



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS

2020/2021 ACADEMIC YEAR

FIRST YEAR FIRST SEMESTER

MAIN EXAMINATION

**FOR THE DEGREE OF POST GRADUATE DIPLOMA IN
EDUCATION**

COURSE CODE: ESM 725E

COURSE TITLE: BIOLOGY EDUCATION

DATE: 4/10/2021

TIME: 2:00PM - 4:00PM

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) In what **three** ways is biological knowledge useful to the welfare of human beings? (6 marks)
- b) Discuss **three** misuse of biological knowledge (6 marks)
- c) State any **three** attitudes that biology students should learn (6 marks)
- d) State **four** objectives for teaching secondary school biology in Kenya (4 marks)
- e) Outline **five** factors that determine the choice of a particular teaching method in biology (5 marks)
- f) List **three** advantages of field trips in the teaching of biology? (3 marks)

QUESTION TWO (20 marks)

- a) State **five** values of projects in the teaching and learning of secondary school biology (10 marks)
- b) Outline **two** disadvantages of project work (4 marks)
- c) Briefly discuss **three** problems that may be expected in using projects in the teaching and learning of biology (6 marks)

QUESTION THREE (20 marks)

- a) Define schemes of work (2 marks)
- b) State **four** factors to consider when making a biology schemes of work (4 marks).
- c) Outline three reasons for preparing a biology lesson plan (6 marks)
- d) Discuss the essentials of a biology lesson plan (8 marks)

QUESTION FOUR (20 marks)

- a) Explain **four** factors that a biology teacher must consider when storing laboratory reagents (8 marks).
- b) Discuss **six** factors that a biology teacher needs to consider when planning to use a chart for teaching purposes (12 marks).

QUESTION FIVE (20 marks)

- a) Briefly discuss **four** factors to be considered when planning the layout of a biology laboratory in the school (8 marks).
- b) State **three** environmental considerations that should be made when locating and constructing the biology laboratory (6 marks)
- c) Outline **three** security and safety rules that the biology teacher must observe in the biology laboratory (6 marks)