B.Sc NUTRITION AND DIETETICS (NON- SEMESTER)
(With effect from the Academic Year 2013-2014)

QUALIFICATION FOR ADMISSION:

- Candidate should have passed the Higher Secondary Examination conducted by the Board of Higher Secondary Education, Govt. of Tamilnadu or other examination. Bio- Maths or Computer Science or any Vocational groups are considered to eligible for this course.

DURATION OF THE COURSE:

- The students shall undergo the prescribed course of study for a period of 3 academic years.

STRUCTURE OF QUESTION PAPER:

- For all the papers the maximum marks is 100.
- Section A – Answer any 8 questions out of 12 questions (5x8 = 40 marks)
- Section B - Answer any 6 questions out of 10 questions (6x10 = 60 marks)

MADURAI KAMARAJ UNIVERSITY

DDE - B.Sc. NUTRITION AND DIETETICS(Non-Semester)

COURSE OUTLINE

YEAR	PAPER	TITLE OF THE PAPER	TOTAL HOURS	MAX MARKS		TOTAL MARKS
				THEORY	PRACTICAL	
I	1	HUMAN PHYSIOLOGY		100	-	100
	2	FOOD MICROBIOLOGY		100	-	100
	3	FOOD SCIENCE-I		100	-	100
	4	BASIC NUTRITION		100	-	100
II	5	NUTRITIONAL BIO CHEMISTRY		100	-	100
	6	FOOD SCIENCE – II		100	-	100
	7	NUTRITION THROUGH LIFE CYCLE		100	-	100
	8	FOOD SCIENCE PRACTICALS		-	100	100
III	9	FUNCTIONAL FOODS IN HEALTH AND DISEASE		100	-	100
	10	FOOD SERVICE MANAGEMENT		100		100
	11	DIETETICS		100		100
	12	DIETETICS PRACTICALS		-	100	100

I – YEAR

PAPER – I

HUMAN PHYSIOLOGY

OBJECTIVES

To enable the students to understand the

- Organs of the body and their functions
- Different systems of the body, their functions with special reference to the control and feedback mechanisms
- Physiological changes at different stages of life.

UNIT – I: DIGESTIVE AND EXCRETORY SYSTEM

Anatomy and functions of the organs of the digestive system;-oral cavity, stomach, small intestine, large intestine, pancreas, liver; Saliva-composition, function, Bile-composition, function ; process of digestion, absorption and assimilation of food. Movements of the gastro intestinal tract-deglutition, gastric tone, digestive peristalsis, Pendular, Segmenting movements, antiperistalsis, Peristalsis rush, gastro colic reflex.

EXCRETORY SYSTEM

Kidneys, Nephron-Structure and functions, renal circulation, Juxta glomerular apparatus; composition, volume and formation of urine, micturition Urinary Bladder -Structure, filling of bladder, impairment of renal function.

Skin - structure and functions, regulation of body temperature.

UNIT – II: BLOOD AND CIRCULATORY SYSTEM

Composition, functions and volume of blood. Erythrocytes, Leucocytes, Thrombocytes- types, erythropoiesis, leucopoiesis, life span and fate, functions; Haemoglobin, Erythrocyte sedimentation rate, haemolysis, leucocytosis, leucopenia, leukemia, polycythemia, anaemia.

Blood coagulation, blood grouping, transfusion, RH factor, Erythroblastosis foetalis.

Structure and functions of the heart and blood vessels. Cardiac impulse - Junctional tissues, cardiac cycle, Blood pressure- factors affecting blood pressure, ECG, heart sounds, Cardiac output, regulation of heart rate, pulse.

UNIT – III: RESPIRATORY SYSTEM

Anatomy- respiratory pathway, lungs - lung unit: Mechanism of respiration, lung volumes. Gaseous exchange in tissues, lungs; transport of O_2 and $C0_2$ - chloride shift; Regulation of respiration - nervous, chemical - Herring-Brewers reflex; types of breathing; modified forms of respiration- Hypoxia, Asphyxia, Cyanosis, Oxygen debt; Artificial Respiration – types - mouth to mouth, Schafer's method, Holger Neilson's method, Eve's rocking method, Drinker's mechanical method.

