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DMI-ST. EUGENE UNIVERSITY

ZAMBIA

DEGREE EXAMINATION – JUNE 2024

Semester: V

357 CH 53 BIOCHEMISTRY

Time: 3:00 Hours

Max. Marks: 100

Answer any FIVE Questions (5 x 20 = 100 Marks)

1. a) Elaborate on the life and its origin. (5 Marks)
b) Discourse of biochemistry and physiology. (5 Marks)
c) Elaborate the scope of biochemistry in details. (10 Marks)
2. a) Outline a short note on proteins with examples. (5 Marks)
b) Give a brief note on amino acids with examples. (5 Marks)
c) Elaborate the classification of amino Acids with suitable examples. (10 Marks)
3. a) Give a brief note on lipids. (4 Marks)
b) Elaborate the biological roles of lipids. (10 Marks)
c) Outline the types of fatty acids with suitable examples. (6 Marks)
4. a) Draw the neat structures of adenine, guanine, cytosine, thymine and uracil. (10 Marks)
b) Outline the properties of purines and pyrimidines. (5 Marks)
c) Illustrate base pairing of purine and pyrimidines. (5 Marks)
5. a) Elaborate on acid-base balance. (5 Marks)
b) Elaborate on acids and bases and their types. (5 Marks)
c) List the types of chemical buffer systems. (5 Marks)
d) Elaborate of phosphate buffers. (5 Marks)
6. a) Illustrate the structure of a typical amino acid. (5 Marks)
b) Illustrate the reaction of alanine and serine in the formation of alanine-serine. (5 Marks)
c) Elaborate the classification of proteins. (10 Marks)
7. a) Discourse on causes and symptoms of Metabolic Acidosis. (7 Marks)
b) Discourse on causes and symptoms of Metabolic Alkalosis. (8 Marks)
c) Outline the causes of Respiratory Acidosis. (5 Marks)