

UNIVERSITY OF SWAZILAND



FACULTY OF EDUCATION
DEPARTMENT OF CURRICULUM & TEACHING
EXAMINATION QUESTION PAPER
MAY 2018.

TITLE OF PAPER: ADVANCED CURRICULUM STUDIES CHEMISTRY II

COURSE CODE: CTE 616

STUDENTS: M. Ed. Curriculum & Teaching.

TIME ALLOWED: Three (3) Hours

INSTRUCTIONS: 1. There are five questions in this paper.

2. Answer any four questions

3. Each question has a total of 25marks.

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

QUESTION 1

Magnusson , Krajck & Borko (1997) conceptualized pedagogical content knowledge (PCK) for science teaching as consisting of five components.

- a. Identify these five components (5marks)
- b. Discuss the implications of theory and research in PCK to chemistry teacher education training and development. (20marks)

TOTAL FOR QUESTION 1 = 25MARKS.

QUESTION 2.

Cognitive psychologists have identified the critical role of prior learning as a prerequisite to meaningful conceptual (MCU) learning, while Schema theory specifies three conditions necessary for MCU learning to take place (Mayer, 1983)

- a. Explain the three conditions specified by the schema theory. (10marks)
- b. Use a specific chemistry topic to synthesize what the schema theory said about the kinds of learning that can occur when students are presented with information about scientific concepts in a science classroom. (15marks)

TOTAL FOR QUESTION 2 = 25MARKS.

QUESTION 3

- a. Critically analyze the two features of metacognition as identified by Paris & Winograd, (1997). (10marks)
- b. Discuss the virtues of metacognition derived from these two features and explain how knowledge of these virtues will assist the science teacher in developing the metacognitive abilities in the student. (15marks)

TOTAL FOR QUESTION 3 = 25MARKS.

QUESTION 4

- a. Describe the special features that define the Problem Based Learning (PBL) model of instruction. **(10marks)**
- b. Show how you will plan and use PBL to teach a chosen topic in SGCSE chemistry curriculum. **(15marks)**

TOTAL FOR QUESTION 4 = 25MARKS.

QUESTION 5

- a. Contrast the terms assessment and evaluation as they pertain to classroom teaching. **(2marks)**
- b. Assessing and evaluating students is one of the things teachers do that has important and lasting consequences for students'. (Crooks, 1988)
Discuss the importance and consequences of assessment in Swaziland science classrooms. **(10marks)**
- c. Discuss how you would apply the four principles proposed by Gronlund (2005) to design an assessment system in your chemistry class. **(12marks)**

TOTAL FOR QUESTION 5 = 25MARKS.

END OF EXAMINATION!!!