

B.Sc., CBCN

III year – VI Semester - Electives

Elective Paper VII – (A) DIET THERAPY- II

Theory: 45 Hours (3 h/w)

- Unit I : Disorders of Metabolism
- (a) Diabetes Mellitus
- * Incidence and predisposing factors.
 - * Symptoms, types and tests for detection (Diagnosis)
 - * Dietary treatment, meal management and Complications
- Unit II : (a) Obesity and leanness: causes, complications and health effects, dietary treatment and other recommendations.
- (b) Anaemia, PEM
- Unit III : Diet in Cardiovascular diseases.
- Coronary heart disease – incidence, pathology and dietary management, prophylactic role of diet.
- Hypertension – Dietary management.
- Unit IV : Diet in renal diseases.
- Acute and chronic glomerulonephritis, nephrosis, renal failure, urinary calculi – causes, treatment, acid and alkali producing and neutral foods and dietary treatment.
- Unit V : Diet counselling:
- (a) Nutritional assessment of patients, dietary prescription and counselling follow up, patient education and diet.
- (b) Role of dietitian: Definition of nutritional care, interpersonal relationship other patient, planning and implementing dietary care, their approach to nutritional care.

Practical Paper VII – (A)**30 Hours (2h/w)****50 M****Practicals**

1. Planning and preparation of diets for diabetics.
2. Planning and preparation of diet in obesity.
3. Planning and preparation of diet in deficiency disease – Kwashiorkor
4. Planning and preparation of diet in Anaemia.
5. Planning and preparation of diet in cardiovascular diseases.
6. Planning and preparation of diet in hypertension.
7. Planning and preparation of diet in renal diseases.

References

1. Srilakshmi, B., Dietetics, New Age International (P) Ltd., 2000.
2. Robinson, C.H. and Winley, E.S., Basic Nutrition and Diet Therapy, 5th ed, Macmillan Pub, Co., N.Y., 1984.
3. Swaminadhan, M., 1988, Essentials of Food and Nutrition, Volume I and II, The Bangalore Printing and Publishing Co. Ltd., Bangalore.
4. Bamji, Mehtab S, et al., (ed), 2002, Text Book of Human Nutrition, Oxford and IBM Publishing Co., Pvt., Ltd., New Delhi.
5. Jgader Vuhatham 2001., Foods – Nutrition and Health, Kalyani Publishers, Chennai.
6. Robinson Corinne, M., Marilyn R, Lawler, 1982, Normal and Therapeutic Nutrition, Oxford and IBM Publishing Co. Pvt., Ltd., New Delhi.
7. Guthrie Helen A. and Mary Frances Picciano, 1999, Human Nutrition, WCB Mc. GrawHill, Boston.

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VII – (A) - DIET THERAPY-II
Model Question Paper

Time: 3 hrs.

Max. Marks: 75

Section - A

Answer any FIVE questions.

5x5=25

1. Write short note on LDL and HDL cholesterol?
2. Give a dietary recommendation for underweight condition.
3. Explain the dietary modifications for treatment of acute nephrosis?
4. Explain type II diabetes and the role of insulin in controlling it?
5. What is therapeutic diet? What are the changes made in therapeutic diets?
6. Write about the importance of fibre in our diet?
7. How do you prevent anaemia? Plan a diet.
8. Explain the various tests for diagnosis of diabetes.

Section - B

Answer any FIVE questions.

5x10=50

1. a) Narrate the condition of coronary heart disease and role of the diet in it?
(Or)
b) Define hypertension. Write the causes and diet?
2. a) Describe chronic Glomerulo nephritis. What are the dietary restrictions you suggest during this condition?
(Or)
b) What are urinary calculi? Write causes, treatment and dietary management.
3. a) Write about the role and responsibilities of dietician in nutrition care.
(Or)
b) What is diet counselling? Write the various steps involved in diet counselling
4. a) What are the complications of obesity? Plan a diet for an adult obese business man.
(Or)
b) What is PEM? Explain the role of nutrition education in preventing malnutrition.
5. a) Write about the incidence, symptoms and types of diabetes.
(Or)
b) Write about the dietary treatment, meal management and complications of diabetes.

CUSTER ELECTIVES: Cluster Elective – I
III year – VI Semester
Paper VIII – A-1 : FOOD SERVICE MANAGEMENT

45 Hours (3h/w)

Unit I	:	Food Management: Characteristics of food – Types of foods – what is quality- quantitative aspects of quality- Food purchasing - nutritional quality; foods recommended for use in canteens, lunch rooms and kiosks – Receiving and storage of food.	
Unit II	:	Menu planning – Food production- Food production systems – food production process some large quantity cooking techniques; effective use of left overs; holding techniques Food Service styles of service – Types of menus; menu display.	
Unit III	:	Sanitation and Hygiene: Personal hygiene – Environment Hygiene and Sanitation – Microbial growth pattern and factors affecting microbial proliferation – assessment of microbial load	
Unit IV	:	Ventilation lighting, water supply, Food storage, signs of infestation – prevention and control, Preparations: cooking, holding serving, cleaning and dish washing, waste disposal.	
Unit V	:	Personnel Management – Development and Policies – In-service training and Development / appraisals. Personnel policies, recruitment; selection and methods of induction	

Practical Paper VIII – (A)

30 Hours (2h/w)

50 M

Practicals

1. Visits to food service institution to study layout and food service equipment.
2. Planning physical layouts of food service institutions, commercial, non-commercial, school feeding, ICDS etc.,
3. Visits to dietetic departments in hospitals.
4. Visit to Mid day Meal Programmes and observation of food service.
5. Visit to fast food centres and canteens.