UNIT – IV: REPRODUCTIVE AND ENDOCRINE SYSTEM Anatomy of male and female reproductive organs - menstrual cycle, process of reproduction and lactation, conception and contraception.

Structure and functions of pituitary, thyroid and adrenal glands.

UNIT – V: SENSE ORGANS AND NERVOUS SYSTEM

Structure and functions of Eye and Ear
Structure of neuron, synapse,

Structure and functions brain – Cerebrum, Cerebellum, Medulla oblongata Functions of spinal cord

Functions of Autonomic nervous system
Reflex Action – reflex arc. - Receptors –types.
Physiology of sleep - theories.

TEXT BOOKS:

1. Winwood (1988) Sear's Anatomy and Physiology for nurses, Edward Arnold, London
2. Chatterjee C C (1988) Text book of Medical physiology, W B Saunder's Co, London
3. Best,C.H and Taylor, R.S., The Living Body; Chapman and Hall Ltd., London, 1963.
4. Jain,A.K.: Textbook of Physiology. Vol.I and II. Avichal Publishing Co., New Delhi.
5. Mukherjee KL. 1994. *Medical Laboratory Technology.* Vol I. Tata

REFERENCES

1. Antony,C.A., Text Book of Anatomy and Physiology ;C.V. Mosby; Saint Louis, 1963
2. Best,C.H and Taylor,R.S., The Living Body; Chapman and Hall Ltd., London, 1963.
3. Best,C.H., and Taylor,R.B., The Physiological Basis for Medical Practice; The William and Wilkinson Scientific Book Company, Kolkata, 1975.
4. Guyton A.C., Text Book of Medical Physiology, W.B Saunders and Co., London, 1966.
5. Green J.H., An Introduction to Human Physiology, Oxford University Press, London, 1972.
6. S. Subramanian and S.M. Kutty, Text Book of Physiology, Orient Longman, 197 1.
7. McNaught Callander, Illustrated Physiology, Churchill Livingstone, London,1983.
8. Smith Tomy, The Macmillan Guide of Family Health, Macmillan, London, 1983.

I YEAR

PAPER II

FOOD MICROBIOLOGY

OBJECTIVES

This course will enable the student to

1. Understand the nature of micro organisms involved in Food – spoilage, food infections and intoxications.
2. Understand the importance of micro organisms in food bio technology.
3. Understand the principles of various methods used in the prevention and control of the micro organisms in foods.

UNIT – I

a) Introduction to importance of micro organisms in foods – Bacteria, yeast, Virus, Fungi Classification and their role in food industry.

UNIT – II

a) Cultivation of microorganisms – Nutritional requirements of micro organisms, types of media used.

b) Primary sources of micro organisms in foods, physical and chemical methods used in the destruction of micro organisms (Sterilization and Disinfection)

UNIT – III

Fundamentals of control of micro organisms in foods. Extrinsic and intrinsic parameters affecting growth and survival of microbes, use of high and low temperature, dehydration, freezing, freeze drying, irradiation, and preservatives in food preservation.

UNIT – IV: FOOD SPOILAGE

Contamination and spoilage of different kinds of foods and their prevention. Cereal and cereal products, vegetables and fruits, fish and other sea foods, meat and meat products, eggs and poultry, milk and milk products, canned foods.

Unit – V

Public health hazards due to contaminated foods. Foods borne infections, diseases and intoxications – symptoms mode and sources of transmission and methods of prevention investigation and detection of food borne disease outbreak.

REFERENCES

1. Frazier, WC nd Westholf, DC (1988): Fourth Edition, Food Microbiology, McGraw Hill Inc.
2. Jay James, M (1986) : Third Edition, Modern Food Microbiology, Van No strand Reinhold company Inc.
3. Pelczar, MI and Reid RD (1978): Microbiology McGraw Hill Book Company, New York.
4. Benson Harold, J (1990) Microbiological applications, Wn C Brown Publishers, USA.
5. Collins, C H and Lyne, PM (1976): Microbiological Methods, Butters worth, London.

