(5)

(*Knowledge for Development*)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2016/2017 ACADEMIC YEAR

THIRD YEAR SECOND SEMESTER
SUPPLEMENTARY/SPECIAL EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE BIOLOGY

COURSE CODE: SBT 321
COURSE TITLE: BIOSYSTEMATICS AND PALYNOLOGY

DATE: 20/9/2017 **TIME:** 3:00 -5:00 P.M

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over

QUESTION ONE

a. What is the importance of methods in experimental taxonomy to taxonomic research and interpretation? (3mks).

b. How is palynology used in remodeling taxa? (3mks).

c. Describe the pollen grains of the family Compositae (3mks)

d. Outline three forms of polyembrony (3mks).

e. Elucidate the steps in biosystematic investigations (3mks).

f. Describe the biosystematic categories (3mks).

g. What are the similarities between pollen grains and spores (3mks).

h. Explain how can you distinguish the parts of an exine in the Laboratory (3mks).

i. What is polyploidy (3 mks).

j. Distinguish between 'gametic isolation' from 'gametophytic isolation' (3mks).

k. Describe the mechanisms of pollen transfer in aquatic plants (3mks).

2. a. Discuss the steps of studying pollen in an old water sample (10 mks)

   b. What conclusions can be drawn from the steps in (a) above (10 mks)

3. Describe the development of pollen grains. (20 mks)

4. Discuss the sources of taxonomic information in biosystematics (20 mks)

5. Discuss the modes of pollination in different plants (20 mks)