

**BOWEN UNIVERSITY IWO  
COLLEGE OF AGRICULTURE, ENGINEERING, AND SCIENCE  
2023/2023 FIRST SEMESTER EXAMINATION**

**PAB 307: PLANT ANATOMY**

*Instructions: Answer question one, and any other two (2) questions. Time: 2 hours*

1. a) With the aid of a diagram, briefly describe and state the functions of the root regions that may be found in the young roots of higher plants. *(20 marks)*  
(b) Write briefly on the different types of plant cells, elucidating their functions in plants. *(10 marks)*
  
2. Provide a detailed description of the stem anatomy of the sunflower, an herbaceous dicot plant. *(20 marks)*
  
3. State the differences between a monocotyledon and a dicotyledon leaf. *(20 marks)*
  
4. Write short notes on the following:
  - a. Pericycle *(5 marks)*
  - b. Bark *(5 marks)*
  - c. Phellem (cork) *(5 marks)*
  - d. Two special epidermal structures *(5 marks)*
  
5. (a) What is a leaf? *(4 marks)*  
(b) Describe fully the types of leaf tissues with a labelled diagram. *(16 marks)*