I YEAR

PAPER III

FOOD SCIENCE – I

OBJECTIVES

This course will enable the student to

1. Understand the Science of Food.
2. Understand the importance and characteristics of foods and their products.
3. Understand the principles of processing and the effect of heat on different kinds of foods.

UNIT – I: INTRODUCTION TO FOOD SCIENCE

Definition of food, food science, functions of food, Food groups (ICMR) – Basic 7 and Basic 5 , Cooking- Definition, Objectives, Methods of cooking – Moist heat, Dry heat, Solar cooking, Microwave cooking.

UNIT – II: CEREAL AND CEREAL PRODUCTS

Structure, Composition, Milling of Wheat and Rice. Parboiling – Definition, Process, Advantages and Disadvantages. Cereal cookery – Gluten, Factors that affect the gluten formation, gelatinization, Factors affecting gelatinization, Gel formation, Retro gradation, Dextrinisation.

UNIT – III: PULSES

Composition, Processing. Germination and its advantages, Fermentation and its advantages, Parching and Puffing, Extrusion .Pulse cookery – Effects of cooking, Factors affecting cooking quality, Role of pulse in cookery.

UNIT – III: VEGETABLES AND FRUITS Vegetables:

Composition, Water soluble pigments – Anthocyanins, Betalins, Anthoxanthins, Water insoluble pigments – Chlorophyll, Carotenoids.Enzymes, Flavour compounds and Organic acids of vegetables. Vegetable cookery – Types of loss of nutrients and its prevention.

Fruits:

Classification, Composition, Enzymatic and Non enzymatic browning and its prevention.

UNIT – 5: SUGAR

Properties, Sugar related products, Sugar cookery – Stages, Crystallization – factors affecting crystallization. Types of candies– Crystalline – Fondant, Fudge. Non-crystalline – Brittle, Caramel. Role of sugar in cookery. Artificial sweeteners – Definition, Types – Low calorie, Non- calorie, Non-calorie (natural).

REFERENCES

1. Sri Lakshmi (1998), Food Science, New Age International Ltd., New Delhi.

I YEAR

PAPER IV

BASIC NUTRITION

OBJECTIVES

This course will enable the student to

1. Acquire knowledge about their functions and deficiencies.
2. Gain knowledge about physiological and metabolic role of various nutrients.

THEORY

UNIT – I: INTRODUCTION

Definitions - Nutrition, Health, Nutritional Status, Socio cultural factors influencing nutrition, Balanced diet – definition, Importance, Food pyramid.

Unit – II: ENERGY

Energy- definition, Bomb calorimeter, SDA of foods. BMR, factors affecting BMR. Direct and indirect Calorimetry, Energy balance definition. Deficiency and excess of energy, RDA, sources.

Unit – III: CARBOHYDRATES

Definition of CHO, classification, physiological functions, RDA, sources. Dietary fibre - definition. Role of dietary fibre in human nutrition.

PROTEIN: Definition, classification, function, protein quality (BV, PER, NPU), protein requirements (RDA), deficiency, Novel proteins.

Unit – IV: MINERALS

Classification, Minerals (Ca, P, Fe, Fl, Se, Zn, I) and their functions, RDA, deficiency and sources.

Unit – V: VITAMINS

Classification, Vitamins – A,D,E,K, B1, B2, B3, B6, B12 Folic acid and their functions, deficiency, RDA, sources.

WATER: Functions, requirements, Water Balance, Sources.

