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**M.Sc. DEGREE EXAMINATION, DEC. – 2016**

**Second Year**

**FOODS & NUTRITIONAL SCIENCE**

**Nutrition through Life Cycle**

**Time : 3 Hours**

**Maximum Marks : 70**

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*Answer All questions choosing one from each Unit  
Each question carries 14 marks.*

*(5 × 14 = 70)*

**UNIT - I**

**Q1)** a) Discuss the nutritional well being with respect to socio-cultural and economic aspects.

OR

b) Discuss the meal pattern and nutritional values with respect to low cost foods.

**UNIT - II**

**Q2)** a) Discuss the pregnancy outcome effect on the plan of nutrition of the mother and child and write about physical and mental risks.

OR

b) Discuss the advantages of breast milk to infants and the latest trends in breast feeding.

**UNIT - III**

**Q3)** a) Explain the importance of growth charts and supplementary foods for growing children.

OR

b) Discuss the effects of poor nutrition on the features of adulthood. Suggest improvement methods for well being.

**UNIT - IV**

- Q4)** a) Discuss the biochemical changes occur in middle age women and suggest solutions for them by taking nutritional foods.

OR

- b) Discuss the psychological problems leading degenerative states among middle age men.

**UNIT - V**

- Q5)** a) Describe the need and importance of geriatric nutrition for the changes in physiological requirements.

OR

- b) Describe the nutritional requirements for industrial workers of various types.



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**M.Sc. DEGREE EXAMINATION, DEC. – 2016**

**Second Year**

**FOODS & NUTRITIONAL SCIENCE**

**Food Chemistry & Chemical Analysis of Foods**

**Time : 3 Hours**

**Maximum Marks : 70**

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**Answer All questions choosing one from each Unit**  
**Each questions carries 14 marks.**

**(5 × 14 = 70)**

**UNIT - I**

**Q1)** a) Write the physicochemical principles of suspensions and colloidal solutions. Add a note on osmosis.

OR

b) Explain various types of waters and their physicochemical parameters.

**UNIT - II**

**Q2)** a) Describe the sources of proteins. Explain the structure and properties of different proteins.

OR

b) Explain the structure and properties of different types of oils.

**UNIT - III**

**Q3)** a) Explain the composition of fruits and vegetables. Write about the browning reactions in fruits and vegetables.

OR

b) Discuss various types of enzymes present in foods. Explain their importance and functions.

**UNIT - IV**

- Q4)** a) Explain the principle and applications of Gas Liquid chromatography in food analysis with suitable examples.

OR

- b) Describe the principle and applications of column chromatography in food analysis with suitable examples.

**UNIT - V**

- Q5)** a) Write the principles and applications of colorimetry in food analysis.

OR

- b) How do you check food adulterants in fruits and vegetable by chemical methods?



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**M.Sc. DEGREE EXAMINATION, DEC. – 2016**

**Second Year**

**FOODS & NUTRITIONAL SCIENCE**

**Nutritional Assessment Techniques**

**Time : 3 Hours**

**Maximum Marks : 70**

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*Answer All questions choosing one from each Unit (5 × 14 = 70)*  
*Each question carries 14 marks.*

**UNIT - I**

**Q1)** a) Give an account on the overall view of nutritional surveillance.

OR

b) Explain the use of Anthropometric equipment in the assessment of Nutritional status.

**UNIT - II**

**Q2)** a) Discuss the indirect methods of nutritional assessment of middle aged groups.

OR

b) Discuss the direct methods of nutritional assessment of old aged groups?

**UNIT - III**

**Q3)** a) How do you assess the age of various groups by using local event calendar?

OR

b) Discuss the usage of wasting and stunting classifying scale for the interpretation of growth charts. Mention limitations of various methods.

**UNIT - IV**

**Q4)** a) Explain Dietary assessment techniques for assessing dietary intake of household people.

OR

b) Write about the factors affecting the accuracy of interpretation of dietary data.

**UNIT - V**

**Q5)** a) Describe the diagnostic techniques for the sign of various nutritional deficiencies.

OR

b) Give an account on the field level techniques for the assessment of nutritional disorders at various group of people.

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**M.Sc. DEGREE EXAMINATION, DEC. – 2016**

**Second Year**

**FOODS & NUTRITIONAL SCIENCE**

**Experimental Foods**

**Time : 3 Hours**

**Maximum Marks : 70**

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**Answer All questions choosing one from each Unit**  
**Each questions carries 14 marks.**

**(5 × 14 = 70)**

**UNIT - I**

**Q1)** a) How do you evaluate food standards? Write about selection of taste panels.

OR

b) Discuss the sensory evolution on food materials.

**UNIT - II**

**Q2)** a) Explain various stages of sugar cookery. Write about the factors affecting sugar crystals.

OR

b) Write the chemical properties of oils. How do you determine smoking point and melting point of oils?

**UNIT - III**

**Q3)** a) Discuss the factors affecting the cooked products of egg and meat preparations.

OR

b) Explain germination and fermentation processes in detail.

**UNIT - IV**

**Q4)** a) Explain the structure of fruits. Discuss the starches and sugars present in fruits taking examples.

OR

b) Write the preparation of cakes and Indian sweets taking examples.

**UNIT - V**

**Q5)** a) Write and explain the properties and uses of plant pigments. Mention their advantages and disadvantages in foods.

OR

b) What is pepsin? Discuss the effect of pepsin on meat browning reactions.





