2019 Scheme

Q.P. Code: 115001 Reg. no.: .....

First Professional MBBS Degree Regular/Supplementary Examinations
February 2023
Biochemistry - Paper I

Time: 3 Hours Total Marks: 100

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Long Essays **(2x15=30)**

1. Mother noticed that her child didn't attain milestones for the age. Mother also noticed hypopigmentation and mousy odour
   a) Name the amino acid involved (1)
   b) What is the diagnosis (1)
   c) What is the metabolism of the amino acid. Mention the inborn errors associated with its metabolism. (5+3)
   d) Enumerate the laboratory investigations aiding in the diagnosis. (2)
   e) Name two specialized compounds formed from tyrosine and discuss their formation in brief (3)
2. Define Enzyme, what are the factors affecting enzyme activity. Explain various mechanism of enzyme regulation. (2+4+9)

Short essays **(5x8=40)**

3. How are lipids digested and absorbed. Add a note on the associated disorders (6+2)
4. Explain glycolysis, regulation and its energetics
5. What is thalassemia. Discuss the clinical features, molecular basis and laboratory diagnosis of thalassemia (1+2+2+3)
6. Define dietary fibres. Give suitable examples and their biomedical importance. (1+3+4)
7. Explain electron transport chain with a suitable diagram. Add a note on the inhibitors of ETC (5+3)

Short answers **(5x4=20)**

8. Enumerate the sources, daily requirement and deficiency manifestation of vitamin C.
9. Kwashiorkor
10. Hypoglycemia
11. Mitochondria
12. Name four therapeutically important enzymes and their significance

Give Precise Answers **(10x1=10)**

13. Name two metabolites of biochemical importance formed in HMP pathway
14. Isoelectric pH of albumin
15. Name the essential fatty acids
16. Name two non-carbohydrates which give a positive Benedicts tests
17. Name a non-glycerol containing phospholipid and mention its significance.
18. Enzyme defect in MSUD.
19. Give the normal reference range for • FBS (Fasting Blood Glucose) • Serum cholesterol
20. Name two specialized compounds derived from glycine
21. Give an example for substrate level phosphorylation
22. Define epimerism

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