



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2020/2021 ACADEMIC YEAR

THIRD YEAR 1ST SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE

COURSE CODE: SZL 314

COURSE TITLE: EVOLUTIONARY BIOLOGY

DATE: 10TH JANUARY 2022

TIME: 11.00 – 1.00 PM

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

QUESTION 1

- a. Briefly explain any three factors affecting rate of evolution in man. (3 Marks)
- b. Differentiate between homologous and analogous structures in organisms. (3 Marks)
- c. Briefly explain the importance of variation in organism's survival. (3 Marks)
- d. State the conditions that must be attained in Hardy weight equilibrium. (3 Marks)
- e. Briefly explain industrial melanism. (3 Marks)
- f. Briefly discuss adaptive radiation in mammals. (3 Marks)
- g. Briefly explain how directional natural selection leads to evolution in man.(3 Marks)
- h. Define the following terms.
 - i. Inbreeding. (1 Marks)
 - ii. Genetic drift. (1 Marks)
 - iii. Darwinian fitness. (1Marks)
- i. Briefly discuss postzygotic isolation reproductive mechanisms in evolution.(3 Marks)
- j. Briefly parapatric speciation in organisms. (3 Marks)

Question 2

Briefly discuss any four evidence of organic evolution. (20 Marks)

Question 3

Describe the causes of speciation in organism's evolution. (20 Marks)

Question 4

Discuss the features of Darwin theory of evolution. (20 Marks)

Question 5

Discuss gene mutations and show their evolutionary significance. (20 Marks)