

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

**BLY 115: ORGAN SYSTEMS IN FLOWERING PLANTS**

Answer one question from each section.

Time: 2 hrs 20 mins

**SECTION A**

1. (a) List **five** functions of the root.  
(b) Give **two** examples of plants with sucking roots.  
(c) Briefly describes a bulb.  
(d) What is the term used in describing a slender root branch that swell at the apex?  
(e) Use diagrams to illustrate:  
(i) Paripinnate leaf. (ii) Leaf with dichotomous venation.  
(iii) Pinnately trifoliolate leaf. (iv) Pistillate flower.  
(v) Pistillate flower. (vi) Neuter flower.  
(f) A flower has five free sepals, five fused petals and four stamens which are attached to the petals and a superior ovary with three fused carpels. If the symmetry is radial, write the floral formula of the flower.  
(30 Marks)

**SECTION B**

2. (a) Differentiate the following:  
(i) Tap root and Adventitious root. (ii) Caudex and Bole.  
(iii) Spine and Prickles. (iv) Procumbent and Decumbent.  
(v) Stolon and Rhizome.  
(b) Draw a well-labelled diagram of growing region of the root system in angiosperm. (20 Marks)
3. Discuss briefly modification of the root system in angiosperms. (20 Marks)

**SECTION C**

4. (a) Explain briefly the primary functions of the leaf.  
(b) List **five** differences between gymnosperms and angiosperms. (20 Marks)
5. Define placentation and describe any **four** types. (20 Marks)