

**CHUKA**



**UNIVERSITY**

**COLLEGE**

**UNIVERSITY EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE IN ECOTOURISM AND HOSPITALITY MANAGEMENT, WILDLIFE ENTERPRISE & MANAGEMENT, ANIMAL SCIENCE, BACHELOR OF SCIENCE (GENERAL) & BACHELOR OF SCIENCE (AGRICULTURAL EDUCATION)**

**BOTA 101: GENERAL BOTANY**

**STREAMS: B.SC (WIEM, **TOHM**, AGED) Y1S1**

**TIME: 2 HOURS**

**DAY/DATE: FRIDAY 10/12/2010**

**2.30 P.M – 4.30 P.M.**

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**INSTRUCTIONS:**

1. ANSWER ALL QUESTIONS IN SECTION A AND ANY TWO IN SECTION B.
2. EACH QUESTION IN SECTION A CARRIES 5 MARKS; EACH QUESTION IN SECTION B CARRIES 20 MARKS.

**SECTION A: (30 MARKS)**

1. Giving suitable examples, differentiate between the following:
  - (a) Monocots and dicots [1 mark]
  - (b) Angiosperms and gymnosperms [1 mark]
  - (c) Vascular cambium and cork cambium [1 mark]
  - (d) Bryophytes and tracheophytes [1 mark]
  - (e) Apoplast and symplast [1 mark]
2. For each of the following plant structures, explain one function they perform.
  - (a) Xylem [1 mark]
  - (b) Parenchyma cells [1 mark]
  - (c) Pits [1 mark]
  - (d) Guard cells [1 mark]

- (e) Companion cells [1 mark]
3. Give two characteristics in each of the following organisms:
- (a) Rhodophytes [1 mark]
  - (b) Phaeophytes [1 mark]
  - (c) Chlorophytes [1 mark]
  - (d) Amoeboid protozoans [1 mark]
  - (e) Ciliated protozoans [1 mark]
4. Briefly explain the process of primary and secondary growth in a woody stem. [5 marks]
5. Explain the concept of embolism in plants. [5 marks]
6. With an illustration, describe structure and characteristics of bacteria. [5 marks]

**SECTION B: (40 MARKS)**

7. Discuss the differentiation in structure and function of any four types of plant cells giving known examples. [20 marks]
8. Discuss the process of photosynthesis. [20 marks]
9. Discuss water uptake in plants. [20 marks]
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