

# 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:

- What is the probable diagnosis
  - Mention the causes for the above condition
  - Briefly describe chylomicron metabolism
  - 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)

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

### Short answers

(5x4=20)

- Importance of dietary fiber
- Importance of HMP shunt pathway
- Kwashiorkor
- Peroxisomes
- Describe the digestion and absorption of carbohydrates

### Give Precise Answers

(10x1=10)

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

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