SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)
M.B.B.S. PHASE – I Degree Examination – July-2013

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

BIOCHEMISTY

Q.P Code : SDUU -105

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

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

1. Write briefly on various physiologically important derivatives of tyrosine. Name the associated inborn errors of metabolism.
2. Describe the steps of transcription. Explain in brief post transcriptiorial modifications of mRNA.

SHORT ESSAY **10 X 5 = 50 Marks**

3. Factors influencing enzyme activity.
4. Regulation of gluconeogenesis.
5. Functions of phospholipids.
6. Absorption of vitamin B_{12}.
7. Functions of vitamin C.
8. Liver function tests.
9. Tests to assess glomerular functions of kidney.
10. Hyperuricemia.
11. Causes of hypoglycemia.
12. Absorption of iron.

SHORT ANSWERS **10 X 3 = 30 Marks**

13. Selenium
14. Obesity
15. Tests for the assessment of thyroid function
16. Respiratory acidosis.
17. Biological value of proteins.
18. Tumour markers.
19. Lipid profile – normal values.
20. Reactive Oxygen Species.
21. 2,3- Bisphosphoglycerate.
22. Types of porphyrias.

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LONG ESSAY (Answer any 2 only) **2 X 10 = 20 Marks**

1. Out line the phenyl alanine Metabolism. List out various disorders of the pathway with enzyme defects.
2. What is recombinant technology? Describe the various tools for isolation and manipulation of DNA to make chimeric DNA molecules. Add a note on the applications of recombinant technology.
3. What is normal PH of blood? Explain the renal mechanism of regulation of acid base balance. Add a note on metabolic acidosis.

SHORT ESSAY (Answer any 10 only) **10 X 5 = 50 Marks**

4. Cholesterol excretion and regulation of excretion.
5. Pyruvate dehydrogenase complex.
6. Enumerate different types of jaundice. How can you differentiate between them by bilirubin and Enzyme estimations.
7. Give an account of dietary sources, normal levels, functional importance and difficiency manifestations of Zinc.
8. What is allosteric regulation of enzymes? Explain in brief with two Examples.
9. Describe the mechanism of action of insulin.
10. Enumerate the synthesis of urea. Discuss the clinical utility of urea estimation with regard to the the various disorders.
11. What are the key enzymes of glucogenesis? Describe the synthesis along with its regulation.
12. What are xenobiotics? Give four examples. Mention the various phases of metabolism of xenobiotics. Describe the phase1 metabolism of xenobiotics.
13. HDL Metabolism.
14. Inhibitors of respiratory chain.
15. Protein biosynthesis.

SHORT ANSWERS **10 X 3 = 30 Marks**

16. Xeroderma pigmentosum.
17. PCR uses.
18. Glycemic index.
19. Specific dynamic action.
20. 2,3, DPG Significance.
21. Metabolic role of biotin.
22. Coris cycle.
23. Elucidate some enzyme markers for different membranes.
24. List out important features of clinical condition caused by deficiency of vitamin D.
25. What is the chemistry of vitamin C and clinical manifestations of its deficiency.

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