Specialization - I :

Clinical Nutrition and Dietetics Papers are given with Subject paper code A.

Specialization -II :

Food Science and Quality Control Papers are given with Subject paper code B.

(DFN 21A)

M.Sc. DEGREE EXAMINATION, MAY – 2015

Final Year

FOODS & NUTRITIONAL SCIENCE

Paper - I : Nutrition Through Life Cycle

Time : 3 Hours **Maximum Marks: 80**

Answer all questions

Each question carries 16 marks

1) a) What is the composition of colostrums? Discuss in detail the advantages of breast feeding.

OR

b) Describe about the changes in physiological requirement during aging process.

2) a) Give the RDA for lactating women (Secondary worker) and comment on its significance for the infant and mother.

OR

b) Explain the maintenance and importance of growth charts and supplementary foods among children.

3) a) Explain the effect of poor nutrition on the growth support of adolescents and its effect on their future adulthood.

OR

b) Explain in detail the dietary guidelines for old people.

4) a) Write a short note on Protein Energy Malnutrition. Explain the effect of undernutrition and infections on the growth and development of the child.

OR

b) Discuss the physical and physiological changes occurring during pregnancy.

5) a) Write a short note on complication during pregnancy. Explain the daily nutritional requirements of a pregnant woman.

OR

b) Describe the importance and necessity of school lunch programs with special reference to Andhra Pradesh.

☛ ☛ ☛

(DFN 22A)

M.Sc. DEGREE EXAMINATION, MAY – 2015

Second Year

FOODS & NUTRITIONAL SCIENCE

Paper - II : Nutritional Assessment Techniques

Time : 3 Hours **Maximum Marks: 80**

Answer all questions

Each question carries 16 marks

1) a) Explain various direct and indirect methods of nutritional assessment among humans.

OR

b) Write short notes on:
i) MUAC
ii) Growth charts

2) a) What is anthropometry? How anthropometric assessment is used to assess the malnutrition status of children?

OR

b) Classify different categories of malnutrition among Indian population.

3) a) What is malnutrition? Describe the cut of point used to distinguish current and long term malnutrition.

OR

b) What are the various clinical and biochemical assessment used for the assessment of various nutritional disorders among adults.

4) a) Explain how you assess dietary status of individual using appropriate techniques.

OR

b) Explain various methods and techniques for clinical assessment.

5) a) Describe various factors affecting the accuracy of dietary assessment.

OR

b) What is nutritional surveillance? Discuss its need and determinants.

☛ ☛ ☛

(DFN 23A)

M.Sc. DEGREE EXAMINATION, MAY – 2015

Second Year

FOODS & NUTRITIONAL SCIENCE

Paper - III : Clinical Nutrition and Dietetics

Time : 3 Hours **Maximum Marks: 80**

Answer all questions

Each question carries 16 marks

1) a) Write the classification of Dietician and enlist their responsibilities.

OR

b) Write the principles in formulation of therapeutic diets.

2) a) Write the etiology of obesity and discuss in detail about the role of diet as causative factor.

OR

b) Enumerate the metabolic changes in people with underweight and write about their complications.

3) a) Discuss about lactose intolerance and write the dietary management.

OR

b) Explain the types of Food allergens.

4) a) Write the etiology of gastric ulcers and explain the symptoms and consequences.

OR

b) Discuss in detail about dietary management of malabsorption syndrome.

5) a) Enlist the types of Hepatitis and write the symptoms and causative factors?

OR

b) Write the Dietary principles and management of Pancreatitis?

☛ ☛ ☛

(DFN 24A)

M.Sc. (Final) DEGREE EXAMINATION, MAY – 2015

Final Year

FOODS & NUTRITIONAL SCIENCE

Paper - IV : Diet Therapy and Counseling

Time : 3 Hours **Maximum Marks: 80**

Answer all questions

All questions carry equal marks

1) a) Write the role of counseling strategies in Behaviour modification.

OR

b) Enumerate the client centered approach in hospital.

2) a) Discuss the methods of diet counseling.

OR

b) Write the etiology and clinical symptoms of different febrile conditions.

3) a) What is diabetes mellitus? Write the classification and diagnosis.

OR

b) Discuss indetail about counseling procedure for a diabetic.

4) a) Explain the role of fibre in Prevention and treatment of cardiovascular disease.

OR

b) Write the etiology of
   i) Atherosclerosis
   ii) Hypertension

5) a) Distinguish between Nephritis and Nephrosis.

OR

b) Explain the role of diet in Prevention of renal calculi.

☼ ☼ ☼

(DFN 21B)

M.Sc. (Final) DEGREE EXAMINATION, MAY – 2015

Second Year

FOODS & NUTRITIONAL SCIENCE

Paper - I : Food Chemistry and Chemical Analysis of Foods

Time : 3 Hours **Maximum Marks: 80**

Answer all questions

All questions carry equal marks

1) a) Briefly explain the following:

i) What are the changes occurring in gluten protein during dough formation?

ii) Illustrate the sequence of protein-water interaction specific to the hydration properties of proteins.

