#### M.Sc. DEGREE EXAMINATION, MAY - 2017

#### First Year

# FOODS & NUTRITIONAL SCIENCE

#### **Fundamentals of Food and Nutrition**

Time: 3 Hours Maximum Marks: 70

#### Answer all questions choosing one from each Unit.

#### <u>Unit - I</u>

**Q1)** a) What do you understand by balanced diet? Explain the effects of malnutrition on health.

OR

b) Discuss the ICMR recommendations of dietary requirements. What are its uses and limitations?

#### <u>Unit - II</u>

**Q2)** a) Explain the composition and classification of Carbohydrates with examples. Discuss the functions of carbohydrates in body.

OR

b) Discuss the food sources for oils and fats explain the biological functions of Cholesterol.

#### <u>Unit - III</u>

Q3) a) What are vitamins? Write about the sources and functions of vitamins.

OR

b) Explain the vitamin deficiency symptoms and diseases due to vitamin deficiencies.

#### <u>Unit – IV</u>

**Q4)** a) Explain the sources for Sodium and Potassium for body. Write their biological functions.

OR

b) Discuss the sources and need of Cobalt and Zinc for body.

# $\underline{Unit - V}$

**Q5)** a) Discuss the WHO's recommendations on Food and nutrition.

OR

b) Explain the aims and role of NGOs in popularizing the nutritional knowledge in rural areas in India.



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# **Nutritional Biochemistry**

Time: 3 Hours Maximum Marks: 70

Answer all questions choosing one from each Unit  $(5 \times 14 = 70)$ Each question carries 14 marks

#### <u>Unit - I</u>

**Q1)** a) Explain HMP pathway in detail.

OR

b) write about protein bio synthesis what is the metabolic interrelationship between lipids and proteins.

#### <u>Unit - II</u>

**Q2)** a) Discuss the utilization of nutrients and its metabolism.

OR

b) Discuss the role of minerals in metabolism.

#### Unit - III

**Q3)** a) Explain the metabolism of vitamins.

OR

b) Discuss the role of vitamins in metabolism.

#### <u>Unit – IV</u>

**Q4)** a) What are enzymes? Explain the factors influencing enzyme activity?

OR

b) Discuss the Antigen - Antibody reactions and nutrition.

# $\underline{Unit - V}$

**Q5)** a) Describe human immune system in detail.

OR

b) Discuss Biochemical oxidation – reduction processes in human body giving examples.



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#### **Functional Foods**

Time: 3 Hours Maximum Marks: 70

# Answer all questions choosing one from each Unit (5 x 14 = 70) Each question carries 14 marks

#### Unit - I

**Q1)** a) What are Functional foods? Discuss the Indian Market Potential of functional foods.

OR

b) Discuss the Public Demand on functional foods.

#### <u>Unit - II</u>

**Q2)** a) What are the sources for protein powders? Write the types of protein powders and the usage of their merits and demerits.

OR

b) Write a detailed note on low cholesterol oils and cholesterol free foods. What are its advantages on health aspects?

#### Unit - III

**Q3)** a) What are nutraceuticals? Explain the types and classification of neutraceuticals giving suitable examples.

OR

b) What are diabetic nuts and confectionaries? Discuss their nutritional implications.

#### <u>Unit – IV</u>

**Q4)** a) What are artificial Sweeteners? Discuss the production of Sugar free products and their current market trend.

OR

b) Discuss the Fortification of nutrients in processed foods. Explain their role in health.

#### $\underline{Unit - V}$

**Q5)** a) Discuss the need and importance of biotechnology in food processing industry.

OR

b) Explain in detail about genetically modified foods. Discuss their nutritional implications.



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# **Institutional Foods Service Management**

Time: 3 Hours Maximum Marks: 70

# Answer all questions choosing one from each Unit $(5 \times 14 = 70)$ Each question carries 14 marks

#### Unit - I

**Q1)** a) Discuss the need and importance of Food Service Industry. Write about the tools of management.

OR

b) Explain the principles of Food Service Management in Hostels and Hospitals.

#### Unit - II

**Q2)** a) Explain the principles and functions of Fast foods and takeaway Foods Service Managements.

OR

b) Discuss the Food Service Managements in Industrial Canteens and Wine bars.

#### <u>Unit - III</u>

**Q3)** a) Describe the building plans cum outlays of Kitchen and service areas of Catering Institutions.

OR

b) Discuss the service available from the Food management regarding Self Servicing Canteens and Mobile Catering.

#### <u>Unit – IV</u>

**Q4)** a) Discuss the hygiene conditions of Food and its safety in Temples and Mass feeding programmes.

OR

b) Write about the Food Safety awareness programmes to food handlers and consumers.

#### $\underline{Unit - V}$

**Q5)** a) Describe the importance of Bookkeeping and accounting in Cost Control and Pricing of Food items.

OR

b) Explain the need and importance of Training Programmes for employees in Food Service Sectors.

