

## 2019 Scheme

Q.P. Code: 115001

Reg. no.: .....

### First Professional MBBS Degree Supplementary (SAY) Examinations May 2022

#### 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. A 45-year-old man complaints of increased appetite, thirst, and frequent micturition. His random blood sugar is 346 mg/dl
  - What is the diagnosis. What are the diagnostic criteria
  - Discuss the relevant investigations that can be done for further monitoring of the patient
  - How is blood glucose regulated
  - What is the renal threshold for Glucose (3+4+5+3)
2. Define Beta oxidation. Enumerate the steps and add a note on its regulation. Explain the energetics for palmitic acid (2+8+1+4)

#### Short essays

(5x8=40)

3. Enumerate the steps of TCA cycle. Add a note on malate shuttle (6+2)
4. Describe the salient features of any two types of enzyme inhibition with suitable examples (2+2+2+2)
5. Define nitrogen balance. Add a note on the clinical conditions altering nitrogen balance (2+6)
6. Discuss the catabolism of heme. Describe the causes and laboratory finding in obstructive jaundice (5+3)
7. What are the sources of vitamin A. Enumerate the biochemical role and deficiency manifestations of vitamin A (2+4+2)

#### Short answers

(5x4=20)

8. Define Peptide bonds. Enumerate two biochemically important peptides and their significance. (2+2)
9. Substrate level phosphorylation
10. Golgi complex
11. Discuss the formation of melanin and add a note on albinism
12. Describe the synthesis of any two compounds of biomedical importance synthesized from glycine

#### Give Precise Answers

(10x1=10)

13. Why is sucrose a non reducing sugar
14. Enzyme defect in Alkaptonuria
15. Name two cardiac markers
16. Name two prostaglandins and mention their importance
17. Enzyme defect in Von-Gierke's disease
18. Give the normal reference range for • Serum triglyceride • Serum creatinine
19. Marker enzyme for mitochondria
20. Name two compounds formed from Tryptophan
21. Name the enzyme activity to assess the deficiency of vitamin B<sub>1</sub>
22. Name the rate limiting enzyme of heme synthesis.

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