IV Year B.Tech Food Technology I - Semester

PROCESSING OF SPICES AND PLANTATION CROPS

UNIT – I
Introduction and History of Spices and condiments, production and processing scenario of spices and plantation crops and its scope. Value addition of spices and spice products with different processing methods. Definition of major spices, classification of spices, post harvest technology, processed products and their marketing in trade. Different technologies involved in the preparation of spice powders, spice oils, oleoresins and micro encapsulated products. Standards and specifications of spices, packaging of spices and spice products, market value of spices in India. Herbs and leafy vegetables used as spices and condiments. Definition of plantation crops, Commercial value of plantation crops that are grown in India. Garlic- introduction, harvesting, post harvest technology, processing methods, Processed products and its grades

UNIT – II
Turmeric - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Onion - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Pepper- introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. All spice and Dill seed - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Nutmeg and Mace: Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Cassia and Cinnamon : Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades

UNIT – III
Coffee - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Tea - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, Types of tea packaging and different grades. Rubber - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Cocoa - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Clove and Coriander - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Annie seed and Fennel seed: Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Chilli - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades

UNIT – IV
Cumin and Ajowan : Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Areca nut - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Cardamom - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Sweet basil and Mint - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Sage and Savory - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Marjoram and Saffron - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Oil palm - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Cashew nut - Introduction, harvesting, post harvest technology and
treatments, Processing into marketed products, adulteration, specifications for marketed products, packaging and different grades

UNIT – V
Vanilla and Annatto - Introduction, harvesting, post harvest technology and treatments, processing and extraction, adulteration, specifications for marketed products, packaging and different grades. Thyme and Rosemary - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Coconut - Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Asofoetida and caraway seed - Introduction, harvesting, post harvest technology, treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades. Chemistry of different spice flavors including coffee, tea, vanilla, nutmeg, mace, cinnamon, mint and Ajowan. Ginger: Introduction, harvesting, post harvest technology and treatments, processing into marketed products, adulteration, specifications for marketed products, packaging and different grades.

References
4. Gupta S. *Hand Book of Spices and Packaging with Formulae*. Engineers India Research Institute, New Delhi.