

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

M.B.B.S. PHASE – I Degree Examination – January-2014

Time : 3 Hrs.

[Max. Marks : 100]

BIOCHEMISTRY

Q.P Code : RS -105

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY (Answer any 2 only)

2 X 10 = 20 Marks

1. Describe the steps in the synthesis of cholesterol. How is it regulated? What is the normal level of cholesterol? How is it correlated with the incidence of atherosclerosis and coronary heart disease.
2. Describe the various components of electron transport chain. How is ATP synthesized in ATP synthase complex. List out the uncouplers of oxidative phosphorylation with a brief note about their mechanism of action.
3. Name the different purines. How are they synthesized in the body? Define salvage pathways. What is the significance of salvage pathways.

SHORT ESSAY (Answer any 10 only)

10 X 5 = 50 Marks

4. Give an account of dietary sources, normal levels, functional importance and deficiency manifestations of calcium.
5. Mechanism of action of vitamin D.
6. Name the compounds that under go gluconeogenesis. What are the key enzymes of gluconeogenesis? How blood glucose is derived from gluconeogenesis?
7. What is the role of carnitine in beta oxidation? Add a note on energetics of beta oxidation.
8. Methionine metabolism.
9. LDL metabolism and lipoprotein disorders.
10. Name six tumour markers and give their clinical significance.
11. What are the causes of metabolic acidosis. What are the compensatory mechanisms available in the body to overcome.
12. Competitive inhibition of enzymes and its therapeutic significance.
13. How are porphyrias classified? What are clinical features of acute intermittent porphyrias? How are they treated.
14. Liver function tests.
15. Homocystinurias.

SHORT ANSWERS

10 X 3 = 30 Marks

16. Calmodulin.
17. Night blindness.
18. Inhibitors of translation.
19. Futile cycles.
20. Mechanism of action of glucagon.
21. Normal levels of B.urea, S.Creatinine, Uricacid, S.Sodium, S.Potassium, Bicarbonate.
22. Histones.
23. Significance of TSH estimation in thyroid disorders.
24. Selenium.
25. Dietary fibre advantages.

* * *