



SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

Integrated B.Sc. –M.Sc. Clinical Nutrition and Dietetics (CND)
First Year Semester-I, April 2026 Examination

Time: 2.00 Hrs.

[Max. Marks: 50]

NUTRITIONAL BIOCHEMISTRY

Q.P Code: N1020

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

I. LONG ESSAY

2X6=12 Marks

1. Define Carbohydrates. Classify them with suitable examples & write their biomedical importance. (1+3+2)
2. Define Enzymes. Classify enzymes. Give one example for each class. (1+5)

II. SHORT ESSAY

6X4=24 Marks

3. What are Biologically Important Peptides? Give three examples and their biological roles. (1+3)
4. Explain the primary structure of proteins? What is its significance?.
5. Describe the transport and storage of Iron. (2+2)
6. What are Phospholipids? Classify them with suitable examples and important functions. (1+3)
7. Write the sources, daily requirement and biochemical functions of Ascorbic acid. (1+1+2)
8. Describe the steps of urea cycle.

III. SHORT ANSWERS

7X2=14 Marks

9. What is active transport? Give two examples.
10. Write the biological reference interval for a) Serum Sodium b) Serum Potassium
11. What are lipoproteins? Give two examples.
12. Define Isoenzymes. Give any two examples.
13. Define Transamination. Give two examples of Transaminases.
14. What is the normal blood pH? Name any two blood buffers by which acid-base balance is regulated in the body.
15. What are essential amino acids? Name them.

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First Year Semester-I, April 2026 Examination

TIME – 2.30 HRS

MAX MARKS: 80

Human Physiology

QP CODE: N1350

Your answers should be specific to questions asked.

Draw neat labelled diagrams wherever necessary

I. LONG ESSAY

2 X 10 = 20 Marks

1. Describe the steps involved in haemostasis. Write the mechanism of intrinsic and extrinsic pathway of clotting (4+6)
2. Define blood pressure (BP). State the normal value. Name the instrument used to record BP. List the factors influencing blood pressure (2+2+1+5).

II. SHORT ESSAY

6 X 5 = 30 Marks

3. Define ovulation and name three tests of ovulation
4. Describe the etiology, clinical features, and management of erythroblastosis foetalis
5. Define GFR. Mention its normal value. List two factors which affect GFR.
6. Define active transport and classify it with an example for each classification.
7. Name the hormones that maintain the normal serum calcium level. Mention two functions of calcium
8. Define and classify Hypoxia with an example for each classification.

III. SHORT ANSWERS

10 X 3 = 30 Marks

9. List the salivary glands.
10. List the functions of basal ganglia
11. List the functions of the saliva
12. Define Residual volume. Mention its normal value.
13. Draw a neat, labelled diagram of a Neuron
14. Mention three differences between cretinism and dwarfism
15. Name two hormones acting on the Kidney tubules
16. List the functions of the plasma proteins
17. Name the components of the Juxta Glomerular apparatus
18. List the functions of blood



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[Max. Marks: 80]

NUTRITIONAL BIOCHEMISTRY

QP CODE: N1360

Your answers should be specific to questions asked.

Draw neat labelled diagrams wherever necessary

I. Long Essay

2X10=20Marks

1. Describe Gluconeogenesis with key enzymes, regulation, and significance.
2. Explain β -oxidation with steps, energy yield, and clinical significance.

II. Short Essay

6X5=30Marks

3. Explain Glycolysis regulation with key enzymes.
4. Describe the Urea cycle disorders.
5. Explain importance of Pentose Phosphate Pathway.
6. Explain Enzyme kinetics – K_m and V_{max} .
7. Classify lipids with suitable examples.
8. Describe Calcium metabolism and regulation.

III. Short Answers

10X3=30Marks

9. Define Glycogenolysis. Mention key enzyme.
10. Define NADPH. Mention two functions.
11. Define Transamination. Mention coenzyme.
12. Define Ketolysis. Mention site and significance.
13. Mention any three role of α -ketoglutarate in TCA and amino acid metabolism.
14. Define HDL. Mention its function.
15. Name thyroid hormones and state one function.
16. Define DNA replication. Mention its nature.
17. Define Facilitated diffusion. Mention two characteristics.
18. Classify fatty acids based on saturation with examples.



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TIME – 2.30 HRS

MAX MARKS: 80

Food Facts and Principles -I

QP CODE: N1381

Your answers should be specific to questions asked.

Draw neat labelled diagrams wherever necessary

I. LONG ESSAY

2X10 = 20 Marks

1. Classify pigments present in fruits and explain their stability.
2. Explain toxic constituents of pulses and methods of reduction.

II. SHORT ESSAY

6X5 = 30 Marks

3. Explain functions of food.
4. Describe structure of wheat grain.
5. Elaborate nutritive composition of fats and oils.
6. Explain enzymatic browning in vegetables.
7. Enumerate properties of water.
8. Describe biological importance of colloids.

III. SHORT ANSWER

10X3 = 30 Marks

9. Define nutrition.
10. Define acids.
11. Define covalent bond.
12. Define sol and gel.
13. Define gluten and factors affecting it.
14. Define syneresis and retrogradation.
15. Name the enzymes causing browning.
16. Name any three nutrients in nuts.
17. Define freezing and mention freezing point of foods.
18. Define pH and mention its scale.