

**UNIVERSITY OF ESWATINI
FACULTY OF EDUCATION
DEPARTMENT OF CURRICULUM AND TEACHING
RE-SIT EXAMINATION QUESTION PAPER: OCTOBER 2021**

TITLE OF PAPER : **CURRICULUM STUDIES IN BIOLOGY II**
COURSE CODE : **CTE528**
STUDENTS : **PGCE F/T; IDE**
TIME ALLOWED : **THREE (3) HOURS**

- INSTRUCTIONS:**
- 1. This examination paper has five (5) questions. Answer any four (4) questions.**
 - 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

1. a) Professors Ajeyalemi (1990) and Yoloye (1999) lamented the state of Science and Technology Education in Africa.
 - i) Discuss the common concerns of these science educators regarding the state of Science and Technology Education in Africa. [10]
 - ii) How has the situation changed since then? [5]

b) The African Forum for Children's Literacy in Science and Technology (AFCLIST) goals were to increase the interest, appreciation and participation of African youth in Science and Technology. Discuss, with examples, the measures taken by AFCLIST to accomplish this goal. [10]
2. a) i) According to Morrison (2006) Science Technology Engineering and Mathematics (STEM) education should develop in learners skills for the 21st Century. Provide and discuss 3 of these skills and state how they are relevant to Eswatini. [9]
- ii) Explain how these skills compare with the characteristics of STEM lessons. [6]
- b) Compare and contrast the steps taken by Botswana and Eswatini to develop relevant science curriculums at the Junior Secondary level. [10]
3. a) You are preparing to teach a Form IV Biology class with approximately equal numbers of boys and girls on the Human Reproductive System. Show how you would organize your class and your lesson plan for a gender responsive science lesson. [12]
- b) The Forum for African Women Educationalists Swaziland (FAWESWA) programmes are helping to keep girls in school and enrolled in science subjects. Explain how FAWESWA is accomplishing this task. [7]
- c) Discuss how FAWE's Science, Mathematics and Technology Model has impacted on the education and participations of girls in SMT areas. [6]
4. a) Suggest three types of resources and show how a Form IV Biology teacher can use them to effectively teach a lesson on digestion in the mouth [12]
- b) Language use in science can either promote or hinder learning. Explain how some language related classroom practices hinder learning. [10]
5. a) Explain how, according to Ausubel, the following impacts on students' learning of science concepts: [3x3]
 - i) prior concepts
 - ii) subsumers
 - iii) advance organisers
- b) Research studies show the following about teacher practices in science classrooms

- teachers spend 2/3 of the time talking; telling, instructing, directing and informing learners
- learners average 2 speeches a day, each speech is 8.4 words in length

Explain how this impacts on learners' development of scientific language and thinking abilities. **[10]**

- c) Concept mapping is important in the teaching and learning of biology concepts. Explain what this means. **[6]**