

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE

AGH 112

**Department of Crop Science
BSc Agricultural Science (Honours) Part I Examination
Introduction to Microbiology**

3 HOURS (100 Marks)

INSTRUCTIONS

Answer any **FOUR** questions. Each question carries **25 marks**.

NOV 2024

1. a) Describe the Gram staining technique and clearly outline the differences between gram+ and gram- bacterial cells. **[20 marks]**
b) Outline any five (5) ways in which the following microorganisms are important to humans. **[5marks]**
2. a) Give an account of any five (5) discoveries made by Louis Pasteur that had an impact in the development of the discipline of microbiology. **[15 marks]**
b) Explain the factors that affect sporulation. **[10 marks]**
3. With the aid of a diagram, discuss the microbial growth curve. **[25 marks]**
4. Write short notes on the following fungal groups
a) Chytridiomycota **[5 marks]**
b) Zygomycotina **[5 marks]**
c) Ascomycota **[5 marks]**
d) Basidiomycota **[5 marks]**
e) Dueteromycota **[5 marks]**
5. a) Describe the steps in the Krebs cycle and explain the importance of the cycle. **[10 marks]**

b) Discuss microbes with reference to any five (5) nutritional types. **[15 marks]**

6. a) Outline any five properties of viruses. **[10 marks]**

b) Describe the life cycle of an amoeba and clearly explain how it can be controlled. **[15 marks]**

End of Exam Paper