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**Question Paper Code:99D72**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2025

Open Elective

Civil Engineering

19UBT972- QUALITY ASSURANCE AND CONTROL IN FOOD INDUSTRY

(Common to CSE,EEE, ECE, MECH, IT ,Agri, BME, CSBS & CSD Engineering branches)

(Regulations 2019)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

1. I am in a plan to develop a food product so being a customer list some quality assessing parameters that a customer would have for developing good food product. CO2- App
2. List some applications of Microbes in food industry. CO1- U
3. The fishes harvested from the ocean were found in excess of the sales and dumped as waste. Suggest them a processing technique to make them a useful food product. Justify your suggestion. CO2- App
4. Suggest me a technique for sterilizing heat labile compounds. Justify it. CO2- App
5. Define packaging process. CO1- U
6. Write the importance of labeling. CO1- U
7. Define TQM. CO1- U
8. What is the purpose of writing SOP? CO1- U
9. Daniel, a food safety officer inspects a tea shop. Now list out what are instructions he should give to the workers and owner of the shop. CO2- App
10. Explain how AGMARK certification is varied from FSSAI certification. CO2- App

PART – B (5 x 16= 80Marks)

11. (a) Explain in detail various unit operations in food processing to improve the shelf life of a product. CO1- U (16)

Or

- (b) Write various spectroscopy techniques and its corresponding electromagnetic radiation used during the analysis and explain in detail the spectroscopy technique which uses visible region as source of analysis. CO1- U (16)
12. (a) In a meat shop the slaughtered meat pieces were found in excess. Suggest Carter some processing techniques to make them a useful food product. Justify your suggestion in detail. CO1- U (16)
- OR
- (b) Romanoff has planned to start a dairy industry. Suggest her some dairy products and ways to process and preserve the products. Justify your suggestion in detail. CO1- U (16)
13. (a) Explain in detail various ways of packaging methods and the research methods to develop it. CO1- U (16)
- Or
- (b) Write about the food safety issues in consuming ready to eat foods in detail. CO1- U (16)
14. (a) In a food industry, make a hazard analysis in various departments and prepare a HACCP Protocol to rectify the flaws and enhance the production. CO2- App (16)
- (b) Mr. Stark was recruited by a dairy industry to monitor and enhance the production of Paneer. Now he is insisting the R&D department prepare SOP for the production. Help him for the effective writing of SOP. CO2- App (16)
15. (a) Write a detailed note on food safety regulations of GMO based food products. CO2- App (16)
- OR
- (b) Explain the quality attributes to be maintained and safety regulations to be followed in a biscuit producing industry. CO2- App (16)