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**2<sup>ND</sup> SEMESTER SUPPLIMENTARY EXAMINATIONS 2016/2017**

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**UNIVERSITY OF SWAZILAND**

**SUPPLEMENTARY EXAMINATION PAPER**

**PROGRAMMES:**

**B.SC. IN AGRICULTURAL EDUCATION YEAR 2**

**B.SC. IN AGRONOMY YEAR 2**

**B.SC. IN ANIMAL SCIENCE YEAR 2**

**B.SC. IN ANIMAL SCIENCE (DAIRY) YEAR 2**

**B.SC. IN CONSUMER SCIENCE YEAR 2**

**B.SC. IN CONSUMER SCIENCE EDUCATION YEAR 2**

**B.SC. IN FOOD SCIENCE, NUTRITION AND TECHNOLOGY YEAR 2**

**B.SC. IN HORTICULTURE YEAR 2**

**COURSE CODE: CPR 207/CP 204**

**TITLE OF PAPER: MICROBIOLOGY**

**TIME ALLOWED: TWO (2) HOURS**

**INSTRUCTIONS: ANSWER ANY FOUR QUESTIONS**

**DO NOT OPEN THIS PAPER UNTIL PERMISSION HAS BEEN GRANTED BY  
THE CHIEF INVIGILATOR**

COURSE CODE: CPR 207

**QUESTION 1**

- A. Before staining (e.g. simple staining), a bacterial smear is fixed. (2 Marks)
  - (i) How is it fixed? (2 Marks)
  - (ii) Why is it fixed? (2 Marks)
- B. Describe five uses of each of the following microorganisms which are beneficial to humans (5 Marks)
  - (i) Fungi (5 Marks)
  - (ii) Algae (5 Marks)
  - (iii) Bacteria (5 Marks)
- C. The following microorganisms can be purchased from a supermarket and agro-supply shop, respectively. Give a reason for buying each. (3 Marks)
  - (i) *Saccharomyces* (3 Marks)
  - (ii) *Bacillus thuringiensis* [25 Marks]

**QUESTION 2**

- A. Explain the following media used in a Microbiology laboratory:
  - i. Complex media (3 marks)
  - ii. Differential media (3 Marks)
  - iii. Selective media (3 Marks)
- B. What is bioremediation and what are its benefits? (4 Marks)
- C. In microbial genetics, what is meant by:
  - a. A promoter (3 Marks)
  - b. A terminator (3 Marks)
  - b. A terminator (2 Marks)
  - c. Translation (2 Marks)
  - d. A codon (2 Marks)
  - e. Degeneracy [25 Marks]