

BOWEN UNIVERSITY, IWO
DEPARTMENT OF BIOLOGICAL SCIENCES
2010/2011 SECOND SEMESTER EXAMINATION

PLB 306: PLANT ANATOMY

Answer one question from each section.

Time: 2hr 20 mins.

SECTION A

1. (a) Discuss how you will prepare sections of young monocot and dicot roots to study the distribution of their tissues in a transverse section.
(b) State the differences between the transverse sections of monocot and dicot roots.
(c) Draw the different types of crystals found in plants.
(d) Stomata types are based on number and arrangement of subsidiary cells, draw and label any two types. (30 Marks)

SECTION B

2. (a) Describe the structure of a young stem of *Helianthus annuus* (Sun flower).
(b) How does this differ from that of *Zea mays* (maize or corn). (20 Marks)
3. (a) What is secondary growth?
(b) Discuss this process in a dicot stem.
(c) What is the role of phellogen in the formation of cork? (20 Marks)

SECTION C

4. Write concisely on:
(a) Glandular trichomes.
(b) Collateral vascular bundles. (20 Marks)
5. (a) Discuss the functions of parenchyma in plants
(b) Describe the structure and function in stomatal complex. (20 Marks)