

SEMESTER - II - CORE COURSE – VI - ADVANCED FOOD SCIENCE II

{Hours of Instruction Per week: 6
Theory 3
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OBJECTIVES:

To enable Students to

1. Understand the Principles and chemistry of foods.
2. Apply the Principles while preparing and cooking.

TOPIC	COURSE OUTLINE	RELATED EXPERIENCE
UNIT – I CARBOHYDRATE STARCH	Sources – Uses gelatinization of flours, starch as thickening agents. Gluten formation, Factors affecting it and Retro gradation of starch.	Microscopic Examination of different Starches and gluten formation preparation of Dasai, Idli, Appam, Poori, Chappathi.
BREAD MAKING	Role of ingredients- Methods of Bread making and leavening agents.	Demonstration of Bread making, Preparation of different types of biscuits.
UNIT – II GRAMS, DHALS AND NUTS	Composition, Methods of Processing and cooking, Effects of Processing Such as soaking, decortications, Germination and fermentation.	Methods of cooking pulses, Effect of soaking with Alkalis, salts and germination of grams.
VEGETABLES AND FRUITS	Structure, Texture pigments and, Acids in Vegetable and fruits. Cellulose and Hemicelluloses. Changes in cooking, Pectic substances, James and Jelly.	Structure, Texture, Pigments and acids in Vegetables and fruits changes in cooking, pectic substances, Jam and Jelly.
UNIT – III SUGAR	Sources, Uses Properties, crystallization of sugar.	Crystallization of sugar, stages of sugar cookery, Fondant, Fudge and brittle, Preparation of Lalwa, coconut burfi and gulabjamun.
SUGAR COOKERY	Stages of Sugar cookery, Amorphous and crystalline candies, fondant, Fudge and caramels, Indian Sweet Preparations.	

<p>UNIT – IV MEAT</p>	<p>Structure, Cuts of meat and Constituents of meat, Postmortem changes, Methods of increasing Tenderness and juiciness</p>	<p>Meat, fish and Poultry – changes in cooking. Two recipes in each involving any two methods.</p>
<p>FISH</p>	<p>Kinds of fish, Constituents, selection and cooking</p>	
<p>EGGS</p>	<p>Structure, Composition and Selection, Coagulation of egg Protein, Egg cooked in shell, Poached, cake making Procedures and different types of cakes.</p>	<p>Coagulation of Egg, boiled eggs, Poached eggs, omelets, Custard and cake.</p>
<p>UNIT- V MILK AND MILK PRODUCTS</p>	<p>Composition, and Constituents of milk, Physical and chemical properties. Protein, creaming, butter and cheese making.</p>	<p>Cream of Tomato soup, Preparation of cheese, curds and ice-cream.</p>
<p>FATS AND OILS</p>	<p>Sources and Extraction of edible fats and oils. Characteristics of Fats And oils Physical and Chemical Properties of oils and Fats. Changer during storage and cooking. Uses of fats, Value and Flakiness</p>	<p>Smoking temperature. Factors affecting absorption of fats, deep fried foods.</p>