SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH

(A DEEMED TO BE UNIVERSITY)

Post Graduate Degree Examination – November - 2013

Time : 3 Hrs. **[Max. Marks : 100]**

M.D BIOCHEMISTRY

PAPER - I

Q.P Code :1301

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Describe the principles and applications of different types of immunoassays in a diagnostic laboratory.
2. Discuss the arachidonic acid derivatives and their functions in the body. Add a note on clinical uses of drugs inhibiting their formation.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Prion and disease causation.
4. Synthetic nucleotides and their clinical importance.
5. Structures of Collagen.
6. Organization and factors influencing Bio-membranes.
7. Working principles of High Performance Liquid Chromatography.
8. Anti- Oxidants in the body.

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M.D BIOCHEMISTRY

PAPER - II

Q.P Code :1302

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Write in detail about effects of inborn errors of metabolism with two examples each from amino acids, lipid and carbohydrate metabolism. Add a note on the biochemical principles used in the diagnosis and treatment of those inborn errors of metabolism.
2. Explain integration of intermediary metabolism in fasting and fed states.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Transcription initiation in eukaryotes and its regulation.
4. Use of recombinant DNA technology in the molecular analysis of diseases.
5. Transport and excretion of intracellular cholesterol.
6. Hormones acting through cGMP as second messenger.
7. Biosynthesis and degradation of glycoproteins and list associated inborn errors.
8. Extrahepatic and intrahepatic sources of nitrogen for urea genesis and give diagnostic flow chart for neonatal hyperammonaemia.

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M.D BIOCHEMISTRY

PAPER - III

Q.P Code :1303

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Discuss factors involved in transport across cell membranes. Add note on disorders of membrane transport mechanism.
2. Discuss the role of vitamins as antioxidants. Describe the sources, daily requirements, functions and deficiency manifestations of any one of them.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Zinc.
4. Folate Trap.
5. Wilsons Disease.
6. Regulation of calcium homeostasis.
7. Biotin as coenzyme.
8. Limiting Aminoacids.

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M.D BIOCHEMISTRY

PAPER - IV

Q.P Code :1304

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

LONG ESSAY **2 X 20 = 40 Marks**

1. Describe the metabolism, estimation and clinical importance of low density lipoproteins (LDL). Add a note on its involvement in pathogenesis of atherosclerosis.
2. Discuss methods used to estimate potassium levels in blood. Describe the derangements associated with potassium metabolism.

SHORT ESSAY **6 X 10 = 60 Marks**

3. Discuss the importance of estimation of homocysteine in clinical practice.
4. Describe the importance of creatine kinase as a diagnostic enzyme.
5. Describe with examples, variables that affect values of biochemical analytes estimated in a diagnostic laboratory.
6. Discuss parameters used to assess the diagnostic efficiency of a test.
7. Describe tests done to evaluate the function of the thyroid gland.
8. Discuss microalbuminuria.

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