

4269 – METHODS OF FOOD PRESERVATION- II										
Teaching Schedule Per Week			Progressive Assessment		Examination Schedule (Marks)					
Lectures	Practical	Credits			Theory			Practical Ex.	Total	
3	2	5	25	25	100	3 Hrs	-	150		
Pre-requisite		Source	Semester		Theory	Test	Total	TW	PK	Gr Total
Nil		FOD			75	25	100	50	-	150

Rationale: This is the continuation of Methods of Food Preservation- I

Rationale: This is the continuation of Methods of Food Preservation- I. In this subject more emphasis is given on chemical additives, packaging and canning. Chemical additives play an important role in nation's economy of food. In processing and preservation of food their uses is indispensable in maintaining nutritional quality in regarding the rate of deterioration, in improving aesthetic appeal and convenience of food processing. Packaging plays an important role in finished product and increasing the marketability. The topics covered in theory are supplemented with practical to provide appropriate skills.

## COURSE CONTENT

	Hrs	Mks
<b>1. METHOD OF FOOD PRESERVATION</b>	18	30
Preservation by heat. Principles of preservation by heat, blanching, sterilisation, pasteurisation, Preservation by canning- Canning principle, classification of foods for processing, types of can and can terminology, Lacquered cans, Outline of manufacture of can from tin plate electrolytic and Hot Dip Tinning Method for tin plate manufacture. Canning operation and equipment. Procedures and equipment involved in- Filling, Exhausting, Seaming, Retorting, Cooling. Common problems in above equipment-Causes and remedial action to be taken, Examination of can cut out report.		
<b>2. PRESERVATION BY CHEMICALS</b>	15	40
Chemical preservatives- Antioxidants, chemistry, application, mode of action limits. Antibiotics, mold inhibitors – Chemistry, application, mode of action, limits. Food additives – Outline of mode of action, application and limits in the following additives- Colours, flavours, acidulents bases and buffers, sweeteners, nutritive additives, flour and bread additives, emulsifiers and thickeners, Anti-caking agents, Humectants, Enzymes, Firming agents.		
<b>3. PACKAGING</b>	15	30
Packaging of food – Functions of packaging, primary elements of package form, material and decoration. Various package forms – Pouches, tubes, package materials: Aluminium, glass, tinne steel plate, carton board paper, flexible films, laminates. Properties of above and their advantages and limitations. Suitable printing methods in brief. Shipping containers – Secondary containers, wooden boxes, crates, baskets, etc. Testing of packaging material.		
<b>Total</b>	<b>48</b>	<b>100</b>

## PRACTICALS

- 1) Examination of tin plate
- 2) Can seam examination
- 3) Cut out report for typical product such as: Fruit in syrups, vegetables in brine, puree / paste
- 4) Identification of plastic films
- 5) Estimation of shelf life of packaged food
- 6) Demonstration on efficiency of antioxidants in storage of fatty food
- 7) Demonstration on addition of emulsifiers and stabilisers in squash / juice
- 8) Demonstration on effect of adding thickening agents in products like ketchup, sauce, etc.
- 9) Addition of anti-caking agents in dehydrated powdered foods
- 10) Addition of humectant in coconut shreds.