

First Year M.Sc Medical Physiology Degree Examinations, October 2015

(FOUNDATION COURSE)

Time: 3 hrs

Max. Marks:- 70

PAPER II – BIOCHEMISTRY

- ***Answer all the questions***
- ***Draw diagrams wherever necessary***

Essay: (2x10=20)

1. What is the normal pH of the blood. Explain the role of lungs and kidneys in the maintenance of acid base balance. Add a note on respiratory acidosis. (1+3+4+2=10)
2. Enumerate the major steps of cholesterol synthesis. How cholesterol synthesis is regulated and mentions the causes of hypercholesterolemia. (4+3+3=10)

Short Notes: (6x5=30)

3. Name the specialized products synthesized by tyrosine. Explain the synthesis any two of them.
4. Defects and manifestations of congenital hyper bilirubinemia.
5. Significance of pentose phosphate pathway.
6. Absorption and transport of iron.
7. Effect of temperature and pH on enzyme activity.
8. Features of genetic code.

Answer briefly: (10x2=20)

9. List the salient features of active transport and mention two examples.
10. Oncogenes
11. What are zymogens and cite examples.
12. Mention the defect in Refsum's disease and Niemann-pick disease.
13. Name four antioxidants.
14. What are ribozymes. Mention, examples and its importance.
15. Name two biologically important nucleotides and mention its importance.
16. Defect and manifestations of xeroderma pigmentosum.
17. Deficiency manifestations of cobalamin
18. Causes of hyper gamma globulinemias
