

M. Sc. (Medical Biotechnology) Sem-I (Choice Based Credit System) :

SUMMER - 2019

SUBJECT : MEDICAL BIOCHEMISTRY

Day : Wednesday

Time : 02.00 PM TO 05.00 PM

Date : 03/04/2019

S-2019-1499

Max. Marks : 60

N. B. :

- 1) **Q. No. 1 and Q. No. 5 are COMPULSORY.** Answer **ANY TWO** from **Q. No. 2, 3, 4** and from **Q. No. 6, 7, 8.**
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **'SAME'** answer books.
- 4) Draw neat and labelled diagram **WHEREVER** necessary.

SECTION – I

- Q. 1** Answer **ANY FIVE** of the following question in brief **(10)**
- a) Explain the hormone sensitive lipase.
 - b) Describe the pathogenic condition of impaired fasting glucose.
 - c) Discuss fetal hemoglobin.
 - d) Enumerate the complications of Diabetes mellitus.
 - e) Give any four functions of plasma proteins.
 - f) Mention the functions of lipoproteins.
- Q. 2** Answer the following question in brief **(10)**
- a) Explain the procedure and clinical significance of glucose tolerance test.
 - b) Describe β - Oxidation of fatty acids.
- Q. 3** Explain the following: **(10)**
- a) Biomedical implications of hemoglobin and myoglobin.
 - b) Urea Cycle.
- Q. 4** Write short notes on **ANY TWO** of the following: **(10)**
- a) Glycosuria
 - b) Ketone bodies
 - c) Fatty liver

SECTION – II

- Q. 5** Answer the following: **(10)**
- a) Discuss oxidative stress and antioxidants.
 - b) What are isoenzymes? Explain the applications of enzymes as therapeutics agents.
- Q. 6** Answer **ANY TWO** of the following: **(10)**
- a) Regulation of electrolyte balance.
 - b) Explain the principle of spectrophotometer and describe different types of spectrophotometers.
 - c) Describe detoxification of xenobiotics.
- Q. 7** Write short notes on the following: **(10)**
- a) Acidosis and alkalosis
 - b) Chromatography
- Q. 8** Define vitamins. Describe their biochemical role, common food sources and deficiency problems of B complex vitamins. **(10)**

OR

Ranjan, a 55 year old chronic smoker attended casualty with exacerbation of bronchial asthma. The acid base report is pH = 7.3, pCO₂ = 90 mm Hg, HCO₃ = 26 mg/l, H₂CO₃ = 2.8 meq/l. Give your interpretation and justify it.

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