SEC- ANALYTICAL TECHNIQUES – I

Course Objectives: Student should be able to...

1. Understand the methods of proximate analysis of food.
2. Know different types of solution

Credits (Total Credits 1)	SEC- ANALYTICAL TECHNIQUES – I	No. of hours (15 hours)
UNIT I	**Proximate Analysis of Food**	8
	Introduction, Preparation of sample, Methods for estimation of moisture, protein, fat, fiber, ash and Carbohydrate.	
UNIT II	**Types of Solution**	7
	Molar Solution, Normal solution, Colloidal solutions, Buffer solutions, Measurement of pH, acidity.	

Course Outcomes: Students will be able to...

1. apply the methods of proximate analysis of food.
2. prepare different types of solution

Reference Books:

1. Morris B. Jacobs, The chemical analysis of foods and food products, CBS Publishers and distributors New Delhi, III Edition, 2000.
2. S. Rañganna, Hand book of analysis and quality control for fruit and vegetable products, Tata McGraw Hill Publishing Co. NewDelhi.,3rd edition,2007.
3. D.T. Plummer, An introduction to practical biochemistry, Tata McGraw Hill Publishing Co. New Delhi, 3rd edition, 2004.
4. Pomeranz Y., Meloan, Food Analysis: Theory and practice, Clifton E. 1994. 3 Edn. IS: 6273 (Part- 1and Part-2). Chapmanand Hall, 3rd edition, 2004.

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ANALYTICAL TECHNIQUES –I

Credits (Total Credits 1)	ANALYTICAL TECHNIQUES – I	No. of hours (30 hours)
1	To estimate carbohydrates by phenol sulfuric acid method.	
2	To estimate protein by Biuret method.	
3	To estimate reducing sugar from food	
4	To estimate non- reducing sugar from food	
5	To study the preparation of primary solutions.	
6	To study the preparation of secondary solutions.	
7	To determine the pH of different food samples.	
8	To determine the acidity of given food samples	
9	To determine the moisture Content from given food samples	
10	To determine the ash content from given food samples.	
11	To determine the fiber content from given food samples.	
12	To determine the fat content from given food samples.	
13	To determine dietary fiber from food	
14	To study the preparation of Normal solution	
15	To study the preparation of Molar solution	

Course Outcomes: Students will be able to...

1. analyze the fat and acidity indifferent food sample.
2. determine moisture content, ash content, fat content, fiber content, protein content of indifferent food sample.

REFERENCE BOOKS:

1. Connie M. Weaver, James R. Daniel, The Food Chemistry Laboratory: AManual for Experimental Foods, Dietetics, and Food Scientists, 1996.
2. Morris B. Jacobs, The chemical analysis of foodsand food products, CBSPublishers and distributors New Delhi.3rd edition 2018.
3. S. Ranganna, Hand book of analysis and quality control for fruit and vegetable products, (Tata McGraw Hill Publishing Co. New Delhi, 2003.
4. Dennis D. Miller, Food Chemistry: A Laboratory Manual, Wiley 2017.