

BINDURA UNIVERSITY OF SCIENCE EDUCATION  
SCIENCE & MATHEMATICS EDUCATION DEPARTMENT  
DipEd  
REGULATION AND CONTROL (BZ008)

EXAMINATION 1  
2 HOURS (100 MARKS)

 JUN 2023

**INSTRUCTIONS**

Answer **FOUR** questions. You **MUST** answer QUESTION 1 (Section A) and any **THREE** questions from Section B. Each question carries **25 MARKS**. Where a question contains subdivisions, the mark value of each subdivision is given in brackets. Illustrate your answers, where appropriate, with large, clearly labelled diagrams. You should not spend more than thirty minutes on each question.

**SECTION A (COMPULSORY)**

1. (a) Describe regulation of blood sugar levels. (10 marks)
- (b) Describe homeostasis. (5 marks)
- (c) Draw and label the kidney. (10 marks)

**SECTION B**

2. Describe the role of the kidney in removal of metabolic wastes from the body
3. (a) Describe precisely where and when oestrogen and progesterone are synthesized and secreted in humans. (15 marks)
- (b) Describe the action of progesterone during pregnancy. (5 marks)
- (c) Suggest how chemical compounds based on progesterone act to prevent pregnancy. (5 marks)
4. (a) Describe and explain excretion highlighting the importance of removing nitrogenous compounds from the body. (12 marks)
- (b) Describe the role of blood vessels associated with the nephron. (13 marks)

- 5.(a) Explain the role of thyroid gland in human growth and development. (15 marks)
- (b) Explain how secretions of the thyroid gland are regulated. (10 marks)
- 6.(a) Discuss the factors which control seed dormancy in plants. (10 marks)
- (b) Describe the roles of auxins as plant growth regulators. (15 marks)

**END OF EXAMINATION QUESTION PAPER**