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University Examinations 2023/2024

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

SHC 3354: BIOCHEMISTRY OF NUCLEIC ACIDS

DATE: APRIL 2024

TIME: 2 HOURS

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

QUESTION ONE (30 MARKS)

- a) Differentiate between the following;
 - i. Nucleotides and Nucleosides
 - ii. Purine and pyrimidine
 - iii. Translation and Transcription (6 marks)
- b) Draw the structure of β -D- 2- deoxyribose sugar (3 marks)
- c) Explain briefly any five biological importance of DNA (5 marks)
- d) List three features of the genetic code (3 marks)
- e) Describe structural equation of the formation of DNA trinucleotide (7 marks)
- f) Describe briefly three molecular methods applied in analysis of nucleic acids (6 marks)

QUESTION TWO (20 MARKS)

Give an account of the Enzymes of DNA synthesis

QUESTION THREE (20 MARKS)

Discuss the catabolism of pyrimidine mononucleotide and the fate of uric acid

QUESTION FOUR (20 MARKS)

Discuss the semi conservative method of DNA Replication