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KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2017/2018 ACADEMIC YEAR

THIRD YEAR FIRST SEMESTER

MAIN EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIORESOURCE
MANAGEMENT AND CONSERVATION

COURSE CODE: SZL 314

COURSE TITLE: EVOLUTIONARY BIOLOGY

DATE: 17th January 2018

TIME: 9:00 -11:00 a.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
KIBU Observes ZERO tolerance to examination cheating

1.

- a) Define each of the following concepts: (3 marks)
 - I. Speciation
 - II. Organic evolution
 - III. Mendelian trait
 - b) Describe the major events in the evolution of life on earth. (3 marks)
 - c) Explain three factors that affect the process of host-parasite co-evolution. (3 marks)
 - d) Explain why evolution is sometimes slow and sometimes fast (3 marks)
 - e) Distinguish between allopatric and sympatric hypotheses (3 marks)
 - f) Describe three main causes of variation in human populations. (3 marks)
 - g) State three advantages of selective breeding in the long run. (3 marks)
 - h) Explain three criteria/concepts for identifying species. (3 marks)
 - i) Describe three mechanisms involved in prezygotic isolation of species. (3 marks)
 - j) State three scientific evidences for evolution of human beings from ape-like forms. (3 marks)
2. Discuss five evidences of organic evolution. (20 marks)
 3. Discuss non-human causes of extinction of species. (20 marks)
 4. With relevant examples, discuss adaptive radiation in birds that enabled them to be very diverse. (20 marks)
 5. a) Describe evolutionary characteristics of *Homo sapiens* that have enabled it to occupy the apex of evolutionary tree. (10 marks)
b) Discuss human activities that have a great impact on animal diversity and abundance. (10 marks)