



OFFICE OF THE DEPUTY PRINCIPAL
ACADEMICS, STUDENT AFFAIRS AND RESEARCH

UNIVERSITY EXAMINATIONS

2019 /2020 ACADEMIC YEAR

THIRD YEAR SECOND SEMESTER REGULAR EXAMINATION

**FOR THE DEGREE OF BACHELOR OF SCIENCE
IN MICROBIOLOGY**

COURSE CODE: MIC 314

COURSE TITLE: SYMBIOTIC INTERRACTIONS

DATE: 3RD NOVEMBER, 2020

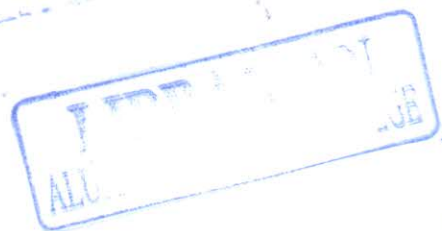
TIME: 2.00 PM – 5.00 PM

INSTRUCTIONS TO CANDIDATES

- SEE INSIDE

THIS PAPER CONSISTS OF 3 PRINTED PAGES

PLEASE TURN OVER



REGULAR EXAM – MAIN EXAMS

MIC 314: SYMBIOTIC INTERACTIONS

STREAM: BSc. MICROBIOLOGY

DURATION: 3 Hours

INSTRUCTIONS TO CANDIDATES

- i. Answer **ALL** questions from section A and any **THREE** from section B.
 - ii. Diagrams should be used whenever they serve to illustrate the answer.
 - iii. Do not write on the question paper.
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SECTION A (24 MARKS)

QUESTION ONE

- a) Describe how the principle of natural selection has contributed to the evolution of symbiotic interactions (6 Marks)
- b) Explain why normal bacterial flora of humans are normally located at a particular anatomical site (6 Marks)

QUESTION TWO

- a). Using **Three** specific examples, briefly describe the symbiotic relationship that occur between the normal body flora and the human host (6 Marks)
- b). Give a brief account of how Rhizobium bacteria relate with legumes (6 Marks)

SECTION B (36 MARKS)

QUESTION THREE

Describe the structural defense mechanisms in plants formed in response to pathogenic microorganisms (12 Marks)

QUESTION FOUR

- a) What is commensalism (2 Marks)
- b) Discuss five microbial commensal associations (10 Marks)

QUESTION FIVE

Discuss the various types of Mycorrhizae and how they relate to higher plants (12 Marks)

QUESTION SIX

Discuss the morphological adaptations to the mode of nutrition of parasites (12 marks)

QUESTION SEVEN

Discuss the various types of parasite hosts (12 Marks)

