

UNIVERSITY OF ESWATINI
DEPARTMENT OF BIOLOGICAL SCIENCES
MAIN EXAMINATION PAPER MAY 2019

TITLE OF PAPER: GENOMICS

COURSE CODE: BIO342

TIME ALLOWED: THREE HOURS

INSTRUCTIONS:

1. ANSWER ALL FOUR QUESTIONS IN THIS PAPER
2. EACH QUESTION COUNTS 25 MARKS
3. ILLUSTRATE YOUR ANSWERS WITH LARGE AND CLEARLY LABELLED DIAGRAMS WHERE APPROPRIATE

SPECIAL REQUIREMENTS: NONE

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATORS

Question 1

- (a) Explain the principle of cycle sequencing. (9 marks)
- (b) Discuss the advantages and disadvantages of Next Generation Sequencing methodologies. (16 marks)

Question 2

Discuss DNA microarrays highlighting their applications in biochemical and biomedical functional genomics research. (25 marks)

Question 3

Discuss the application of bioinformatics as well as structural and functional genomics. (25 marks)

Question 4

Discuss the concept of interactomics in terms of in terms of genomics. (25 marks)

END OF EXAMINATION PAPER