

Course related to Environment

Sem	Course Code	Elective - II	Total Marks: 100		Hours Per Week	Credits
			CIA: 25	ESE: 75		
IV	17UATET409	Food Preservation			4	4

OBJECTIVE(S)

1. To understand the principles of food preservation
2. To acquire skills in methods of food preservation

Course Outcomes:

At the end of the course, students will be able to

CO1 Will have a basic knowledge about concept of food preservations.

CO2 Will have a good knowledge in preservation techniques by using food chemicals.

CO3 Will possess a thorough knowledge in processing of foods

CO4 Can enrich their skills and knowledge in preservation of food by Cold & Hot temperatures.

CO5 Will have a knowledge in radiation of foods.

UNIT I

Food preservation - Definition, general principles and methods of food preservation. Classification of foods for processing. Preservation by addition of sugar, salt- General principles. Status and scope of food processing industry in India.

UNIT II

Preservation by use of high temperature - Pasteurization, sterilization and their types.

Canning - Steps, types of cans, advantages, disadvantages.

Bottling - Steps, advantages, disadvantages.

Food dehydration - Concept of dehydration and sun drying.

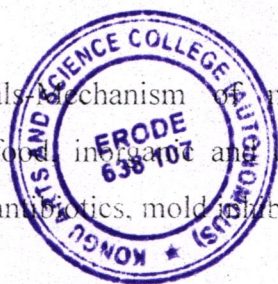
UNIT III

Preservation by use of low temperature. Types - Common types of cold storage, refrigeration during transport, defects in cold storage.

Freezing - Principles and methods of freezing, freeze drying - advantages and disadvantages.

UNIT IV

Preservation with chemicals - Mechanism of microbial inhibition, mechanism and action of preservatives in processed food, inorganic and organic preservatives (nitrites, nitrates, sugar, salt, sorbic acid and acetic acid), antibiotics, mold inhibitors, antioxidants and...



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UNIT V

Radiation of foods- Sources of radiation, units of radiation, mode of action of irradiation, radiation effect on protein enzyme system, microwave heat. Preservation of semi moist foods - Principles and intermediate moist foods.

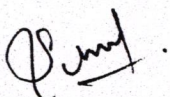
TEXTBOOK

Janet D. Ward and Larry T. Ward, Principles of Food Science, Goodheart-Willcox Company, Tinley Park, IL, 2007.


REFERENCES

- 1) B. Sivasankar, Food Processing and Preservation, PHI Learning Private Limited, New Delhi, 2002.
- 2) G.Subbulakshmi and Shobha A. Udipi, Food Processing and Preservation, New Age International Publishers, New Delhi, 2001.
- 3) B. Srilakshmi, Food Science, 3rd Edition, New Age International Publishers, New Delhi, 2003.
- 4) W.C. Frazier, D.C. Westhoff, Food Microbiology, Mc Graw Hill, New York, 1995.

QUESTION PAPER PATTERN		
Section - A	Section - B	Section - C
10 x 1 = 10 Marks (Multiple Choice, Four options) Two questions from each unit	5 x 7 = 35 Marks (Either or choice) Two questions from each unit	3 x 10 = 30 Marks (Answer any three Questions) One Question from each unit


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