

## **Fruits and Vegetable Processing 3(2-1)**

### **Theory**

General properties of fruits and vegetables: chemical composition, nutritional aspects, structural features, choice of processing technologies. Maintaining post-harvest quality of fruits and vegetables: quality criteria, quality deterioration – measurement and maintenance. Spoilage factors (chemical, enzymatic, biological) and their control. General procedures for fruits and vegetables preservation: an overview. New technologies for processing of fruits and vegetables: minimal processing technology, modified atmosphere packaging, edible coatings and high pressure processing – introduction, applications, impact on bacteria, enzymes, product quality. Future trends in fruits and vegetables processing.

### **Practical**

Preparation of fruits and vegetables products: dried, frozen and canned. Quality evaluation of the products during storage. Manufacturing of pickle, juice concentrate, ready to serve juices, squashes, syrups and fruit candies. Use of edible coating for fruits and vegetables. Visit to fruit and vegetable processing units.

### **Books Recommended**

1. Awan, J.A and Rehman, S.U. 2009. Food preservation manual. Unitech Communications, Faisalabad, Pakistan.
2. Jongen, W. (Ed). 2002. Fruit and vegetable processing – improving quality. Woodhead Publishing. Ltd., Abington, Cambridge, UK.
3. Sirivastava, R.P. and Sanjeev, K. 2002. Fruit and vegetable preservation: principles and practices. International Book Distributing Co., Lucknow, India.
4. Dauthy, M.E. 1995. Fruit and vegetable processing. FAO Agricultural Services Bulletin No. 119. Food and Agriculture Organization of the United Nations, Rome, Italy.

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