

  
**Dr. Estari Mamidala**  
Chairman  
Board of Studies in Zoology  
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Kakatiya University  
Warangal-506009

**B.Sc. FOOD & NUTRITION**  
**KAKATIYA UNIVERSITY – WARANGAL - TELANGANA**  
Under Graduate Courses (Under CBCS 2020-21 onwards)  
**B. Sc. II<sup>nd</sup> YEAR - SEMESTER - IV**

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**PAPER-IV: DIET IN DISEASE (Theory)**

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**Theory: 4 hrs/week; Credits : 4 Marks : 100 (Internal-20, External-80) Practical:**  
**3 hrs/week; Credits : 1 Marks : 25**

**UNIT I: ENERGY METABOLISM**

- 1.1 Energy metabolism- Measurement of energy by direct and indirect calorimetry, determination of energy value of food by bomb calorimeter and benedicts oxy calorimeter
- 1.2 Energy balance, Factors affecting TEE - BMR, Physical Activity, SDA
- 1.3 Underweight- Definition, Causes, Principles of the Diet, Dietary Modifications, Foods to Be Included and Foods to be Avoided
- 1.4 Obesity - Definition, Causes, Assessment (BMI, Body Weight, Brokas Index), Type (Grade I, II, III, Apple and Pear shape) Complications, Principles of the Diet Dietary Modifications , Foods To Be Included And Foods To Be Avoided

**UNIT II: DIET IN DIABETES AND CARDIO VASCULAR DISEASES**

- 2.1 Diabetes - Definition, Causes, Types, T2DM- risk factors, Signs, Symptoms, Complications and Dietary Modifications
- 2.2 T1DM- risk factors, Signs, Symptoms, Complications and Dietary Modifications
- 2.3 Hypertension- Definition, Causes, Types, risk factors, Signs, Symptoms, Complications and Dietary Modifications
- 2.4 Atherosclerosis - Definition, Causes, risk factors, Signs, Symptoms, Complications and Dietary Modifications

**UNIT III: DIET IN GASTRO – INTESTINAL DISEASES**

- 3.1 Diarrhoea - Definition, causes, types, symptoms, complications and dietary Modifications, foods to be included and foods to be avoided
- 3.2 Constipation - Definition, causes, types, symptoms, complications and dietary modifications, foods to be included and foods to be avoided
- 3.3 Peptic Ulcer - Definition, causes, types, symptoms, complications and dietary modifications, foods to be included and foods to be avoided

  
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3.4 Celiac disease, tropical sprue, irritable bowel syndrome, inflammatory bowel disease-  
Definition, Symptoms

#### **UNIT IV: DIET IN LIVER AND PANCREATIC DISEASES**

4.1 Hepatitis - Definition, Causes, Types, Symptoms, Complications and Dietary Modifications, Foods to Be Included and Foods to Be Avoided

4.2 Cirrhosis - Definition, Causes, Symptoms, Complications and Dietary Modifications, Foods to Be Included and Foods to Be Avoided

4.3 Gall stones - Definition, Causes, Symptoms, Complications and Dietary Modifications, Foods to Be Included and Foods to Be Avoided

4.4 Pancreatitis- Definition, Causes, Types, Symptoms, Complications and Dietary Modifications, Foods to Be Included and Foods to Be Avoided

#### **Books Recommended:**

#### **Text Books:**

- ❖ Srilakshmi B – Dietetics, 5<sup>th</sup> edition, New Age International publishers, 2002.

#### **Reference Books**

- ❖ Antia F.P - Clinical Dietetics and Nutrition, Oxford University Press, New Delhi, 2003.
- ❖ Mahtab S. Bamji, N Prahlad Rao, Vinodini Reddy -Text book of Human Nutrition, 2<sup>nd</sup> edition, Oxford and IBH publishing Co. Pvt. Ltd, 2004.
- ❖ Swaminathan, M - Essentials of Food and Nutrition, Vol 2, Bangalore Printing and Publishers Co Ltd, Bangalore, 1985.

  
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**PAPER-IV: DIET IN DISEASE (Practical)**

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- I. Planning, Calculation and Preparation of Diets for
  1. Underweight
  2. Obesity
  
- II. Planning, Calculation and Preparation of Diets for
  3. Diabetes- T2DM
  4. Hypertension
  
- III. Planning, Calculation and Preparation of Diets for gastro intestinal diseases
  5. Diarrhea
  6. Constipation
  7. Peptic Ulcer
  
- IV Planning, Calculation and Preparation of Diets for Liver diseases
  8. Hepatitis
  9. Cirrhosis
  10. Gall stones

**Books Recommended**

- ❖ Srilakshmi B – Dietetics, 5<sup>th</sup> edition, New Age International publishers, 2002.
- ❖ Longvah T. , Ananthan R. , Bhaskarachary K. and Venkaiah K. Indian Food Composition Table, National Institute of Nutrition, Tarnaka, 2017.
- ❖ Indian Dietetic Association, Clinical Dietetics Manual 2<sup>nd</sup> Edition