

**UNIVERSITY OF ESWATINI
FACULTY OF EDUCATION
DEPARTMENT OF CURRICULUM AND TEACHING
MAIN EXAMINATION QUESTION PAPER: APRIL 2020**

TITLE OF PAPER : CURRICULUM STUDIES IN BIOLOGY I
COURSE CODE : CTE527
STUDENTS : PGCE FULL TIME & IDE
TIME ALLOWED : THREE (3) HOURS

INSTRUCTIONS:

- 1. This examination paper has five (5) questions.**
- 2. Answer (four) 4 questions**
- 3. Each question has a total of 25 points.**
- 4. Do not use bullets, unless implied by the question**

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

1. a) i) Explain what is meant by the following: [3x3]
 Science as a body of knowledge
 Science as an inquiry process
 Science as a way of knowing or thinking
- ii) Scientific process is cyclical in nature. Discuss what this entails. [4]
- b) Discuss how the following philosophers of science view *demarcation*. [3x4]
 Karl Popper
 Thomas Kuhn
 Imre Lakatos
2. A Form 2 science teacher was teaching the topic diffusion. He gave a demonstration by putting a few grains of potassium permanganate in a beaker of cold water as the learners watched and he informed them that they would check the beaker every ten minutes. Then he gave the learners the definition of diffusion as stated in the syllabus and wrote it on the board. Every ten minutes he would ask the learners what they observed, to which he would respond 'this is diffusion'.
- i) Comment on this type of approach. [10]
 ii) Use the generative learning model to improve on this approach. [8]
 iii) Explain how you would use *the predict-observe-explain* strategy to teach this concept. [7]
3. Mr Mazwi's Form IV Biology class was preparing to do investigations on seed germination using bean seeds. The teacher prepared the questions below in advance.
- i) Why is it that a seed can still grow into a plant even after many years? [5]
 ii) How can we show that seeds need water in order to grow? [5]
 iii) What does the word germinate mean? [5]
 iv) What will happen to the seedlings when they are placed in a cardboard box with a window cut on the side that allows light to pass through? [5]
- a) Classify the questions as convergent /divergent; science processes; and Bloom's taxonomy. Justify your classification and identify the science processes and bloom's thinking levels where appropriate.
- b) Classify the above questions, with justification, using the SOLO taxonomy. [5]
4. a) Discuss the role of assessment in Biology, giving examples. [5]
 b) Compare and contrast assessment for learning and assessment of learning. [10]
 c) Why is feedback significant in assessment? [10]
5. a) Discuss the importance of the following official documents in Science and Biology instruction. [2x5]
 Lesson plan
 Scheme book
- b) Below is a general format for the scheme of work. Explain what each heading entails, giving science/biology examples where appropriate. [15]

