

**MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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**University Examinations 2016/2017**

FIRST YEAR, FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGICAL SCIENCES, BACHELOR OF SCIENCE IN EDUCATION SCIENCE.

**SBA 3100: SURVEY OF PLANT KINGDOM**

**DATE: DECEMBER, 2016 TIME: 2 HOURS**

**INSTRUCTIONS: -** *Answer question* ***one*** *and any other* ***two*** *questions*

**QUESTION ONE (30 MARKS)**

1. Explain briefly the following terms
2. Prothallus (2 marks)
3. Sorus (2 marks)
4. Rhizoids (2 marks)
5. Distinguish between the anatomy of a phylidium and that of a fern leaf using drawings of their cross-sections. (4 marks)
6. Demonstrate the four different morphologies displayed by alge using named sketches/diagram. (2 marks each)
7. List at least six reasons why the charophysians are presumed to be the most probable ancestors to plants. (6 marks)
8. Describe with illustration the alternation of generations in lower plants. (6 marks)

**QUESTION TWO (20 MARKS)**

Attempt a bifurcation scheme of plants to their respective divisions giving the criteria for each bifurc/foric/split (20 marks)

**QUESTION THREE (20 MARKS)**

Discuss the reasons for the success of angiosperms over the other spermatophytes (20 marks)

**QUESTION FOUR (20 MARKS)**

Discuss the challenges, adoptions and limitations of mosses to live on land. (20 marks)

**QUESTION FIVE (20 MARKS)**

Compare alternation of generation on the life cycle of plants from the Bryophytes, to pterophytes and the spermatophytes in relation to sporophyte and gametophytes generation. (20 marks)