OR

b) Describe the physiochemical principles with special reference to food in the following:

i) True solutions.

ii) Colloidal solutions.

iii) Osmosis.

2) a) Describe the different types of browning occuring in fruits and vegetable.

OR

b) Explain physical and chemical structure and properties of different fats and oils.

3) a) Explain various methods of extraction of starches and factors affecting properties of starches.

OR

b) Explain various changes occurring in water soluble pigments in fruits and vegetables during cooking and in the presence of acid, alkali and metal ions.

4) a) Describe various types of food enzymes. Explain the role of enzymes in brewing industry and in the cheese production.

OR

b) Explain the application of chromatographic techniques in food analysis with suitable example.

5) a) Briefly describe the protein present in wheat and its importance in the preparation of flour products. Explain different factors affecting gluten formation.

OR

b) Discuss the components, chemistry, types of water and water activity.

☛ ☛ ☛

(DFN 22B)

M.Sc. DEGREE EXAMINATION, MAY – 2015

Second Year

FOODS & NUTRITIONAL SCIENCE

Paper - II : Experimental Foods

Time : 3 Hours **Maximum Marks: 80**

Answer all questions

All questions carry equal marks

1) a) What are the changes occurring in gluten protein during dough formation? Explain various factors affecting gluten formation.

OR

b) Explain the role of sugars and fats in the preparation of bakery products.

2) a) Describe the different types of browning occurring in fruits and vegetables.

OR

b) Briefly explain the following processes:

i) Pasteurization

ii) Rancidity

iii) Stages of sugar cookery

iv) Smoking and melting point.

3) a) Explain crystallization. Describe various factors affecting the size of crystal formed.

OR

b) Write short notes on any four of the following:

i) Changes in fish during heat treatment

ii) Primary processing of rice

iii) Dough formation

iv) Food fermentation

v) Gelatinization

4) a) Describe various changes that takes place in fats and oils during storage period.

OR

b) "Egg as binding, foaming and emulsifying agents". Comment on the statement, giving appropriate justifications.

5) a) Briefly explain the alteration/chemical changes during heat treatment occurring in the following foods:

i) Green leafy vegetables

ii) Meat

OR

b) Discuss the role of bacteria in food fermentation, highlighting the different food products obtained from bacterial fermentation.

☛ ☛ ☛

(DFN 23B)

M.Sc. DEGREE EXAMINATION, MAY – 2015

Second Year

FOODS & NUTRITIONAL SCIENCE

Paper - III : Food Microbiology and Toxicology

Time : 3 Hours **Maximum Marks: 80**

Answer All questions

All questions carry equal marks

1) a) Explain the role of microbiology in fermented foods. Elaborate with examples.

OR

b) Graphically, present the four phases of bacterial growth and discuss any three factors which affect the growth of bacteria.

2) a) Briefly explain the physical methods used for the control of microorganisms.

OR

b) List the three categories of food borne diseases. Describe any one of the categories.

3) a) '' A variety of naturally occurring toxicants present in animal foods have been linked to human ill-health and death''. Elaborate on the statement, giving appropriate justifications.

OR

b) Briefly explain the following:
   i) Classify food toxicants
   ii) Toxins formed from fat and protein

4) a) Explain the physical methods you would adopt to control the growth of microorganisms.

OR

b) Differentiate between the following giving appropriate examples.

i) Food infection

ii) Food intoxication

iii) Food –borne toxic infections

5) a) Write short notes on the following:

i) Neurotoxins in food

ii) Toxicology of marine foods

iii) Mould and micotoxins contamination of foods

iv) Factors associated with food spoilage.

OR

b) What are micotoxins? Briefly describe the method of detection and preventing food contamination by micotoxin.

☼ ☼ ☼

(DFN 24B)

M.Sc. DEGREE EXAMINATION, MAY – 2015

Second Year

FOODS & NUTRITIONAL SCIENCE

Paper - IV : Food Safety and Quality Assurance

Time : 3 Hours **Maximum Marks: 80**

Answer all questions

All questions carry equal marks

1) a) What is meant by Food Quality assurance? Describe about various national and international food quality regulating authorities?

OR

b) What is Food Quality? Write various components of food quality?

2) a) What is HACCP? Write in detail about the role of HACCP in food Quality and safety assurance?

OR

b) Explain about any two systems and programmes for food quality and safety.

3) a) Write about biological hazards and their out-breaks in foods.

OR

b) Write about the Quality programmes and systems for Food Industry.

4) a) Define GMP and write indetail about EMP pre requisite programme.

OR

b) Write a short note on

i) HACCP Principles

ii) Codex alimentarians

5) a) Describe the need of HACCP system in food industry.

OR

b) Explain the record keeping and documentation procedures to HACCP system.

☼ ☼ ☼