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UNIVERSITY EXAMINATIONS 2022/2023

THIRD YEAR, SECOND SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATION
FOR DEGREE OF BACHELOR OF EDUCATION SCIENCE AND BACHELOR OF
SCIENCE IN AGRICULTURAL EDUCATION AND EXTENSION

ECT 3351: BIOLOGY SUBJECT METHODS

DATE: AUGUST 2023

TIME: 2 HOURS

INSTRUCTIONS: Answer Question ONE and any other TWO questions.

QUESTION ONE (30 MARKS)

- a) You are the biology teacher for form 2N. Your scheme of work indicates that you are to teach the topic RESPIRATION and sub topic – RESPIRATION IN PLANTS from 2.40 pm on 20/05/2023. Draw a 40 minutes lesson plan for a class demonstration. (6 Marks)
 - i. Identify the T/L resources to be used indicating the importance of each. (2 Marks)
 - ii. Explain four ways you will make the demonstration effective in teaching the lesson content during the lesson. (4 Marks)
- b) Explain how you would achieve ASEI/PDSI using ICT during teaching/learning of biology in secondary school. (5 Marks)
- c) Identify and explain five goals of education in Kenya that are Achieved through teaching/Learning of biology in secondary school. (5 Marks)
- d) Discuss the differences between formative and summative evaluation in regard to teaching/learning of biology in secondary school (4 Marks)
- e) Discuss the importance of expository approach in teaching/learning of biology (4 Marks)

QUESTION TWO (20 MARKS)

- a) Laboratory experiments are sometimes misused by students leading to poor learning of biology in schools. Discuss (10 Marks)
- b) Improvisation is a vital practice in teaching/learning of biology. Discuss (10 Marks)

QUESTION THREE (20 MARKS)

- a) Describe the steps you would follow in preparing a biology field trip for a form two class to a game reserve. (10 Marks)
- b) Discuss five factors considered when developing curriculum. (10 Marks)

QUESTION FOUR (20 MARKS)

- a) i. Identify and explain four types of teacher made tests used in evaluation of teaching/learning process in biology. (8 Marks)
- ii. Explain the function of each teacher made test in (i) above. (4 Marks)
- b) Discuss four factors you would consider when scoring biology practical examinations. (8 Marks)

QUESTION FIVE (20 MARKS)

- a) It is always advisable for a biology teacher to carefully choose and apply two or more approaches of teaching biology in every lesson. Discuss (10 Marks)
- b) Discuss five factors determining selection of a method of teaching. (5 Marks)
- c) Explain five factors contributing to successful practical work in teaching/learning of biology. (5 Marks)