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

**Post Graduate Degree Examination – May - 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 primary structure of human insulin. Enumerate the steps to determine the primary structure of proteins.
2. Describe the principles and applications of spectrophotometry.

**SHORT ESSAY**

**6 X 10 = 60 Marks**

3. Phospholipids.
4. Membrane proteins.
5. Henderson Hasselbalch equation.
6. Southern Blotting.
7. Stabilizing forces in protein molecules.
8. Apoptosis.

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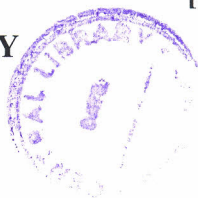
**SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH****(A DEEMED TO BE UNIVERSITY)****Post Graduate Degree Examination – May - 2013****Time : 3 Hrs.****[Max. Marks : 100]****M.D BIOCHEMISTRY****PAPER - II****Q.P Code :1302***Your answers should be specific to the questions asked.**Draw neat labelled diagrams wherever necessary.***LONG ESSAY****2 X 20 = 40 Marks**

1. Describe homeostasis of Blood Glucose.
2. Describe the synthesis of thyroid hormones. Add a note on subclinical hypothyroidism.

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

3. Metabolic fate of amino acid nitrogen in the body.
4. Bile salts and Bile Pigments.
5. Sphingolipids and its associated clinical disorders.
6. Reverse transcriptase and its significance.
7. cDNA
8. Lipoproteins.

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1. List various mechanisms used for regulation of enzyme activity with the help of a diagram. Write in detail about short term regulatory mechanisms with suitable examples.
2. Nutritional significance of vegetarian diet in india and dietary management of ischaemic heart disease.

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

3. Metabolism in platelets and endothelium.
4. Biochemistry of red blood cell membrane and list intrinsic causes of haemolytic anaemias.
5. Identification of nature of inhibitors.
6. Hyper vitaminosis and vitamin dependent syndromes.
7. Minerals that function as prosthetic groups of enzymes.
8. Quality of proteins and it's assessment.

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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. Discuss various abnormal hemoglobin. Explain thalassemias in detail.
2. Cardiac markers.

**SHORT ESSAY**

**6 X 10 = 60 Marks**

3. Oncogenes
4. Insulin resistance.
5. Hypothyroidism.
6. Quality control programs.
7. Lipid profile.
8. Renal function tests.

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