REFERENCES

1. Kawala, K. (1963). Environmental Sanitation in India, Lucknow Publishing House.
2. Van Nostrand, Principles of Food Sanitation – II edition, AVI Book, Reinhold, New York.
3. Avery-A, A Modern Guide to Food Service Equipment, CBI Publishing Inc., 1980.
4. D.M.A. Arulanadam, Dr. K.S. Raman, Financial Accounting, Himalaya Publishing House, 2000.

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Paper VIII-(A) – FOOD SERVICE MANAGEMENT
Model Question Paper

Time: 3 hrs.

Max. Marks: 75

Part-A

Answer any FIVE questions.

5x5=25

1. Explain different cooking methods.
2. What is importance of in-service training and appraisals?
3. Write about waste disposal in food service institutions.
4. What are the methods used to improve the nutritive quality of foods in preparation?
5. List down the delivery methods of food to food service establishment.
6. Why labour policies are important? Explain.
7. Write about dish washing.
8. What are materials used for case of cleaning equipment.

Part-B

Answer any FIVE questions.

5x10=50

1. a) Define menu planning. Explain the importance of food purchase in menu planning?
(Or)
b) Explain the different types of menus.
2. a) Explain about the environmental hygiene in institutional kitchens.
(Or)
b) Explain about the personal hygiene in food preparation.
3. a) Write the significance of water supply in food service institutions.
(Or)
b) What is the storage methods used for different types of food materials?
4. a) Write about different types of food serving methods?
(Or)
b) What are objectives of food service institutions and explain the factors to consider in food service institutions?
5. a) What are the development and policies in case of food service institutions?
(Or)
b) What are the functions of a personnel manager in food service institution?

SEMESTER – VI

PAPER – VIII-A-2 HUMAN PHYSIOLOGY AND MICROBIOLOGY

45 hrs (3 h/w)

OBJECTIVES - To enable the students to

1. Obtain a better understanding of nutrition and dietetics through the study of physiology.
2. Gain knowledge about the role of microorganism in health and disease.

UNIT – 1

TISSUES- Classification of tissues, structure and functions of epithelial, muscular, connective and nervous tissue.

DIGESTIVE SYSTEM- Structure of digestive system, digestion and absorption of carbohydrates, proteins and fats.

MUSCULO SKELETAL SYSTEM- Bone and Muscle: Structure and functions.

UNIT – II

BLOOD- Composition, functions and Coagulation of blood- definition, process and factors regulating.

HEART- Structure of heart and blood vessels; Blood pressure- definition and factors affecting; Definitions: Heart rate and cardiac output.

RENAL SYSTEM- Structure and functions of kidneys; Urine: composition and formation.

UNIT – III

REPRODUCTIVE SYSTEM- Structure of male and female reproductive organs, puberty, menstrual cycle, meaning of menopause and structure of mammary glands.

ENDOCRINE SYSTEM- Pituitary, thyroid, parathyroid and adrenal glands: Structure, functions of hormones secreted and their abnormality.

UNIT – IV

BACTERIA- Structure, types, reproduction and nutrition.

VIRUS- Structure and lifecycle of bacteriophage.

YEAST- Structure, reproduction and economic importance.

PROTOZOA- Structure and life cycle of Entamoeba histolytica.

MOULDS- Type, structure and reproduction.

UNIT – V

INFECTIOUS DISEASES- Causes and symptoms of the following:

FOOD BORINE DISEASES- Salmonellosis Botulism, Cholera and Typhoid.

WATER BORINE DISEASES- Gastro enteritis, Diarrhea: Campylobacter and Gardia lamblia.

AIR BORNE DISEASES- Tuberculosis and Pneumonia.

PARASITIC INFECTIONS- Amoebiasis and Malaria.

REFERENCES

1. Gary.A Thibodeau and Kelvin. T.Patlon, Anthony's Text Book of Anatomy and Physiology, Seventeenth edition, Mosby Publications, Indiana Print, 2004.
2. Anne Waugh and Allison Grant Ross and Wilson Anatomy and Physiology in Health and Illness Elsevier Publication, Ninth Edition, 2005.
3. Guyton, A.C, Text Book of Medical Physiology, 4th Edition, W.B. Saunders Co. Philadelphia, 1996.
4. Frazier, W.C, Food Microbiology, McGraw Hill Publications, New York, 4th Edition, 1998.
5. Pelczar, H.J. And Rober. D, Microbiology, McGraw Hill Publication, New York, 10th Edition, 1998.

