



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018 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: 10th October, 2018

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



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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. Describe the main plant events in the mesozoic, palaeozoic and caenozoic eras (3mks).
 - e. Elucidate the steps in biosystematic investigations (3mks).
 - f. Describe the biosystematic categories (3mks).
 - g. What are the differences between pollen grains and spores (3mks).
 - h. Explain how you can distinguish the parts of an exine in the Laboratory (3mks).
 - i. Distinguish between 'gametic isolation' from 'gametophytic isolation' (3mks).
 - j. Outline the reasons as to why tetrads would stick together (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. Compare and contrast biosystematics and modern taxonomy.
 4. Hybridization in nature is not unusual in plants; explain the factors operating in the wild (reproductive isolating mechanism) which prevent hybridization.
 5. How can palynology be exploited by human to better their life? (20 mks)