BSc II YEAR III – SEMESTER

Biochemistry and Biostatistics

QUESTION BANK

Unit-1

Essay Answer Type

1. Write about classification of carbohydrates & mention their importance.
2. Describe the structure of proteins and their importance.
3. Explain about factors influencing rate of enzyme reactions.
4. Derive Michaelis Menton equation.
5. Explain about saturated and unsaturated fatty acids with examples.
6. What is enzyme inhibition? Write different types enzyme inhibition.

Short answer Type

1. Isoelectric pH
2. Zwitterion
3. Write about peptide bond formation
4. Phospholipids & glycolipids
5. Steroids & terpenes
6. Explain about simple lipids with example
7. Co-enzymes
8. Properties of aminoacids

Unit-2

Essay Answer Type

1. Explain about TCA Cycle.
2. What are different steps involved in glycolysis?
3. Explain about HPLC.
4. Describe about transamination & deamination reactions.
5. Write about Beer & Lamberts law & UV spectrometry.
6. Describe about Gluconeogenesis & its significance.
7. Explain about electron transport chain & oxidative phosphorylation.

Short answer type

1. β-oxidation of fatty acids
2. Thin layer chromatography
3. Agarose Gel Electrophoresis

4. Paper chromatography
5. Preparative centrifugation
6. SDS-PAGE
7. Analytical centrifugation

Unit-3

Essay Answer Type

1. Explain about different types of sampling methods.
2. Explain about diagrammatic and graphical representation of data.
3. Calculate the arithmetic mean of continuous series of the following data

Marks	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	3	2	4	1	2	6

4. What is mean by standard deviation? Calculate the standard deviation for the following data

Marks	0-10	10-20	20-30	30-40	40-50
Frequency	1	2	3	3	4

5. Calculate median & mode for the discrete series & mention merits and demerits

Marks	60	80	70	50	90	40
Frequency	4	2	3	6	5	1

Short answer type

1. Mean deviation
2. Histogram
3. Variance
4. Frequency Polygon
5. Define range & Find out coefficient of range for 56,25,10,60,70,80.

Unit-4

Essay Answer Type

1. Explain about chi-square test with an example and its application to biology
2. Describe about ANOVA & its applications
3. Define correlation regression analysis
4. Explain the applications of t-test
5. What is mean by probability and explain different conditions of probabilities
6. What is test of significance? Write about its applications.

Short answer type

1. Poisson & normal distribution
2. Null & alternate hypothesis
3. Degree of freedom
4. Student t-test
5. Paired t-test
6. Anova test