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Question Paper Code : 41510

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2024.

Sixth Semester

Biomedical Engineering

OBT 351 – Food, Nutrition and Health

(Common to: Computer Science and Engineering/Computer and Communication Engineering/Electronics and Communication Engineering/Electronics and Telecommunication Engineering/ Medical Electronics/Artificial Intelligence and Data Science/Computer Science and Business Systems/Information Technology)

(Regulations 2021)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. State microbial Indicators of product quality.
2. Comment on the concept of Hazard Analysis Critical Point System.
3. What are the importance and influence of bioflavors and colors in food items?
4. Recall recombinant enzymes in food sector.
5. Comment on the important aspects of nano materials as food components.
6. State shelf-life assessment with suitable example.
7. What are the causes and impacts of cardio-vascular diseases?
8. List the requirements related to individual nutrient and energy needs.
9. State the safety aspects associated with GM foods.
10. Define bioavailability.

PART B — ($5 \times 13 = 65$ marks)

11. (a) Describe in a neat manner about the physiological disturbances in alcoholism, drug abuse and smoking.

Or

- (b) Explain in a systematic manner about the microbial indicators of product quality and food safety.

12. (a) Summarize the importance and influence of carbohydrates, proteins and lipids in the body development.

Or

- (b) Explain about the influences of vitamins in body system and also expose the important types of vitamins with their benefits.

13. (a) Outline the various steps involved in the food product development.

Or

- (b) Explain in a suitable manner about the food packaging, nano materials, policies on usage of nanomaterials in foods.

14. (a) Analyze the role of Type-II Disorders in the development of cancer, diabetics and water imbalance.

Or

- (b) Explain in a detailed manner about the Type I Disorders and also the causes of life style and stress related diseases.

15. (a) Elaborate in a systematic manner about the global perspective of consumers on GM foods.

Or

- (b) Elaborate suitably about the importance and influence of regulatory agencies involved in GM foods.

PART C — (1 × 15 = 15 marks)

16. (a) Explore the importance of calcium, magnesium, iron, zinc and copper in food for the benefits of human body.

Or

- (b) Create a healthy diet plan and describe the important aspects to plan a healthy diet.