

**Integrated B.Sc. – M.Sc. Clinical Nutrition and Dietetics (CND)**  
**First Year Semester-I, January-2019 Examination**

Time: 2.00 Hrs.

[Max. Marks: 50]

**HUMAN PHYSIOLOGY**

**Q.P Code: N1010**

*Your answers should be specific to the questions asked.  
Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

**2 X 6 = 12 Marks**

1. Explain the origin & spread of cardiac impulse.
2. Describe the mechanism of HCl secretion in the stomach.

**SHORT ESSAY**

**6X 4 = 24 Marks**

3. Define erythropoiesis. List the sites of erythropoiesis.
4. Describe the steps involved in humoral immunity.
5. Draw a neat labelled diagram of oxygen hemoglobin dissociation curve
6. Name the clinical condition arising out of impaired synthesis of thyroid hormones in adults and infants.
7. Define GFR. List factors affecting GFR
8. Draw a neat labelled diagram of neuron

**SHORT ANSWER**

**7 X 2 = 14 Marks**

9. List the composition of saliva.
10. Define & List the types of diuresis
11. List the steps of spermatogenesis
12. Explain how oral contraceptives prevent pregnancy
13. Classify leucocytes
14. Give the cause of hemophilia
15. classify body fluid compartments.give the volume of each compartment

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**NUTRITIONAL BIOCHEMISTRY**

**Q.P Code: N1020**

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**LONG ESSAY**

**2x6=12Marks**

1. Describe the steps of TCA cycle. Add a note on inhibitors of TCA cycle. (4+2)
2. Define Enzymes. Enumerate the various factors affecting enzyme activity. (1+5)

**SHORT ESSAY**

**6x4=24Marks**

3. Explain the Chemiosmotic theory of oxidative phosphorylation.
4. Describe the Structure of DNA with neat labeled diagram.
5. What are Phospholipids? Classify them with suitable examples and important functions. (1+3)
6. Write the sources, daily requirement and biochemical functions of Ascorbic acid. (1+1+2)
7. Describe the steps of urea cycle.
8. Define Carbohydrates. Classify them with suitable examples. (1+3)

**SHORT ANSWERS**

**7x2=14Marks**

9. Write any 4 characteristics of genetic code
10. What is Denaturation of proteins? List two factors causing Denaturation.
11. List any 4 functions of zinc.
12. Name the ketone bodies.
13. Define lipoproteins. Give two examples.
14. Hemosiderosis.
15. Define essential amino acids and name them.

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**FUNCTIONAL HUMAN ANATOMY**

**Q.P Code: N1030**

*Your answer should be specific to the questions asked  
Draw neat labeled diagrams wherever necessary.*

**LONG ESSAY:**

**6X2=12Marks**

1. Mention the formation, tributaries and clinical importance of Portal vein.
2. Describe the features & structures opening in lateral wall of nose.

**SHORT ESSAY:**

**6X4=24Marks**

3. Describe the mediastinal surface of Left lung.
4. Describe the microscopic structure of Pancreas.
5. Describe the Blood supply and applied aspects of Stomach.
6. Enumerate the steps of fertilization.
7. Cross section of spinal cord.
8. Describe the Haversian system of bone.

**SHORT ANSWER:**

**7X2=14Marks**

9. Mention any two differences between right and left lung.
10. Define Morula.
11. Draw a labelled diagram of microscopic structure of Mucous Salivary gland.
12. Mention the structure of Umbilical cord.
13. List the ventricles of brain.
14. Name the constrictions of ureter.
15. Name any two branches of right coronary artery.

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**MAX MARKS: 50**

**FOOD FACTS AND PRINCIPLES -I**

**Q.P CODE: N1041**

*Your answers should be specific to questions asked.*

*Draw neat labelled diagrams wherever necessary*

**LONG ESSAY**

**2 x 6 = 12 marks**

1. Explain the structure of rice with labelled diagram.
2. Describe the role of fats and oils in Indian cookery .

**SHORT ESSAY**

**6 x 4 = 24 marks**

3. Explain factors affecting the shelf life of vegetables.
4. Describe oil seeds utilization in malnutrition programmes.
5. Explain the biological importance of water.
6. Explain pectic substance and gel forming ability of fruits.
7. Explain properties of colloids.
8. Differentiate between vegetable oils, animal fats and synthetic fats.

**SHORT ANSWER**

**7 x 2 = 14 marks**

9. Define germination and parching process .
10. List post – harvest changes in fruits .
11. List factors affecting gelatinization.
12. List importance of fat substitutes.
13. Define texture vegetable protein.
14. Define lathyrism and lathyrogens.
15. List all the toxic constituents present in pulses .

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