

**GURU JAMBHESWAR UNIVERSITY OF SCIENCE AND TECHNOLOGY, HISAR**

**Centre for distance and online education**

Programme: Diploma in Food Quality Assurance

**Nomenclature:** Introduction to Food Analysis

**Semester:** 2<sup>nd</sup>

Code: IIFQA01

**Total Marks:** 30

**Credits:** 4+0+0

**Important Instructions:**

- 1) Attempt all Questions each assignment given below
- 2) Each assignment carries 15 marks
- 3) All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on student's portal

**Assignment -I**

Q1-Define sampling. Discuss different types along with their significance.

Q 2- What is the proximate analysis of food? Explain its importance. Discuss the method of moisture and protein estimation in a given food sample.

Q 3- Name different instruments used to measure the textural properties of food. Explain one instrument along with its principle, working, and applications.

**Assignment -II**

Q 1- Name different equipment used to evaluate the rheological properties of food. Explain any one instrument to study the rheology of dough.

Q 2- Define spectroscopy and explain its principle. Describe the working of a UV-visible spectrophotometer.

Q 3- Explain the basic principle, working, and applications of gas chromatography in food analysis.

**GURU JAMBHESWAR UNIVERSITY OF SCIENCE AND TECHNOLOGY, HISAR**

**Centre for distance and online education**

Programme: Diploma in Food Quality Assurance

**Nomenclature:** Food Adulteration and Testing

**Semester:** 2<sup>nd</sup>

Code: IIFQA02

**Total Marks: 30**

**Credits: 4+0+0**

**Important Instructions:**

- 1) Attempt all Questions each assignment given below
- 2) Each assignment carries 15 marks
- 3) All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on student's portal

**Assignment -I**

- Q 1- Define and discuss food adulteration and types of food adulterants.
- Q 2-What are the adulteration in milk/ milk products and in cereal grains?
- Q 3- What are the injurious adulterants/contaminants in foods and discuss their health effects.

**Assignment -II**

- Q 1- Mention the tests for detection of food adulterants.
- Q 2- What are the various contamination by pathogenic microorganisms in foods?
- Q 3- Discuss various hazards/damage and protection of packaging injuries.

**GURU JAMBHESWAR UNIVERSITY OF SCIENCE AND TECHNOLOGY, HISAR**

**Centre for distance and online education**

Programme: Diploma in Food Quality Assurance

**Nomenclature: Food Packaging and Labelling**

**Semester: 2<sup>nd</sup>**

**Course Code: IIFQA03**

**Total Marks: 30**

**Credits: 4+0+0**

**Important Instructions:**

- 1) Attempt all Questions each assignment given below
- 2) Each assignment carries 15 marks
- 3) All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on student's portal

**Assignment -I**

Q 1- Discuss the characteristics of food packaging materials for package selection.

Q 2- Packaging requirement of different foods:

- i) Fresh fruits & vegetables
- ii) Meat products

Q 3- Recent advancement in the area of recycling of packaging materials.

**Assignment -II**

Q 1- Brief about recent packaging techniques to extend shelf life of foods: active and intelligent packaging.

Q 2- Elaborate recent packaging standards, regulations & labelling according to FSSAI.

Q 3- Important and role packaging in determination of shelf life of foods.

**GURU JAMBHESWAR UNIVERSITY OF SCIENCE AND TECHNOLOGY, HISAR**

**Centre for distance and online education**

Programme: Diploma in Food Quality Assurance

**Nomenclature:** Food Toxicants, Contaminants and Allergens

**Semester:** 2<sup>nd</sup>

Code: IIFQA04

**Total Marks:** 30

**Credits:** 4+0+0

**Important Instructions:**

- 1) Attempt all Questions each assignment given below
- 2) Each assignment carries 15 marks
- 3) All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on student's portal

**Assignment -I**

- Q 1.** What is food toxicology? Classify toxins on the basis of origin with the help of suitable examples.
- Q 2.** Explain about the toxins from microbial source. How they are impacting food safety?
- Q 3.** Describe different types of allergens present in food.

**Assignment -II**

- Q. 1.** What is the role of colorants and flavours in food toxicology?
- Q 2.** Explain about toxins produced during processing. Describe toxins produced during meat processing.
- Q3.** What are acrylamides? How they are produced in the food and what strategies need to adopted to minimise acrylamide production?

**GURU JAMBHESWAR UNIVERSITY OF SCIENCE AND TECHNOLOGY, HISAR**

**Centre for distance and online education**

Programme: Diploma in Food Quality Assurance

**Nomenclature: HACCP in Food Industry**

**Semester: 2<sup>nd</sup>**

Code: IIFQA05

**Total Marks: 30**

**Credits: 4+0+0**

**Important Instructions:**

- 1) Attempt all Questions each assignment given below
- 2) Each assignment carries 15 marks
- 3) All questions are to be attempted in legible handwriting on plane white A-4 size paper and upload the scanned copy of the assignments on student's portal

**Assignment -I**

- Q 1- What do you understand by HACCP. Enlist the prerequisites used in food industry.
- Q 2- Define the term Hazard. Explain the different types of food safety hazard
- Q 3- Write a short note on the following fermented foods-
- 1) FIFO
  - 2) Ornament policy

**Assignment -II**

- Q 1- Write in brief about HACCP principles and their application steps.
- Q 2- What is CCP? Enlist the CCP in bakery industry.
- Q 3- Write down the responsibilities of HACCP team