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Question Paper Code: U9C75

B.E./B.Tech. DEGREE EXAMINATION, APRIL / MAY 2025

Open Elective

Civil Engineering

21UBT975- QUALITY ASSURANCE AND CONTROL IN FOOD INDUSTRY

(Common to All Engineering branches)

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10x 2 = 20 Marks)

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| 1. List out various vitamins with their classification | CO1- U |
| 2. Illustrate wine production technically | CO1- U |
| 3. Define D value of thermal sterilization | CO1- U |
| 4. Write a short note on edible coating | CO1- U |
| 5. Differentiate breakthrough and radical innovations | CO1- U |
| 6. Illustrate how the packaging methods were developed or enhanced | CO1- U |
| 7. What is the purpose of drafting Good Manufacturing Practices? | CO1- U |
| 8. Do any difficulties arise during Good hygiene practices implementation? | CO1- U |
| 9. What is GMO and write its significance | CO1- U |
| 10. 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. | CO3- App |

PART – B (5 x 16= 80 Marks)

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|--|--------|------|
| 11. (a) Explain various spectroscopy techniques and its corresponding electromagnetic radiation and visible radiations used during the analysis. | CO1- U | (16) |
| Or | | |
| (b) What is microbial spoilage, and how does it affect the quality of food products? | CO1- U | (16) |

12. (a) In terms of process optimization, how can knowledge of D, Z, and F values be utilized to ensure the effectiveness of thermal treatments while preserving food quality? CO2- App (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 CO2- App (16)
13. (a) Discuss the advantages and disadvantages of various packaging materials, including plastics, glass, and metals, in the context of different food products? CO1- U (16)
- Or
- (b) Discuss the potential risks and preventive measures related to the contamination of ready-to-eat foods during manufacturing, handling, and storage? CO1- U (16)
14. (a) What is the significance of Hazard Analysis and Critical Control Points (HACCP) in ensuring food safety, and how is it prepared and documented in a food processing company? CO1- U (16)
- Or
- (b) Explain in detail the features, approaches and advantages of Total Quality Management CO1- U (16)
15. (a) Linda has planned to start a meat based industry. Suggest her some meat products with their possible safety issues and quality parameters to be verified before marketing in detail CO3- App (16)
- Or
- (b) Vishal was recruited in curd production. Help him with the various quality attributes to be verified and safety issues with a detailed explanation. CO3- App (16)