

Register No: .....

Name: .....

**SAINTGITS COLLEGE OF ENGINEERING (AUTONOMOUS)**

(AFFILIATED TO APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY, THIRUVANANTHAPURAM)

**EIGHTH SEMESTER B.TECH DEGREE EXAMINATION(R), MAY 2024****Food Technology  
(2020 SCHEME)****Course Code : 20FTT472****Course Name : Beverage Processing****Max. Marks : 100****Duration:3 Hours****PART A***(Answer all questions. Each question carries 3 marks)*

1. Discuss the function and characteristics of two commonly used emulsifiers in beverages.
2. Provide a list of natural food colorings that are permitted for use in food and beverage products.
3. Describe the effects of temperature fluctuations on beer quality and shelf life, and provide examples of specific defects that can arise.
4. Explain the importance of malting in the beer manufacturing process.
5. Explain the purpose of a wash still in whisky production and outline the key steps involved in its operation.
6. Explain the concept of the "angels' share" in whisky maturation and its impact on the final product.
7. Discuss the role of fortification in enhancing the nutritional value of dairy-based beverages.
8. Explain any 2 methods of carbonation.
9. What are the key components of effective quality controls in the beverage industry?
10. What are the quality parameters used to assess the suitability of water for beverage production?

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

11. How do water miscible flavoring agents differ from water dispersible ones in beverage production, and what role do these distinctions play in achieving desired flavor profiles, stability, and consumer acceptance of various drink formulations? 14

**OR**

12. In what ways can beverages be classified, and how do these classifications influence consumer choices and societal trends? 14

**MODULE II**

13. What are the common defects and spoilage issues encountered in wine production, including microbial contamination, oxidation, volatile acidity, and off-flavors, and how do they manifest in sensory characteristics such as aroma, taste, color, and mouthfeel? 14

**OR**

14. How do the fundamental ingredients of malt, hops, adjuncts, water, and yeast interact during the brewing process to shape the flavor, aroma, appearance, and mouthfeel of beer. 14

**MODULE III**

15. What are the key characteristics and operating principles of pot stills used in whisky production, and how do they contribute to the distinctive flavor profiles and complexity of pot-distilled spirits? 14

**OR**

16. What are the key stages and parameters involved in the operation of grain whisky stills. 14

**MODULE IV**

17. Describe the intricate process of coffee bean preparation, starting from cultivation in coffee-growing regions to the market-ready stage. 14

**OR**

18. What are the key steps involved in the preparation of syrups for use in beverage production, including selection of ingredients, mixing or dissolving processes, and heat treatment or pasteurization techniques? 14

**MODULE V**

19. Name and explain the role of the regulatory body in India responsible for overseeing food safety in the beverage industry. 14

**OR**

20. Describe in detail the manufacturing processes involved in producing packaged drinking water, from sourcing and treatment to packaging and quality control measures, highlighting the importance of safety, quality, and regulatory compliance in the production process. 14

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