

**UNIVERSITY OF ESWATINI
FACULTY OF EDUCATION
DEPARTMENT OF CURRICULUM AND TEACHING
MAIN EXAMINATION QUESTION PAPER, OCTOBER 2021**

TITLE OF PAPER : CURRICULUM STUDIES IN BIOLOGY II
COURSE CODE : CTE 528
STUDENTS : PGCE F/T & IDE
TIME ALLOWED : THREE (3) HOURS

INSTRUCTIONS:

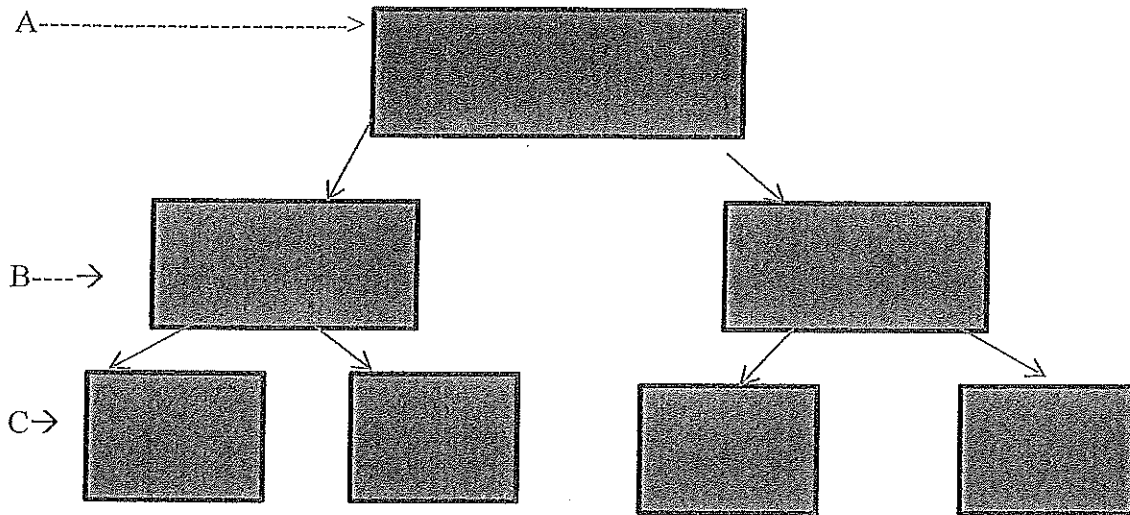
- 1. This examination paper has five (5) questions. Answer four (4) questions only.**
- 2. Each question has a total of 25 points.**
- 3. Do not answer in bullet form unless implied by the question**

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

- 1a) According to Aickenhead (1994), the goal of Science Technology and Society (STS) science teaching is to help the learner make sense of his or her everyday experiences. With the aid of an illustration, explain how STS achieves this goal. [7]
- b) The following projects in Eswatini and Ghana: Linking School Science with Industry and Technology (LISSIT); and Science and Technology in Action in Ghana (STAG), respectively, developed curriculum materials that attempt to link school science with that of the workplace and the home/community.
 i) Discuss the origins of this concept in Africa. [6]
 ii) Describe the characteristic features of each of these projects. [12]
- 2a) The Swaziland Science Education Policy (1999) embraced contextualisation as the approach to be used in the teaching of science in Grades 1-12.
 i) Briefly, explain what is meant by the term contextualisation [3]
 ii) Discuss the process of curriculum development undertaken to produce contextualised curriculum materials at the Junior Secondary level. [7]
- b) The Swaziland Integrated Science Programme (SWISP), a post reform project, could not be implemented by science teachers in its original form. Discuss the following:
 i) Teacher orientation and preparedness to utilise the curriculum materials. [5]
 ii) Challenges faced by teachers in implementing the curriculum. [10]
- 3a) A gender responsive school ensures that boys' and girls' needs are catered for equally and equitably. Explain, using appropriate indicators, how this can be accomplished. [10]
- b) In 2009, Gucuka High School was established as a Gender Responsive School/Centre of Excellence by FAWESWA. Discuss the process of transformation and its impact on this school. [10]
- c) In Eswatini, girls and boys are generally equally represented in enrolment in school and in science subjects and yet there are fewer females than males in science professions. Discuss how societal attitudes act as a barrier to women's participation in Science, Technology, Engineering and Mathematics fields in Eswatini. [5]
- 4a) Textbooks remain a major resource for science teaching and learning, hence it is important to select suitable textbooks. Discuss three criteria you would use to select an appropriate and relevant EGCSE Biology textbook for 21st century learners in the era of COVID-19. [9]
- b) Explain how the following factors affect how learners process scientific information and, therefore, how they respond to science assessment questions: key words; terms of quantity; large numbers of words; negative forms of language. [16]

5a) Constructivists emphasize learners' prior knowledge in the teaching and learning process. Discuss the role of prior concepts in learning science. [5]

b) Concept mapping is a strategy that can be used to achieve meaningful learning. Below is a hypothetical concept map. Answer the questions that follow:



- i) What is a concept map? [4]
- ii) What are the main parts of a concept map? [4]
- iii) Distinguish between A and B; and B and C [4]
- iv) How do concept maps facilitate meaningful learning? [4]
- v) Explain how concept maps help in diagnosing misconceptions [4]