Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 28-Feb-2023

Time: 3 Hours **Max. Marks: 38 Marks**

BIOCHEMISTRY (RS3 & RS4)

Q.P. CODE : 1739

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

(Note: Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Explain the digestion and absorption of proteins.
2. Explain the role of liver in fat metabolism.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Write a note on Gout.
4. Write any five diagnostic applications of enzymes.
5. Explain the classification of Polysaccharides with examples.
6. Explain the classification of proteins.
7. Mention the sources and disposal methods of biomedical waste.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Name the two essential amino acids.
9. Mention any two functions of Cholesterol.
10. Mention the normal levels of i) Fasting blood glucose ii) Blood creatinine.
11. Rickets.

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 23-May-2022

Time: 3 Hours **Max. Marks: 38 Marks**

BIOCHEMISTRY (RS3 & RS4)

Q.P. Code: 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. What is gluconeogenesis? Describe formation of glucose from pyruvate.
2. Describe the oxidation of fatty acids. Add a note on its energetics with example.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Heteropoly saccharides
4. Name phospholipids and write their functions.
5. Urea cycle
6. Write briefly on factors regulating water balance.
7. Digestion of carbohydrates

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Name ketone bodies.
9. Write normal serum levels of sodium and alkaline Phosphatase.
10. Give examples for (a) Reducing disaccharide (b) Sulfur containing amino acid.
11. Mitochondria

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 09-Feb-2022

Time: 3 Hours **Max. Marks: 38 Marks**

BIOCHEMISTRY (RS3 & RS4)

Q.P. Code: 1739

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

(Note: Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One)

1 x 10 = 10 Marks

1. Write the steps of HMP shunt pathway in detail. Write its significance.
2. Define carbohydrates. Classify carbohydrates with examples. Add a note on importance of carbohydrates.

SHORT ESSAYS (Answer any Four)

4 x 5 = 20 Marks

3. Difference between diffusion and Osmosis.
4. Transamination of amino-acids and its significance
5. Role of liver in lipid metabolism.
6. Bio-medical waste management.
7. What are plasma proteins and their functions?

SHORT ANSWERS

4 x 2 = 8 Marks

8. List any four pancreatic lipases of GIT.
9. Galactosuria.
10. Classification of Lipids with examples.
11. Mention the normal values of Blood Urea, Nitrogen and Serum Creatinine.

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 30-Jul-2021

Time: 3 Hours **Max. Marks: 38 Marks**

BIOCHEMISTRY (RS3 & RS4)

Q.P. CODE : 1739

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

(Note: Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Explain digestion and absorption of carbohydrates. Add a note on Lactose Intolerance.
2. Explain tyrosine metabolism, add a note on Alkaptonuria.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Describe about Active mechanism with one example.
4. What are Essential fatty acids? Mention their importance and deficiency manifestation.
5. Cori's cycle and its significance
6. Hormonal regulation of blood glucose
7. Classification of enzymes with examples.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Four characteristics of Eukaryotic Cells.
9. Structure and function of Starch.
10. Properties of Simple Lipid.
11. Deficiency manifestations of Folic Acid.

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 27-Nov-2020

Time: 3 Hours **Max. Marks: 38 Marks**

BIOCHEMISTRY (RS3 & RS4)

Q.P. Code : 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Explain Biosynthesis of protein in eukaryotes.
2. Describe β – oxidation of palmitic acid. Add a note on its energetics.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Write any five diagnostic applications of enzymes.
4. Urea Cycle
5. GTT
6. Regulation of blood glucose
7. Glycogen synthesis

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Biomedical waste management
9. Give the Normal value of Sodium and Total Cholesterol.
10. Classify carbohydrates
11. Mitochondria

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – 07-Sep-2020

Time: 3 Hours **Max. Marks: 38 Marks**

BIOCHEMISTRY (RS3 & RS4)

Q.P. Code: 1739

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

(Note: Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Name the Ketone bodies. How ketone bodies are formed and utilized?
2. Explain Glycolysis with energetics.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Disaccharides
4. Formation of uric acid
5. Digestion and absorption of carbohydrates
6. Urea cycle
7. Classify lipoproteins. Explain their biological significance

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Any two factors effecting enzyme activities
9. Lactose
10. Normal serum levels of
    a) Serum cholesterol
    b) Serum sodium
11. Define Gluconeogenesis.

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – OCT-2019

Time: 3 Hours **Max. Marks: 38 Marks**

Biochemistry

Q.P. Code: 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Define Gluconeogenesis. Describe the pathway of gluconeogenesis in detail.
2. Write the steps involved in the synthesis of urea. Add a note on its regulation.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Electrolytes of human body and their functions.
4. Explain in detail about fluid mosaic model.
5. Biomedical importance of proteins.
6. The steps of Hexose Monophosphate Pentose (HMP) pathway and its significance.
7. Describe the process of transport mechanism across the cell membrane.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. What is lactose intolerance?
9. What is phosphorylation?
10. Essential amino acids.
11. Write the normal values of HDL, LDL, VLDL in the blood.

