2019 Scheme

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

First Professional MBBS Degree Supplementary (SAY) Examinations
May 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. A man of 45 years of age is overweight with a sedentary lifestyle underwent an annual health checkup. Following are the details of the investigations.

Test	Result	Units	Biological Reference Interval
Fasting blood sugar	115	mg/dl	70 - 110
Total cholesterol	250	mg/dl	150 - 200
Triglycerides	269	mg/dl	50 - 200
HDL cholesterol	24	mg/dl	30 - 60
LDL cholesterol	172	mg/dl	80- 120

Answer the following questions using the above data:
   a) What is the probable diagnosis
   b) Mention the causes for the above condition
   c) Briefly describe chylomicron metabolism
   d) Briefly describe hyperlipidemia (1+2+8+4)
2. Describe the breakdown of triglycerides, the mobilization of fatty acids. Discuss the beta oxidation of palmitic acid. Add a note on its energetics. (1+2+2+2+5+3)

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

3. How is heme synthesized. Add a note on its regulation (6+2)
4. Classify proteins based on their functions giving suitable examples (4+4)
5. Sources, biochemical functions and deficiency manifestations of thiamine (2+4+2)
6. Describe the urea cycle and add a note on its regulation. (4+4)
7. Define competitive inhibition. Describe the features of competitive inhibition. Give three examples. (2+3+3)

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

8. Importance of dietary fiber
9. Importance of HMP shunt pathway
10. Kwashiorkor
11. Peroxisomes
12. Describe the digestion and absorption of carbohydrates

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

13. Mention two causes of fatty liver
14. Mention two important products obtained from Tyrosine
15. Mention the enzyme defects in homocystinuria
16. Define glycemic index and name one food with low glycemic index
17. Name any two biomarkers of myocardial infarction
18. Mention the importance of 2,3 BPG
19. Name two conditions that cause ketosis
20. Define atherosclerosis
21. Enzyme defect in Von Gierke's disease
22. Reference interval of serum creatinine.

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