SEMESTER VI

PRACTICAL PAPER VIII – A-2 (at the end of SEMESTER VI)

30 hrs (2/w)

PHYSIOLOGY

1. Microscopic Study of Different Tissues –Epithelial, Connective and Muscular.
2. Estimation of Haemoglobin.
3. Blood Grouping and Measurement of Blood Pressure.
4. Determination of Coagulation Time of Blood.
5. Microscopic Structure of Heart, Digestive System, Kidney and Reproductive Organs: Ovary, Uterus, Mammary Glands and Testis.
6. Microscopic Structure of Various Endocrine Glands – Thyroid, Pituitary and Adrenal.

MICROBIOLOGY

1. Examination of Yeast, Mould, Protozoa and Pathogenic Bacteria.
2. Examination of Unstained organism – Hanging Drop Preparation.
3. Examination of Stained Organisms- Simple Staining and Gram's Method of Staining.
4. Testing milk for purification – Reductase test for milk and standard plate count.
5. Common Culture Media and Uses.
6. Study of Sterilizing Equipment
7. Cultivation of Organism in the Laboratory – Methods and Equipments.

MODEL QUESTION PAPER
PHYSIOLOGY AND MICROBIOLOGY

Time : 3 Hours

Maximum :75 marks

PART-A

Answer any 5 Questions

(5x5 = 25 marks)

1. List different types of connective tissues.
2. Where are salivary glands located?
3. What is normal heart rate?
4. Mention any one factor that hastens coagulation of blood?
5. What is hormone?
6. Define Ovulation.
7. Classify Moulds.
8. Name any two Viral diseases.
9. Name the causative organism of typhoid.
10. What is food poisoning?

PART – B

Answer all Questions

(5X10 = 50 marks)

11.(a) Give the structure of muscular tissues.

(or)

(b) Explain the digestion of carbohydrates.

12.(a) List the function of blood.

(or)

(b) Draw the structure of heart.

13. (a) Explain the function of placenta.

(or)

(b) Explain fertilization.

14. (a) Describe the structure of a bacterial cell.

(or)

(b) Explain reproduction of molds.

15. (a) Explain Clostridium botulinum food poisoning.

(or)

(b) Explain the causes and symptoms of pneumonia

Semester - VI
Paper – VIII – (A)-3: Nutrition for Health and Fitness

45 Hours (3h/w)

Objectives -To enable the students to

- Learn about the terms related to health and fitness
- Comprehend the interaction between fitness and nutrition

UNIT – I

Health – Concept of Health, Changing concepts, definition of health, dimensions of health, concept of well being, spectrum of health, determinants of health, ecology of health, right to health, responsibility for health and indicators of health.

UNIT – II

Exercise and Health related fitness – Health related fitness, health promotion and physical activity for health benefits,

Sports related fitness – Role of nutrition in sports and nutrition to athletic performance.

UNIT – III

Body weight and composition for health and sports – Ideal body weight, values and limitations of the BMI, composition of the body Diet during training, prior to competition during and after competition; dietary supplements for athletes.

UNIT – IV

Exercise Performance – Energy expenditure during physical activity, carbohydrate metabolism and performance, fat metabolism and performance, effect of exercise on protein requirements, physique and sports performance.

UNIT – V

Exercise programs – Resistance exercise training, aerobic exercise, types of exercise, effective weight control – dieting or exercise; weight reduction program for young athletes.

REFERENCES

1. K.Park Test book of preventive and social medicine, 15th edition, MIS Banarsidas Bhano publishers, Jabalpur, 1997
2. Melvin H.Williams, Nutrition for Health, fitness and Sports, 7th edition, MC Graw Hill international Edition, 2005.
3. Michael J.Gibney Ian A Macdonald and Helen M.Roche, Nutrition and Metabolism, Blackwell publishing company, Bangalore, Reprint 2004.

VIII – (A) – 3 Practical: Project Work on Assessment of Health and fitness Among students.

MODEL QUESTION PAPER
THREE YEAR B.Sc., Degree Examination
SEMESTER – VI

PAPER – VIII – A – 3 NUTRITION FOR HEALTH AND FITNESS

Time : 3 Hours

Maximum : 75 Marks

PART – A

Answer any FIVE of the following questions Each question carries FIVE marks
5x5=25 M

1. Write about the responsibility for health.
2. What are the dietary supplements for athletics.
3. What are the dimensions of health.
4. Changing concepts of health.
5. Explain about physical activity for health benefits.
6. Weight reduction programmes.
7. Write about physique
8. Fat metabolism.

PART – A

Answer ALL questions. Each question carries TEN marks

5X10=50 M

1. (a) Explain the concept of health and dimensions of health.
(or)
(b) What are the indicators of health
2. (a) Explain the role of physical activity in health
(or)
(b) Bring out the role of nutrition in improving sports performance.
3. (a) Explain BMI and body composition
(or)
(b) Explain the type of diet recommended during training and prior to competition.
4. (a) Elaborate on the energy expenditure and carbohydrate metabolism during physical activity
(or)
(b) Elaborate on the effect of exercise on protein requirement and sports performance.
5. (a) Enumerate the types of exercise.
(or)
(b) Explain the weight reduction programs for young athletes.