

UNIVERSITY OF ESWATINI
DEPARTMENT OF BIOLOGICAL SCIENCES
MAIN EXAMINATION PAPER MAY 2019/2020

TITLE OF PAPER: EVOLUTION

COURSE CODE: BIO 312/B403

TIME ALLOWED: THREE HOURS

INSTRUCTIONS

1. ANSWER ANY FOUR QUESTIONS IN
THIS PAPER

3. ILLUSTRATE YOUR ANSWERS WITH LARGE
AND CLEARLY LABELLED DIAGRAMS WHERE
APPROPRIATE

SPECIAL REQUIREMENTS: NONE

THIS PAPER IS NOT TO BE OPENED UNTIL PERMISSION HAS BEEN
GRANTED BY THE INVIGILATORS

Answer any four questions in this paper

Question 1

Discuss ways in which disruption of Hardy-Weinberg equilibrium may lead to evolution.

[Total marks = 25]

Question 2

Discuss different modes of selection and how they may lead to evolutionary change.

[Total marks = 25]

Question 3

Discuss the statement that: "Populations evolve, but individuals do not."

[Total marks = 25]

Question 4

Giraffes have long necks, which are necessary to reach leaves and fruits on trees. Contrast how Lamarck and Darwin would explain the evolution of these long-necked giraffes using their respective theories of acquired characteristics and natural selection.

[Total marks = 25]

Question 5

Discuss some of the isolating mechanisms that may lead to the formation of new species.

[Total marks = 25]

END OF EXAMINATION PAPER