



TECHNICAL UNIVERSITY OF MOMBASA
FACULTY OF APPLIED AND HEALTH SCIENCES
DEPARTMENT OF PURE & APPLIED SCIENCES
UNIVERSITY EXAMINATION FOR:
DIPLOMA IN INDUSTRIAL MICROBIOLOGY
AND BIOTECHNOLOGY 16S

ABT 2209: INTRODUCTION TO MOLECULAR BIOLOGY

PAPER TWO

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: SEPTEMBER 2018

TIME: 2 HOURS

DATE: Pick Date Sep 2018

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Illustrate answers with appropriate diagrams where possible.

Question ONE

- a) Why would the cell want to have an intermediate between DNA and the proteins it encodes? (5mks)

- b) Differentiate between a Prokaryotic DNA and a Eukaryotic DNA (8mks)

- c) Briefly explain the various types of DNA damages (8mk)
- d) Outline the current applications of molecular biology (5mks)
- e) List the DNA damaging agents (4mks)

Question TWO

- a) With illustrations, discuss the various types of gene mutations (14mks)

Question THREE

- a) Briefly discuss the major DNA repair mechanisms (12mks)
- b) Outline the importance of DNA Repair. (3mks)

Question FOUR

- a) Differences between RNA and DNA (15mks)

QUESTION FIVE

- a) Discuss the various posttranscriptional modifications (10mks)
- b) Outline the protein translation steps (5mks)