REFERENCES

1. Guthrie, A.A. (1986) Introductory Nutrition, 6th ed. The C.V. Moshy Company.
2. Gopalan, C.et. A1 (1991) Nutritive value of Indian Foods, ICMR.
3. Swaminathan, M. (1985) Essentials of Food & Nutrition. Vols I & II Ganesh & Co., Madras.
4. Robinson, C.H., et. A1 (1986) Normal & Therapeutic Nutrition, 17th ed. MacMillan Publishing Co.,
5. Williams. S.R. (2001) Basic Nutrition & Diet Therapy, 11th ed., Mosby, Inc. St. Louis.
6. Brown, J.E. (2002) Nutrition Now, 3rd edition, Wordsworth Thomson Learning, Inc., Canada.
7. Bamji, M.S., Rao, P., Reddy, V. (1998) Textbook of human Nutrition, Oxford & IBH Pub., New Delhi.

II YEAR

PAPER V

NUTRITIONAL BIOCHEMISTRY

OBJECTIVES

This course will enable the student to

1. Develop an understanding of the principles of bio chemistry (as applicable to human nutrition)
2. Obtain an insight into the chemistry of major nutrients and physiologically important compounds.
3. Understanding the biological process and systems as applicable to human nutrition.
4. Apply the knowledge acquired to human nutrition and dietetics.

UNIT – I: CARBOHYDRATES

Structure and properties of Monosaccharides – glucose, fructose, galactose. Disaccharides – maltose, lactose, sucrose Polysaccharides – Dextrin, Starch, Glycogen. Carbohydrate glycol sis, gluconeogenesis, glycognesis, glycogenolysis, blood sugar regulation.

UNIT – II: PROTEINS

Structure and properties of Amino Acids, Essential and Non essential Amino Acids, Definition, Classification, Structure, properties and functions of proteins. General reactions of amino acid metabolism, urea cycle.

UNIT – III: LIPIDS

a) Lipids, types and properties of Fatty acids, composition and properties of fats, significance of Acid Value, Iodine Value and Saponification value.
b) Biological Oxidation – Citric acid cycle, Electron transport chain.

UNIT – IV: ENZYMES

a) Enzymes – Definition, Types and classification of enzymes, definition and types of co- enzymes, specificity of enzymes, enzyme kinetics including factors affecting velocity of enzyme catalyzed reactions, enzyme inhibition.
b) Molecular aspects of transport – passive diffusion, facilitated diffusion, active transport.

UNIT – V: HORMONES

a) Hormones – Biological role of hormones of Pituitary, Adrenal Cortex and Medulla, Thyroid, Parathyroid, Pancreas.
b) Introduction to genetic control of metabolism – Nucleic acids, types, composition, structure, replication, transcription, genetic code. Elementary knowledge of bio- synthesis of proteins.

REFERENCES

1. West, ES Tood, W.R., Mason, HS and Van Bruggen, JT (1974) : 4th Edition, Text book of bio Chemistry, Amerind Publishing Co Pvt Ltd.
2. White, A., Handlar, P., Smith EL, Stelten, DW (1959) : 2nd Edition, Principles of Bio Chemistry, Mc Graw Hill Book Co.
3. Murray, R.K., Granner, D.K., Mayes, P.A. and Rodwell, VW (1993) : 2nd Ed. Harper's Bio Chemistry, Lange Medical book.
4. Lehninger, A.L, Nelson, D.L and Cox, MM (1993) : 2n Edition, Principles of Bio Chemistry, CBS publishers and Distributors.
5. Devlin, TM (1986) : 2nd Edition, Text Book of Bio Chemistry with Clinical Correlations, John Viley and Sons.
6. Stryer, L (1995) : Bio Chemistry, Freeman WH and Co.
7. Oser, BL (1965): 14th Edition, Hawk's Physiological Chemistry, McGraw Hill Book Co.
8. William, S : 16th Edition, JAOAC, Official Methods of Analysis of the Association of Official Analytical Chemists.
9. Indian Standards Institution, (1985) : ISI hand book of food analysis, Parts I to XI, Manak Bhawan, New Delhi.
10. Varley, H., Gowenlock, AH and Bell, M (1980) : 5th Edition, Practical and Clinical Chemistry, Vol – 1, William Heinemann Medical books Ltd.
11. Sundaraj, P and Siddhu, A., (1995) : Qualitative Tests and Quantitative procedure in Bio Chemistry – a Practical Manual, Wheeler Publishing.

