

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

**FACULTY OF APPLIED SCIENCES
DEPARTMENT OF FOREST RESOURCES AND WILDLIFE MANAGEMENT
BACHELOR OF SCIENCE HONOURS DEGREE
MAIN EXAMINATION**

PLANT MORPHOLOGY AND DEVELOPMENT: EFW 2101

January 2013

Time Allowed: 3 HOURS

Total Marks: 100

INSTRUCTIONS TO CANDIDATES:

Answer **QUESTION ONE** and any **THREE** others. Each question carries **25 marks**.

1. Give an account of shoot elongation in flowering plants, showing how it is regulated by external and internal factors.
2. (a) Describe the differentiation of meristematic cells into xylem, phloem, cortex and other specialized cells. **[9 marks]**
(b) Compare and contrast root and stem primary structure in dicotyledons. **[16 marks]**
3. (a) Describe chemical interactions among the seed coat, embryo and endosperm. **[8 marks]**
(b) Discuss the mechanisms of seed dormancy. **[17 marks]**
4. Describe leaf external and internal structure and function.
5. Describe phellogen and vascular cambium differentiation and discuss their functional aspects.
6. Compare and contrast reaction wood and other abnormalities of wood in soft woods and hardwoods.

***** END OF PAPER *****

