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University Examinations 2024/2025

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE IN BIOCHEMISTRY

SHC 3204: STRUCTURAL BIOCHEMISTRY

DATE: JANUARY 2025

TIME: 2 HOURS

INSTRUCTIONS: Answer question *one* and any other *two* questions

QUESTION ONE (30 MARKS)

- a) Draw the structure of purine (3 marks)
- b) State three types of amino acids based on number of amino and carboxylic group (4 marks)
- c) List the building blocks of fatty acids (3 marks)
- d) Outline three roles of biological membrane (4 marks)
- e) Explain four components of phospholipids (4 marks)
- f) List four types of nucleotides and name their components (4 marks)
- g) State roles of protein located on cell membrane (6 marks)
- h) List functions of protein (2 marks)

QUESTION TWO (20 MARKS)

Discuss the structure of bio membrane and transport mechanism across the membrane

QUESTION THREE (20 MARKS)

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Page 1

Classify lipids using examples

QUESTION FOUR (20 MARKS)

Draw chemical structure of the following nucleotide ATCCGATGGT