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University Examinations 2023/2024

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

SHC 3352: RECOMBINANT DNA TECHNOLOGY

DATE: APRIL 2024

TIME: 2 HOURS

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

QUESTION ONE (30 MARKS)

- a) Explain two cellular biological process that require DNA-Protein interaction (5 marks)
- b) Discuss the exception of Mendelian rules of segregation, independent assortment and dominance in genetics. (4 marks)
- c) Discuss the chromosomal abnormalities in organisms (6 marks)
- d) Outline the essential features of effective vectors in gene cloning (4 marks)
- e) Explain the classification of plasmids (5 marks)
- f) Explain the significant properties of protein-protein interactions (6 marks)

QUESTION TWO (20 MARKS)

Discuss the step of Polymerase Chain Reaction

QUESTION THREE (20 MARKS)

Discuss the analysis of cloned genes

QUESTION FOUR (20 MARKS)

Discuss the treatment required for cells in order for them to take up foreign DNA.