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – APRIL-2019

Time: 3 Hours **Max. Marks: 38 Marks**

Biochemistry

Q.P. Code : 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Describe transamination reaction and the formation of ammonia by glutamate Dehydrogenase by urea cycle
2. Describe aerobic Glycolysis. Add a note on its bioenergetics

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Give an account of digestion and absorption of carbohydrates
4. Ketogenesis
5. Explain enzymy inhibition in detail
6. Functions of lipids
7. Heteropolysaccharides

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Essential amino acids
9. Marker enzymes of myocardial infarction
10. Fatty liver
11. Write the normal range of (a) Serum total protein (b) Serum total bilirubin

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – SEP-2018

Time: 3 Hours **Max. Marks: 38 Marks**

Biochemistry

Q.P. Code : 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Give an account of digestion and absorption of lipids.
2. Classify enzymes based on IUB classification with two examples for each class.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Describe Glycogenesis. How is it regulated?
4. Urea cycle.
5. Diagnostic importance of Isoenzymes in myocardial infarction.
6. Hormonal regulation of electrolyte balance.
7. Discuss Hexose monophosphate pathway. Add a note on its significance.

SHORT ANSWERS (Answer All) **4 x 2 = 8 Marks**

8. Functions of Sodium.
9. Uncouplers of Oxidative Phosphorylation.
10. Hyperglycemia.
11. Name Ketone bodies

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – APRIL 2018

Time: 3 Hours **Max. Marks: 38 Marks**

Biochemistry

Q.P. Code : 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Explain in detail glycogenesis and glycogenolysis.
2. Describe urea cycle. Add a note on disorders of urea cycle.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Outline the β – oxidation of fattyacids
4. Disaccharides
5. What are peptides? Biological importance of peptides
6. Classify enzymes with one example.
7. Lipoproteins

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Water balance
9. Function of Albumin
10. Oxidative phosphorylation
11. Essential amino acids

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – SEP-2017

Time: 3 Hours **Max. Marks: 38 Marks**

Biochemistry

Q.P. Code : 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Describe pentosephosphate pathway. Add a note on its significance.
2. Describe β-oxidation reaction of palmitic acid. Add a note on its energetics.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Pellagra
4. Classification and functions of lipoproteins
5. Different structural organization of proteins
6. Polysaccharides
7. Glucose Tolerance Test (GTT).

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Protein denaturation
9. Benedict's test
10. Cori cycle
11. Normal levels of, a) Bilirubin b) Uric acid

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – APRIL 2017

Time: 3 Hours **Max. Marks: 38 Marks**

Biochemistry

Q.P. Code : 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Describe TCA cycle. indicate the energy yielding steps in this cycle, how is this regulated.
2. Describe ketone bodies metabolism. Add a note on ketosis.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Describe water balance in human body.
4. Classify enzymes with suitable examples.
5. Plasma proteins and their functions
6. Digestion and adsorption of lipids
7. Urea cycle

SHORT ANSWERS **4 x 2 = 8 Marks**

8. Name two phospholipids and mention their function.
9. Benedict's test
10. Essential amino acids
11. Hypoglycemia

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – SEP - 2016

Time: 3 Hours **Max. Marks: 38 Marks**

Biochemistry

Q.P. Code: 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Describe the pathway of anaerobic glycolysis. Add a note on its energetics.
2. Describe the Beta oxidation of fatty acids. Add a note on its energetics.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Biomedical importance of lipids.
4. Factors affecting enzyme activity.
5. Functions of water in body.
6. Write a note on Glucose tolerance test (GTT).
7. Define enzyme. Explain competitive inhibition with suitable examples.

SHORT ANSWERS **4 x 2 = 8 Marks**

8. What is denaturation of protein?
9. What are ketone bodies?
10. List down four examples of chemical wastes generated in a hospital.
11. What is Gout?

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Rajiv Gandhi University of Health Sciences, Karnataka

I year B.Sc. Nursing (PC) Degree Examination – MAY 2016

Time: 3 Hours **Max. Marks: 38 Marks**

Biochemistry

Q.P. Code : 1739

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

(Note : Both QP Codes 1739 and 1740 are to be answered within total duration of 3 hours)

LONG ESSAYS (Answer any One) **1 x 10 = 10 Marks**

1. Give an account of digestion and absorption of carbohydrates.
2. Define Oxidative Phosphorylation. Describe the components of Electron transport chain.

SHORT ESSAYS (Answer any Four) **4 x 5 = 20 Marks**

3. Discuss various factors affecting the rate of enzyme catalyzed reactions.
4. Structure and functions of Cholesterol.
5. What are Plasma proteins? Mention their functions.
6. Define Gluconeogenesis and mention its significance.
7. Give account of digestion of proteins.

SHORT ANSWERS (Answer All) **4 x 2 = 8 Marks**

8. Normal levels of a) Blood Urea b) Serum calcium.
9. Name two Glycogen storage diseases.
10. Name two clinically important enzymes.
11. Name two Purine and two Pyrimidine bases.

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