II YEAR

PAPER VI

FOOD SCIENCE – II

OBJECTIVES

This course will enable the student to

1. Understand the Science of Food.
2. Understand the importance and characteristics of foods and their products.
3. Understand the principles of processing and the effect of heat on different kinds of foods.

UNIT- I: MILK AND MILK PRODUCTS

Composition, Processing, Milk cookery- effect of heat, acid, enzymes, Role of milk and milk products in cookery. Fermented milk products- Butter-preparation, Cheese - classification and preparation, Curd- preparation.

UNIT – II: EGG

Structure, Composition, Egg cookery- effect of heat, effect of sugar, salt, acid and starch, Role of egg in cookery. Quality of egg- factors determining the quality, evaluation of egg quality.

UNIT – III: FLESH
FOODS MEAT:

Structure, Composition, Postmortem changes, Ageing, Tenderizing, Meat cookery- factors affecting the cooking quality of meat, changes during cooking.

POULTRY: Classification, Processing and Composition.
FISH: Classification, Composition, Selection.

UNIT – IV: FATS AND OILS

Composition, Refining and Processing of oil, Rancidity- Definition, types, prevention. Role of fat and oil in cooking.

UNIT – V: SPICES AND HERBS

SPICES:

Functions of spices, types, role of spices in cookery.

HERBS:

Types of herbs used in cooking and its characteristics and common uses.

REFERENCES

1. Sri Lakshmi (1998), Food Science, New Age International Ltd., New Delhi.

II YEAR

PAPER VII

NUTRITION THROUGH LIFE CYCE

OBJECTIVES

This course will enable the student to

1. Understand the concept of an adequate diet and the importance of meal planning.
2. Know the factors affecting the nutrient needs during the life cycle and the RDA for various groups.
3. Gain knowledge about dietary management in common ailment.

UNIT – I: MEAL PLANNING

Basic principles and factors influencing of meal planning, Basic meal pattern and its modification to suit different income levels, age and physiological stress.

UNIT – II: PREGNANCY AND LACTATION

Nutrition during pregnancy – Importance, Sign and symptoms, complication & Nutrient requirements during pregnancy.

Nutrition during lactation – physiology of lactation, nutrient composition of human milk, Nutrient requirement during lactation.

UNIT – III: INFANCY AND PRESCHOOL

Nutrition during Infancy - Growth and development during infancy, Advantages of Breast feeding – Weaning and supplementary food, Nutrient requirements.

Nutrition during preschool - Growth and development, Nutrient Requirements, inculcation of good food habits, feeding programmes – school lunch programme.

UNIT – IV: SCHOOL GOING AND ADOLESCENCE

Nutrition during school going - Growth and development ,Nutrient Requirements.

Nutrition during adolescence - Growth and development Eating disorder, nutritional requirements.

UNIT – V: ADULTHOOD AND OLD AGE

Nutrition during Adulthood - Growth and development, nutritional requirements.

Nutrition during old age - Growth and development, Nutritional problems, nutritional requirements, special needs and nutritional requirements during old age.

PRACTICALS

1. Planning and preparation of diets for pregnant woman, lactating woman, infant, pre-school going, Adolescent and aged person.
2. Visit to community health centres.

REFERENCES

1. Srilakshmi, B., Dietetics, New Age International (P) Ltd., Chennai, 2000.
2. Robinson, C.H., Normal and the Therapeutic Nutrition, The oxford and IBH Publishing Co., 1977.
3. Gopalan, C., and Balasubramanian, S.C Ramasastri, B.V. and Viswesvera Rao, Die Atlas of India, ICMR., New Delhi, 1970.
4. Guthrie, A.H. (1986) Introductory Nutrition, 6th ed, The C.V. Mosby Company
5. Swaminathan, M. (1985) Essentials of Food & Nutrition, Vols I & II; Ganesh & Co., Madres.
6. Williams, S.R. (2001) Basic Nutrition & Diet Therapy, 11th ed., Mosby, Inc., St. Louis.
7. Brown, J.E.(2002) Nutrition Now, 3rd edition, Wordsworth Thomson Learning, Inc., Canada.

