

**M. SC. (MEDICAL BIOTECHNOLOGY) SEM-I (CHOICE
BASED CREDIT SYSTEM) : WINTER - 2017**

SUBJECT: MEDICAL BIOCHEMISTRY

02.00 PM TO 05.00 PM

Day: **Friday**

Date: **03/11/2017**

W-2017-1046

Time:

Max Marks: 60

N.B:

- 1) Q. No. 1 & Q. No. 5 are **COMPULSORY**.
- 2) Solve any **TWO** questions from question number 2, 3, 4 in Section-I.
- 3) Solve any **TWO** questions from question number 6, 7, 8 in Section-II.
- 4) Answers to both the sections should be written in **SEPARATE** answer Books.

SECTION-I

- Q.1** Answer the following question in brief (Any **FIVE**) **(10)**
- a) What are ketogenic and glucogenic amino acids?
 - b) What are the chronic complications of diabetes mellitus?
 - c) List the functions of cholesterol.
 - d) Define – anticoagulants and gluconeogenesis.
 - e) Define electrophoresis and give its applications.
 - f) Define ketogenesis. Name the ketone bodies and state their importance.
- Q.2** Answer the following : **(10)**
- a) Define and explain types of glycosuria.
 - b) Describe sickle cell anemia.
- Q.3** Explain the following: **(10)**
- a) Describe the different reactions of Urea cycle and explain its energetics.
 - b) Explain the pathophysiology of atherosclerosis.
- Q.4** Write short note on : **(10)**
- a) Plasma proteins
 - b) Glycated hemoglobin

SECTION-II

- Q.5** Answer the following question: **(10)**
- a) Define vitamins. Explain the physiological role, food sources and deficiency symptoms of any four water soluble vitamins.
 - b) Describe oxidative stress and role of antioxidants.
- Q.6** Answer the following questions : **(10)**
- a) Explain the detoxification of xenobiotics.
 - b) Define transamination. Explain the role of SGOT and SGPT in clinical diagnosis.
- Q.7** Explain the following: **(10)**
- a) Discuss the applications of radioisotopes in medicine.
 - b) Describe the therapeutic applications of enzymes.
- Q.8** Explain the following: **(10)**
- a) Explain the principle, types and applications of spectrophotometer.

OR

- b) Sujay, a 50 year old slum dweller attended causality with complaints of fever, pain in abdomen for past few days. The lab report shows serum bilirubin 7 mg% (direct bilirubin 6.2 mg% and indirect bilirubin 0.8 mg %), serum alkaline phosphatase 30 KAU/dL. Give your interpretation and justify it.

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