

Register No.: Name:

SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

SEVENTH SEMESTER B. TECH DEGREE EXAMINATION (R), DECEMBER 2023**FOOD TECHNOLOGY****(2020 SCHEME)****Course Code: 20FTT411****Course Name: Food Packaging Technology****Max. Marks: 100****Duration: 3 Hours****PART A*****(Answer all questions. Each question carries 3 marks)***

1. What are the functions of packaging?
2. What are the different environments for the functioning of food packaging?
3. Give three examples of metal coatings and enumerate their applications.
4. What are the different types of surface treatments in glass manufacturing?
5. Define glass transition temperature.
6. Define Coextrusion of polymers.
7. What is the importance of orientation of polymer molecules in the manufacturing of films?
8. What are the different types of pouches in food packaging?
9. Difference between MAP and CAP.
10. What is meant by intelligent packaging system?

PART B***(Answer one full question from each module, each question carries 14 marks)*****MODULE I**

11. a) What are different levels of packaging? Describe the properties of packaging material, (8)
- b) What are the major components effecting the food quality? (6)

OR

12. a) Elaborate on packaging sustainability and regulatory trends across the world, with emphasis to Indian packaging industry. (14)

MODULE II

13. a) What is lacquering? Elaborate the different coating agents used on cans. (6)
- b) What is the difference between D&I and DRD? Elaborate with figures. (8)

OR

14. a) Discuss the composition of glass and the coloring agents used. (6)
b) Elaborate the two processes for forming glass containers with diagrams. (8)

MODULE III

15. Explain the properties of different types of polyolefins. (14)

OR

16. a) Describe the constituents of a pulp used in paper industry. (4)
b) Describe mechanical and chemical pulping in the manufacturing of papers. (10)

MODULE IV

17. Explain the heat-sealing processes of a thermoplastic polymer with suitable diagrams. (14)

OR

18. a) What are the ink components? Describe the properties of different types of inks. (7)
b) Describe the different types of adhesives used in food packaging system. (7)

MODULE V

19. a) Elaborate the retort package with a neat diagram. Explain the properties of its components. (8)
b) Difference between vacuum and gas packaging. (6)

OR

20. Elaborate different types of smart packaging system. Give examples and discuss its mechanism of action and application in food industry. (14)