II YEAR

PAPER VIII

FOOD SCIENCE PRACTICAL

UNIT - I

Methods of measuring ingredients, Preliminary preparations of cooking.

UNIT – II

Cereal Cookery: Examination of starch granules, water absorption of raw and parboiled rice, weight and volume of raw and cooked cereals.

UNIT – III

Pulse Cookery: Raw weight and cooked volume of pulses, roasting.

Milk Cookery: Curdling, effect of time and temperature and application of culture in the process of curd preparation.

Sugar Cookery: Stages of sugar cookery, preparation of recipes for different stages of sugar cookery.

UNIT – IV

Vegetables & Fruits: Prevention of browning reaction, peeling techniques, types of cuts.

UNIT – V

EGG COOKERY: Boiled egg, poached egg, custard, mayonnaise.

FISH COOKERY – Boiling and steaming.

REFERENCES

1. Sri Lakshmi (1998), Food Science, New Age International Ltd., New Delhi.

II YEAR
PAPER IX

FUNCTIONAL FOODS AND NUTRACEUTICALS IN HEALTH & DISEASE

OBJECTIVES

To enable students understand the relation between Functional Foods, Nutraceuticals to Food and Drugs

1. To introduce them to various functional food groups and products
2. To enable students understand the clinical role of Functional Foods and Nutraceuticals in health & disease

UNIT – I: INTRODUCTION TO FUNCTIONAL FOODS AND NUTRACEUTICALS

Functional Food and Nutraceutical-Definition, History of functional foods and classification

UNIT – II: FUNCTIONAL COMPONENTS FROM PLANT SOURCES

a. Dietary fiber - Types and sources, Physical and Physiological properties
b. Phenolic compounds – Phytoestrogens (Isoflavones, Lignans) Flavonoids – Quercetin, kempferol, Flavones – limonene, Flavols – Catechin, Phenolic acid – Ellagic acid, Caffeic acid
c. Phytosterols and phyto stenols
d. Saponins d) Tannins
e. Carotenoids - Lycopene, Beta-carotene, Lutein and zeaxanthin

UNIT – III: FUNCTIONAL COMPONENTS FROM ANIMAL SOURCES

a. Proteins – lactalbumin, lactoglobulin, lactoferrin, immunoglobulins,
b. Derived peptides – casein phospho peptides, glycomacro peptides,
c. Lactose. Fat. Mineral – zinc, selenium, Calcium
d. Dietary lipids - Conjugated Linolenic Acid, linoleic acid, oleic acid, GLA
e. Omega 3 and Omega 6 Fatty Acids
f. Structured Lipids

UNIT – IV: MICROBES AS FUNCTIONAL FOODS

Prebiotics - Definition, role of prebiotic as functional ingredient.

Probiotics- Definition, role of probiotic as functional ingredient.

Synbiotics- Definition, role of probiotic as functional ingredient.

UNIT – V: CLINICAL APPLICATIONS OF FUNCTIONAL FOODS

1. Functional foods in oral and gut health

2. Functional foods in Obesity and Cardiovascular diseases
3. Functional foods in Nervous System
4. Functional foods in Bone health and Diabetes mellitus
5. Functional foods in cancer

REFERENCES:

1. Mary K Schmidl and Theodore P.Labuza, Essential of functional Foods Culinary and Hospitality Industry Publications Services 2000
2. G.Mazza Functonal Foods Biochemical Processing Aspects and Culinary and Hospitality Industry Publications 1998
3. Israel Goldberg Functional Foods Designer Foods Pharma Food,Nutraceuticals Culinary and Hospitality Industry Publications 2001
4. Robert E C Wildman Handbook of Nutraceuticals and functional Foods Culinary and Hospitality Industry Publications 2001
5. David H Watson Performance Functional Foods Culinary and Hospitality Industry Publications 2001
6. R Chatwick et al. Functional Foods Springer 2003

III YEAR

PAPER X

FOOD SERVICE MANAGEMENT

Objectives

To enable the student to:

1. Understand the management aspects of food service and
2. Gain knowledge about various types of food service.

Theory

UNIT – I: ORGANIZATION AND MANAGEMENT

Organisation, types and management tools.

