

ADIKAVI NANNAYA UNIVERSITY

RAJAMAHENDRAVARAM

CBCS / Semester System

(From 2015-16 Admitted Batch)

B.Sc. Food Technology

III Semester Syllabus

PROCESSING AND PRESERVATION OF FOODS - 1

Unit-I:

Classification of different foods of plant origin: Cereals, Millets, Pulses, Oilseeds, Fruits, Vegetables, Spices and Plantation Crops. Composition & constituents- Post harvest handling, Storage, methods of infestation.

Unit-II:

Study of different process methods: products of cereals and millets with special reference to rice and wheat. Processing and product development with maize, sorghum and ragi. Processing of Pulses along with different pre-treatments. Oil expelling methods with emphasis on Sesame, Sunflower, Mustard, Palm, Coconut, groundnut and Rice bran oils. Refining, Hydrogenation and Shortenings.

Unit III:

Fruits and Vegetables- Different processing operations – Fruit Juices, Squashes, Cordial, Jam, Jelly, Marmalade, Chutneys, Sauces, Pickle Processing along with Principles and methods of preparation and their usage in different communities.

Unit-IV:

Classification and composition of Spices and Plantation crops. Study of special attributes of main spices like Pepper, Cardamom, Ginger, Garlic, Turmeric, Nutmeg, Coriander and Cinnamon. Chillies, Cocoa, Coffee, Tea and Gum and their processing and preservation methods.

Unit-V:

Classification of animal foods. Meat and Meat products selection, Meat and Meat Products, Egg & Avian Products, Milk & milk products, Fish & Fishery products, and their composition. Characters of animal foods and selection of different animal foods for processing.

Practicals:

1. Determination of quality parameters of rice and wheat.
2. Processing of flaked, parboiled and puffed rice.
3. Experiments on flour quality.
4. Processing of different wheat products.
5. Planning and preparation of malted products.
6. Processing of different fruit and vegetable based products which includes jams, jelly, marmalade, pickles, squashes, juices and cordials.
7. Visit to rice and wheat processing industry and study of different equipment.
8. Visit of fruits, vegetables & spice processing industry and study of processing.

Books for Reference:

1. J.L. Multon, A.M. Riemert, D. Marsb & A.J. Eydt 1st edition, *Preservation & Storage of Grain, Seeds and their Products*, CBS Publications and Distributors, Delhi.
2. Kent, *Cereal Technology*, Oxford Perman Press, London.
3. Giridharlal, Sidappa and G.L. Tandon, *Preservation of Fruits and Vegetables*, ICAR, New Delhi.
4. Dey.S, *Outlines of Dairy Technology*, Oxford University Press, New Delhi, 1994.
5. Lawrie R.A, *Meat Science*, Paragon Press Oxford, New York.
6. Borgstorm G. *Fish as Food*, Vol-4, New York Academic Press.