



(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2022/2023 ACADEMIC YEAR
THIRD YEAR FIRST SEMESTER
MAIN EXAMINATIONS

FOR THE DEGREE OF BACHELORS OF EDUCATION

COURSE CODE: ESM 312

COURSE TITLE: BIOLOGY EDUCATION

DATE: 15/12/2022

TIME: 9-11AM

INSTRUCTIONS TO CANDIDATES

Answer **THREE** questions: Question **ONE** and any other **TWO**

TIME: 2 Hours

The university observes **ZERO** tolerance to examination cheating.

This paper consists of 3 printed pages. Please turn over

Question One (30 Marks)

- a) List **four** applications of Biological knowledge in the field of agriculture. (4mks)
- b) State **three** ways by which Biology students can study and appreciate biological principles.(3mks)
- c) State **four** roles of the teacher during heuristic strategy. (4mks)
- d) List **four** characteristics of a good instructional objective. (4mks)
- e) Outline **four** purposes of classroom tests (4mks)
- f) List **four** factors a Biology teacher should consider during storage of equipment and materials in the laboratory. (4mks)
- g) Describe **four methods** a Biology teacher can use to collect real specimens for teaching Biology (4mks)
- h) State **three** factors to consider when making a scheme of work. (3mks)

Question Two (20 Marks)

- a) Outline **ten** responsibilities of a laboratory technician. (10mks)
- b) Describe **five** factors considered in designing a laboratory layout. (10mks)

Question Three (20 Marks)

- a) Differentiate between assessment and evaluation. (2mks)
- b) List **eight** factors the Biology teacher should consider when constructing the **table of specification**. (8mks)
- c) Discuss **five** advantages of essay tests. (10 marks)

Question Four (20 Marks)

- a) Distinguish between the scheme of work, lesson plan and the syllabus. (3mks)
- b) Discuss **five** disadvantages of teaching Biology without a lesson plan. (10mks)
- c) State **seven** advantages of preparing a scheme of work. (7mks)

Question Five (20 Marks)

- a) State **seven** factors affecting choice of methods for teaching Biology. (7mks)
- b) Outline **seven** situations the teacher uses demonstration as a method of teaching Biology. (7mks)
- c) List **six** reasons why teachers ask questions during teaching (6mks)