UNIT – II

PERSONNEL MANAGEMENT

Recruitment,Selection,induction, training and supervision of personnel, labour policies and legislation.

UNIT – III : QUANTITY FOOD SERVICES

Types of food service, styles of service.

UNIT – IV

FINANCIAL MANAGEMENT

Cost account and keeping, inventory maintenance of account books, balance sheets, food costing.

UNIT – V: SANITATION

Sanitation of plant, garbage disposal, pest control.

REFERENCES

1. West, B.B., Wood-L. Hoglet F. and Shukart, G., Food Service in Institution John Wiley & Sons. 1977.
2. Longree, K., Food Service Sanitation, John Wiley and Sons. 1973.

III YEAR

PAPER XI

DIETETICS

Objectives

To enable students to

1. To describe the roles the responsibilities of a dietitian in a Hospital.
2. To plan and prepare therapeutic diets for patients.
3. To organize diet counseling to patients and family.

UNIT - I

Definition of dietetics and Diet theraphy, Purpose and principles of therapeutic diets, factors considered in planning therapeutic diets,Dietitian-Definition,Classificationand Responsibility.

UNIT – II

1. Routine Hospital diets – clear fluid diet, full fluid diet, soft diet, regular normal diet, pre-operative diet, post-operative diet.
2. Special feeding methods, Tube feeding types, advantages and disadvantages, parenteral feeding.

UNIT – III: Causes, symptoms and dietary management of:

1. Obesity and Under weight.
2. Febrile diseases – Typhoid, influenza, Malaria, Tuberculosis.
3. Gastrointestinal Disorders- Diarrhea, Dysentery,Peptic Ulcer and constipation
4. Diet in Allergy-Definition .Classification. Food allergens, test for allergy, dietary treatment

UNIT – IV:

Causes, symptoms and use of exchange list, dietary treatment for

1. Diabetes mellitus
2. Cardio Vascular diseases- Hypertension, Atherosclerosis**,** congestive cardiac failure,

UNIT – V :

Disease of liver-Hepatitis, Cirrhosis, cholelithiasis

1. Disease of the urinary tract- Glomerulonephritis, Nephrotic Syndrome, Urinary calculi, Acute renal failure.

REFERENCES

1. Srilakshmi, B., Dietetics, New Age International (P) Ltd., Chennai. 2000.
2. Robinson, C.H., Normal and the Therapeutic Nutrition, The Oxford and IBH Publishing Co., 1977.
3. Gopalan. C., and Balasubramanian, S.C. Ramasastri, B.V. and Viswesvera Rao, Diet Atlas of India, ICMR, New Delhi, 1970.

III YEAR

PAPER XII

DIETETICS PRACTICALS

UNIT – I

Planning and Preparation of Therapeutic diets – Soft diet, clear and full liquid diet.

UNIT – II

Planning and Preparation of diet for fevers - Typhoid ,Tuberculosis and Malaria.

UNIT – III

Planning and Preparation of diet for obesity and under weight

UNIT – IV

Planning and Preparation of diet for Diabetes , peptic ulcer, constipation and diarrhea

UNIT – V

Planning and Preparation of diet for Atherosclerosis, Hypertension, Cirrhosis, Hepatitis ,Nephritis, Cholelithiasis, Renal calculi

REFERENCES

1. Srilakshmi, B., Dietetics, New Age International (P) Ltd., Chennai, 2000.
2. Robinson, C.H., Normal and the Therapeutic Nutrition, The Oxford and IBH Publishing Co., 1977.
3. Gopalan, C., and Balasubramanian, S.C. Ramasastri, B.V. and Viswesvera Rao, Diet Atlas of India, ICMR., New Delhi, 1970.
4. Guthrie, A.H. (1986) Introductory Nutrition, 6^{th} ed, The C.V. Mosby Company.