



UNIVERSITY EXAMINATIONS

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF
SCIENCE IN BIOMEDICAL TECHNOLOGY**

BMET 335: APPLIED MICROBIOLOGY

STREAMS:

TIME: 2 HOURS

DAY/DATE: THURSDAY 11/4/2024

2.30 P.M. –4.30 P.M.

INSTRUCTIONS: Answer question one and any other two questions

QUESTION ONE (30 MARKS)

- (a) Discuss microbial production of lactic acid. (8 marks)
- (b) Describe the use of microbial proteases in pharmaceutical industry. (5 marks)
- (c) List any three culture collection and preservation methods of microorganisms. (6 marks)
- (d) Explain the role of microbes in the rumen. (6 marks)
- (e) Discuss the applications and importance of aeromicrobiological studies. (5 marks)

QUESTION TWO (20 MARKS)

- (a) Elucidate the strengths and limitations of bioremediation. (10 marks)
- (b) Elaborate the biochemistry in bread making. (10 marks)

QUESTION THREE (20 MARKS)

- (a) Describe the cytotoxicity test for *Vibro fischeri*. (7 marks)
- (b) Explain the acceptability, safety and toxicology of single cell protein. (5 marks)
- (c) Discuss the mechanism of action of zaragozic acid in controlling hypercholesterolemia. (8 marks)

QUESTION FOUR (20 MARKS)

- (a) Explain the different ways of microbial sludge digestion in sewage treatment.(10 marks)
- (b) Discuss the adaptation of different microflora in aquatic environment. (10 marks)

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