SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

B.Sc. Allied Health Sciences
Second Year Semester-III (CBCS Scheme)
February - 2018 Examination
B.Sc. Medical Laboratory Technology (MLT)

Time : 2.30 Hrs. **[Max. Marks : 80]**

BIOCHEMISTRY-I

Q.P Code : MLT301CC

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

LONG ESSAY **2 X 10 = 20 Marks**

1. Define Enzymes. Classify them with examples.
2. Classify proteins with examples.

SHORT ESSAY (Answer any Six) **6 X 5 = 30 Marks**

3. Describe the structure and functions of Mitochondria.
4. Define polysaccharides. Classify them and describe Heteropolysaccharides.
5. Biologically important peptides.
6. Competitive inhibition.
7. Functions of Albumin.
8. Describe the Watson and Crick model of DNA.
9. Active transport.
10. Classification of lipids.

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. Essential amino acids.
12. Name abnormal constituents of urine.
13. Invert sugar.
14. Disaccharides.
15. Rancidity.
16. Name the plasma proteins.
17. Essential fatty acids.
18. List any three factors affecting enzyme activity.
19. Types of RNA.
20. Benedicts test.
21. Epimers.
22. Name the pyrimidine bares.

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BIOCHEMISTRY-II

Q.P Code : MLT302CC

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

LONG ESSAY **2 X 10 = 20 Marks**

1. Describe the dietary source, RDA and functions of Calcium.
2. Enumerate the reactions of Citric Acid cycle.

SHORT ESSAY (**Answer any Six)** **6 X 5 = 30 Marks**

3. Regulation of glycogen metabolism.
4. What is Atherosclerosis? Explain pathogenesis and factors contributing to Atherosclerosis.
5. Digestion and absorption of carbohydrates.
6. Glucose tolerance test (GTT).
7. What is porphyria? Classify them and explain acute intermittent porphyria.
8. Enumerate the functions of copper and zinc.
9. Chemiosmotic theory.
10. Write the pathway of urea synthesis.

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. Alkaptonuria.
12. Fatty liver.
13. Mention any three uncouplers of oxidative phosphorylation.
14. Functions of iodine.
15. Write three biomedical importance of HMP shunt.
16. Mention two copper containing enzymes.
17. Write three glycogen storage disorders with enzyme defect.
18. Mention the ketone bodies and causes of ketonuria.
19. Write three causes for Hepatic jaundice.
20. Mention the enzyme deficient in Lesch Nyhan syndrome and write two manifestations.
21. Homocystinuria.
22. Write the reference range for: (1) serum urea (2) serum uric acid and (3) serum creatinine.

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BIOCHEMISTRY-III

Q.P Code : MLT303CC

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

LONG ESSAY **2 X 10 = 20 Marks**

1. Describe the various mechanisms regulating the blood acid base balance.
2. Give an account on principle, types and applications of chromatography.

SHORT ESSAY (**Answer any Six)** **6 X 5 = 30 Marks**

3. Advantages and applications of ELISA.
4. Describe the various steps of phlebotomy.
5. Importance of automation in clinical biochemistry laboratory.
6. Ultracentrifugation.
7. External Quality Assessment programs (EQA).
8. Define Respiratory alkalosis and mention the causes.
9. Applications of electrophoresis.
10. Importance and precautions of Sample storage.

SHORT ANSWERS (Answer any Ten) **10 X 3 = 30 Marks**

11. Standard deviation (SD).
12. Preanalytical errors.
13. Mention three causes of Respiratory acidosis.
14. Beer's and Lambert's laws.
15. Sensitivity.
16. Mention thyroid function tests.
17. Mention the advantages of LJ chart.
18. Mention the causes of obstructive jaundice.
19. Mode.
20. Urea clearance test.
21. Principle of pH meter.
22. Write the reference range for: (1) serum urea (2) serum uric acid and (3) serum creatinine.

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