

**M.Sc Home Science (Food Science and Nutrition)
2nd semester Examination 2021 (June)**

**Applied Physiology
HSC-511**

Full Mark: 40

The figures in the margin indicate full marks for the questions.

Answer the following questions

1. Explain the process of regulation of respiration. **10**

Or

Explain the functional anatomy of pancreas with a net diagram. Discuss the mechanism of secretion of pancreatic juice. **5+5=10**

2. Write the compositions of body fluid and methods of measurement of body fluids. **2+8=10**

Or

Discuss the process of urine formation. **10**

3. Discuss the mode of action and regulation of secretion of hormones of posterior pituitary.

Or

Define neurotransmitter. Explain the classes of neurotransmitter. **2+8=10**

4. Discuss the physiological and pathological conditions of blood cells. **5+5**

Or

Explain the effect of exercise on cardiovascular diseases. **10**

**M.Sc Home Science (Food Science and Nutrition)
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**Macronutrients and micronutrients
HSC-512**

Full Mark: 40

The figures in the margin indicate full marks for the questions.

Answer the following questions

1. Describe about the digestion and absorption of carbohydrate. 10

OR

Discuss the method of measurement of energy value of foods by Bomb Calorimeter. Explain the methods for determination of energy expenditure. 5+5=10

2. Classify amino acids and explain in detail. 10

OR

Explain the fatty acid types and write the functions of Essential Fatty Acids 7+3 =10

3. Write the functions, absorption, transport and utilization of vitamin D. 10

OR

Explain the functions and deficiency diseases of Thiamine. 5+5=10

4. Explain the mechanism of absorption of Iodine with the help of flow chart. Write about the toxicity of iodine. 8+2=10

OR

Discuss the absorption and utilization of calcium, Calcium-phosphorus ratio, factors affecting absorption of calcium. 5+2+3=10

M.Sc Home Science (Food Science and Nutrition)
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Advanced Diet Therapy
HSC-514

Full Mark: 40

The figures in the margin indicate full marks for the questions.

Answer the following questions

1. Define atherosclerosis. Bring out the role of dietary fat in atherosclerosis. **2+8**
Or

Discuss the modifications in the intake of calories, fat, protein, electrolytes in hepatic liver disorder. **10**

2. Bring out the relationship between **5+5**
a. Glycemic index and diabetes mellitus
b. Obesiogenic environment and obesity
Or

List the causes of hypothyroidism. Discuss the nutritional management of gout. **3+7**

3. What is nephrotic syndrome. List the objectives of diet therapy and discuss the therapeutic modifications you would suggest to a patient suffering from nephrotic syndrome. **2+2+6**

Or

Elaborate on the general guidelines in planning optimal nutrition for a cancer patient, based on the alterations that you find when you assess the needs of the individual. **10**

4. Name the routine hospital diets prescribed to meet therapeutic needs. Briefly discuss the nutritional management during preoperative period. **2+8**

Or

Define Total Parenteral Nutrition. Discuss the enteral mode of nutrition support in reference to its accessibility, feeding formulas and mode of administration. **2+8**

M. Sc Home Science
2nd Semester Examination 2021 (June)
Advanced Food Science
HSC-513
Full mark-40

Answer all questions

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| 1. | Explain the composition of food starch. Give its source. | 8+2=10 |
| | OR | |
| | What is water activity? Bring out its influence on quality and stability of foods. | 2+8=10 |
| 2. | Discuss the toxic constituents of pulses and legumes. | 5+5=10 |
| | OR | |
| | Explain the various post-harvest changes in fruits and vegetables. | 10 |
| 3. | What are the effects of heat on egg protein? Explain with suitable examples. | 10 |
| | OR | |
| | Discuss the effects of heat, acid and enzymes on milk. | 10 |
| 4. | Define rancidity. Describe its different types and the various strategies to prevent it. | 10 |
| | OR | |
| | Describe the major food additives used in food processing with relevant examples. | 10 |