

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF AGRICULTURE AND ENVIRONMENTAL SCIENCE

NR125

DEPARTMENT OF CROP SCIENCE

BACHELOR OF AGRICULTURAL SCIENCE (HONOURS) DEGREE PART I EXAMINATION

PLANT BIOLOGY

3 HOURS [100 MARKS]

 **OCT 2023**

INSTRUCTIONS

ANSWER ANY *FOUR* QUESTIONS. EACH QUESTION CARRIES 25 MARKS

1. Describe the following processes

a. Pollen formation	[5 marks]
b. Ovule formation	[10 marks]
c. Pollination and double fertilization processes	[10 marks]
2. A. With the aid of a diagram, describe internal structure of monocot roots. [15 marks]
B. With the aid of a diagram relate the structure of a typical hermaphroditic flower to its functions [10 marks]
3. a. Explore the significance of the three main groups of specialized plant cells [15 marks]
b. Discuss the adaptation of plant leaves to their functions [10 marks]
4. Narrate the light reactions of photosynthesis [25 marks]
5. a. Describe the epigeal germination process [10 marks]
b. Describe the structure and functioning of a typical monocot seed. [15 marks]
6. With the aid of diagrams describe the structures of the following cellular components, stating their functions:

a. Nucleus	[5 marks]
b. Chloroplast	[5 marks]
c. Mitochondria	[5 marks]
d. Cell wall	[5 marks]
e. Vacuole	[5 marks]

The end