

**T. Y. B. SC. (BIOTECHNOLOGY) SEM – V (CBCS - 2015  
COURSE) : SUMMER - 2018  
SUBJECT: CLINICAL BIOTECHNOLOGY**

Day : **Tuesday**  
Date : **03/04/2018**

Time : **10.00 am to 01.00 pm**  
Max. Marks : **60**

**S-2018-1059**

**N.B.:**

- 1) **Q. 1 and Q. 5 are COMPULSORY.**
- 2) Answer any **TWO** questions from **Q. 2, Q.3 and Q. 4** in Section - I and from **Q.6, Q.7 and Q. 8** in Section - II.
- 3) Answers to both the sections should be written in **SEPARATE** answer books.

**SECTION - I**

- Q. 1** Attempt any **FIVE** of the following: **(10)**
- a) Define anticoagulants. Explain giving any one example.
  - b) Give the differences between Plasma and Serum.
  - c) Differentiate between Intrinsic and Extrinsic pathways of blood clotting.
  - d) Define Isoenzymes and Leucocytopenia.
  - e) List any two reasons for ordering lab tests of biological samples.
  - f) Name any two Ketone bodies.
- Q. 2** Answer the following: **(10)**
- a) Explain the structure of Hemoglobin, its types and methods of estimation.
  - b) Define Hemogram. Explain its clinical significance.
- Q. 3** Answer the following: **(10)**
- a) Enlist various functions of kidney. Describe urine analysis with reference to abnormal constituents.
  - b) Explain Hemolytic and Post Hepatic Jaundice.
- Q. 4** Write short notes on the following: **(10)**
- a) Structures and functions of various types of Cholesterols.
  - b) Liver Function Tests.

**SECTION - II**

- Q. 5** Attempt the following questions. **(10)**
- a) Define Enzymes. Explain the diagnostic significance of any two enzymes in organ disorders.
  - b) Explain Blood Glucose control and diagnostic criteria for Diabetes Mellitus.
- Q. 6** Answer the following: **(10)**
- a) Explain the distribution of body fluids. Add a note on Potassium balance.
  - b) Describe the pathophysiology of Obesity and Fatty Liver.
- Q. 7** Write short notes. **(10)**
- a) Glucose Tolerance Tests
  - b) Radioisotopes in Medicine
- Q. 8** Differentiate between the following: **(10)**
- a) Acidosis and Alkalosis
  - b) Type I and type II Diabetes Mellitus.

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