B.Sc. (Hons.) Semester III Theory Examination (CBCS): 2020

Subject: Biochemistry

Course Code: SEC-1

Course Title: Clinical Biochemistry

F. M.: 40 Time 2 hours

Answer any eight questions from the following: 5 × 8 = 40

a) Briefly describe the advantages and limitations of automation in clinical biochemistry laboratory.

b) Discuss the capillary method of blood collection.

c) Write the full form of SGPT and SGOT and mention their clinical significance.

d) Schematically present the steps involved in estimation of blood glucose by glucose oxidase-peroxidase method.

e) Write a comprehensive note on morphology of RBCs and WBCs.

f) State the principle of ELISA in clinical biochemistry. What is sandwitch ELISA?

g) Discuss the clinical significance of creatinine and urea.

h) Discuss the significance of the determination of lipid profile in plasma/serum.

i) "Glycated haemoglobin is important parameter for the diagnosis of diabetes mellitus" – Explain.

j) List the biochemistry laboratory safety rules.

B.Sc. Sem-III (Hons.) Examination 2020

Subject: Biochemistry

Paper: SEC – 1 (Bioinformatics and Biostatistics)

Full Marks: 40 Time: 2 hrs

Answer any eight (8) questions: $8 \times 5 = 40$

a. Write briefly on SRS and PIR.

b. Write a short note on operating system.

c. Explain the significance of sequence alignment.

d. Write a short note on diagrammatic representation of data.

e. Write a short note on measure of central tendency.

f. If you will toss an unbiased coin for 10 times, what is the probability of getting 6 heads?

g. Write a method to generate phylogenetic tree from 16S RNA sequencing data.

h. What are the different types of BLAST and mention their input sequence type and target database.

i. Write down the basic steps involved in test of hypothesis.

j. Calculate correlation coefficient for the following data set:

X	10	20	30	40	50	60	70	80	90
Y	2	5	6	8	11	9	13	13	15