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**M.Sc. DEGREE EXAMINATION, DEC. – 2016**

**Second Year**

**FOODS & NUTRITIONAL SCIENCE**

**Clinical Nutrition and Dietetics**

**Time : 3 Hours**

**Maximum Marks : 70**

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*Answer All questions choosing one from each Unit  
All questions carries equal marks.*

**UNIT - I**

**Q1)** a) Write about the qualifications to become a member in Indian dietetic Association and its board Registration process.

OR

b) Write in detail about the classification and preparation of normal diets.

**UNIT - II**

**Q2)** a) Discuss the metabolic changes and complications in obesity patients.

OR

b) Explain the grades of obesity and under weight. Suggest dietary modifications in both the cases.

**UNIT - III**

**Q3)** a) Discuss the factors to be considered in the preparation of Therapeutic diets for food allergy patients.

OR

b) Write about various types of Food Allergy and their intolerance. Explain the dietary management for Allergy persons.

**UNIT - IV**

**Q4)** a) Describe the causes and symptoms of diverticular disorders. Explain clinical nutritional diets for the patients.

OR

b) Explain the causes and symptoms of Dyspepsia gastritis diseases. Write about the clinical nutritional diets for these patients.

**UNIT - V**

**Q5)** a) Explain the symptoms and causes for Hepatitis and clinical nutrition requirement for its cure.

OR

b) Discuss the causes and symptoms for liver and gallbladder diseases. Suggest dietary modifications in these cases.

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**M.Sc. DEGREE EXAMINATION, DEC. – 2016**

**Second Year**

**FOODS & NUTRITIONAL SCIENCE**

**Food Microbiology and Toxicology**

**Time : 3 Hours**

**Maximum Marks : 70**

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*Answer All questions choosing one from each Unit (5 × 14 = 70)*  
*Each questions carry equal marks.*

**UNIT - I**

**Q1)** a) Describe the classification and identification of microorganisms for food preservation with suitable examples.

OR

b) Write about the food enzymes caused for food spoilage. Explain the factors relating to their destruction.

**UNIT - II**

**Q2)** a) Discuss the preventive methods of micotoxic contamination of foods.

OR

b) Discuss the chemical changes caused by microorganisms for the spoilage of food.

**UNIT - III**

**Q3)** a) Discuss the factors affecting the toxicity of foods.

OR

b) Discuss the diseases caused due to the food toxicants.

**UNIT - IV**

**Q4)** a) Discuss the toxicology of Marine foods.

OR

b) Explain food toxin implications on the following :

- i) Hepatic toxicity
- ii) Haemo toxicity
- iii) Carcinogenic toxicity

**UNIT - V**

**Q5)** a) Explain the mechanism of derived toxicants formed by reactivity with contaminants in foods.

OR

b) Discuss the formation of derived toxicants due to proteins and amino acids in foods.

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**M.Sc. DEGREE EXAMINATION, DEC. – 2016**

**Second Year**

**FOODS & NUTRITIONAL SCIENCE**

**Diet Therapy and Counseling**

**Time : 3 Hours**

**Maximum Marks : 70**

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**Answer All questions choosing one from each Unit**  
**All questions carry equal marks.**

**UNIT - I**

**Q1)** a) Write in detail about Nutrition support systems.

OR

b) Explain Diet counseling strategies for individuals. Write about the impact of counseling in Hospitals.

**UNIT - II**

**Q2)** a) Explain various types of Etiology. Write about their diagnosis and metabolic changes in etiology.

OR

b) Discuss the methods and techniques of diet counseling for obese people.

**UNIT - III**

**Q3)** a) Explain dietary Management and insulin treatment for diabetes at different stages.

OR

b) What is Mellitus diabetes? Discuss the metabolic changes in Mellitus diabetes.

**UNIT - IV**

**Q4)** a) Explain the causes and symptoms of consecutive cardiac failure. Write about the change of diet at various stages for these people.

OR

b) Explain the role of diet and fiber for the prevention and cure of certain cardiovascular diseases.

**UNIT - V**

**Q5)** a) Explain the Tests for diagnosis of Accute and chronic Renal disorders. Write about the metabolic changes in Renal disorder patients.

OR

b) Discuss the Diet counseling for cancer patients and nutritional food therapy.



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**M.Sc. DEGREE EXAMINATION, DEC. – 2016**

**Second Year**

**FOODS & NUTRITIONAL SCIENCE**

**Food Safety and Quality Assurance**

**Time : 3 Hours**

**Maximum Marks : 70**

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*Answer All questions choosing one from each Unit  
All questions carry equal marks.*

**UNIT - I**

**Q1)** a) Write in detail about the Recognised experts in the food quality field.

OR

b) Give an account on the overview of food quality and safety.

**UNIT - II**

**Q2)** a) Explain various types of food adulterants and its impact on health.

OR

b) Discuss the scope of food quality and food safety.

**UNIT - III**

**Q3)** a) Give an account on the natural chemical hazards in foods and its impact on health.

OR

b) Make a comparison between food quality programs and food quality systems. Write ISO 9000 food quality standards.

**UNIT - IV**

**Q4)** a) Give an account on the HACCP prerequisite programs on food safety and hazards.

OR

b) Discuss GMP's prerequisite programs on food quality and hazards.

**UNIT - V**

**Q5)** a) Discuss the origin and evolution of HACCP system for consumer foods. Write about the recognition of HACCP system.

OR

b) Discuss the chronology of food safety and its related events.

