

**CHUKA**



**UNIVERSITY**

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**UNIVERSITY EXAMINATIONS  
RESIT/SPECIAL EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF SCIENCE  
(CHEMISTRY, NATURAL RESOURCES, ENVIRONMENTAL SCIENCE,  
BIOCHEMISTRY, FOOD SCIENCE AND AGRICULTURE)**

**BOTA 100/101: GENERAL BOTANY**

**STREAMS:**

**TIME: 2 HOURS**

**DAY/DATE: TUESDAY 11/09/2018**

**1.30 A.M – 1.30 P.M**

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**INSTRUCTION:**

- **Answer all the questions in sections in section A and Only one question in section B**

**SECTION A: 50 MARKS**

1. (a) Explain the following branches of botany; [2marks]
  - (i) Applied botany
  - (ii) Palaeontology
- (b) Give three economic importance of pteridophytes. [3marks]
- (c) Explain the basis of algal classification. [4marks]
- (d) State one major difference between fungi and plants. [1 mark]
2. (a) Explain the components of a lichen. [2marks]
- (b) Identify the sexual spore in the following groups of fungi; [3marks]
  - (i) Zygomycota
  - (ii) Basidiomycota
  - (iii) Ascomycota

- (c) Name two groups of plants identified by the classification based on the absence and presence of flowers is seeds. [2marks]
- (d) State three groups of gymnosperms based on external morphology. [3marks]
3. (a) Describe briefly nutrition in algae. [4marks]
- (b) Explain the term species in broader concept. [2marks]
- (c) Distinguish between:
- (i) Acidophiles and alkalinophiles. [2marks]
- (ii) Saprophytic nutrition and chemo-organotropism. [2marks]
3. (a) Describe briefly nutrition in a large. [4marks]
- (b) Explain the term species in broader concept. [2marks]
- (c) Distinguish between;
- (i) Acidophiles and alkalinophiles. [2marks]
- (ii) Saprophytic nutrition and chemo-organotropism. [2marks]
4. (a) Describe the group of plants constituting phanerogamia. [4marks]
- (b) Name three structures used by lichen for a sexual reproduction. [3marks]
- (c) Give two any uses of angiosperm. [2marks]
- (d) Explain why pteridophytes are considered most primitive living vascular plants. [1mark]
5. (a) Name the kingdom to which each of the following organism belongs;
- (i) Bacteria [1mark]
- (ii) Mucor [1mark]
- (b) Highlight four major characteristics of bryophytes. [4marks]
- (c) Giving examples, outline the classification of bacteria by size and shape. [4marks]

**SECTION B: 20 MARKS**

**ANSWER ONLY ONE QUESTION IN THIS SECTION**

6. Discuss the beneficial aspects of the following microorganism in man;
- (i) Bacteria [10marks]
- (ii) Fungi [10marks]
7. Write an essay on various schemes for classifying the vast plant kingdom into categories of plants. [20marks]
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