

Q.P.Code :

Reg.No.:.....

First Professional MBBS Degree Examinations September 2020

Biochemistry –Paper I

Time : 3 Hours

Total Marks : 100

- **Answer all Questions**
- **Draw diagrams wherever necessary**

Essays:

(2 x15 = 30 Marks)

1. A child aged 4 months was brought to the Paediatric OP by her mother, who had noticed the diapers of the child were turning black on exposure to air.

- a. Name the aromatic amino acids (1)
- b. Discuss the metabolism of the involved amino acid. (7)
- c. Give the probable diagnosis (1 mark)
- d. Write the clinical manifestations and laboratory tests in the above condition. (4)
- e. Name any one special compound formed from this amino acid and its formation. (3)

2. Define Gluconeogenesis. Enumerate the substrates of gluconeogenesis. Write the steps of synthesis of glucose from any one of them. Add a note on its regulation. (1+2+9+3)

Short Essay:

(5x8 = 40 Marks)

- 3 . Write the steps in Ketogenesis. Add a note on Diabetic Ketoacidosis. (4+4)
4. Classify enzymes with examples. What is the clinical relevance of transaminases. (6+2)
- 5 .Describe carnitine shuttle with a labeled diagram (4+4)
- 6 . Describe the biochemical role of Vitamin C. Add a note on its deficiency manifestation. (5+3)
- 7 . Describe heme synthesis and its regulation. (5+3)

Give brief answers

(5x4 = 20 Marks)

8. Wald's visual cycle.
9. Give a schematic representation of anabolic role of TCA cycle.
10. Uncouplers of oxidative phosphorylation.
11. Chylomicrons.
12. Glycemic Index

Give Precise Answers:

(10x1 = 10 Marks)

13. The main protein in hair and nails is
14. Name two lipotropic factors
15. Name the marker enzymes for (1). Lysosome (2) Golgi Complex
16. What is Regan iso enzyme.
17. Name two compounds synthesized from Glycine.
18. Name two inhibitors of Complex I of ETC.
19. Name the ketone body which predominates in blood during ketosis.
20. Kyneurenine is formed from phenyl alanine - True/False

Give the normal values of .

- 21 Serum total cholesterol.
22. Serum total protein