How can you produce cold plasma by using electricity? Discuss the production of cold plasma using chemical. 3+6+6=15
2. How cold plasma kills the microorganism? What are the Food materials can be disinfected by the cold plasma? 6+4=10
3. What are the different advantages of cold plasma? Discuss Gliding Arc plasma and atmospheric pressure plasma jet. 4+3+3=10
4. What do you mean by top-down and bottom-up approaches for nanomaterial synthesis? How can you prepare ZnS nano particle? 4+6=10

[Turn over

B.E (FTBE) FINAL YEAR, SECOND SEMESTER EXAMINATION 2022

NON-THERMAL FOOD PROCESSING TECHNOLOGIES

TIME: 4 H

FULL MARKS = 70

PART- II (35 MARKS)

USE SEPARATE ANSWER SCRIPT FOR EACH PART

Q1. With the aid of diagrams and flow sheets explain the following processes (any 2):

2 × 5 = 10

- a. Gamma-irradiation of bananas in laboratory scale using dry source
- b. PEF processing of apple juice
- c. Microwave processing of potatoes

Q2. Differentiate between (any 5):

5 × 5 = 25

- a. PEF-treated apple juice vs. Pectinase-treated apple juice
- b. Mechanism of microbial inactivation in PEF processing vs. Thermal sterilization
- c. RVA pasting profiles of Irradiated rice-vs. Non-irradiated rice
- d. Radappertization vs. Radpasteurization
- e. Batch PEF processing vs Continuous PEF processing
- f. MW drying vs. Tray drying