252

UNIVERSITY OF SWAZILAND
FACULTY OF EDUCATION
DEPARTMENT OF CURRICULUM AND TEACHING
MAIN EXAMINATION PAPER
M. Ed.
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Title of paper: Curriculum Studies: Chemistry I

Course number: EDC 646

Time allowed: Three (3) hours

Instructions:

1. This paper contains FIVE questions.
2. Answer Question 1 and then choose ANY TWO questions
3. Answer all questions in continuous essay form.
4. Questions carry marks as indicated.
5. Any piece of material or work that is not intended for marking purposes should be clearly CROSSED OUT. Ensure that responses to questions are NUMBERED CORRECTLY.

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

QUESTION 1

This question is compulsory

"... essentially everyone agrees that we should teach the nature of science. Unfortunately, there is no consensus about the nature of science..." (Smith and Scharmann, 1999:494).

Discuss your views regarding the above statement and show its implications for school science in Swaziland. [40]

QUESTION 2

In tracing the historical developments of the scientific method, it appears that right from Aristotle's time **inductive** and **deductive** reasoning play a significant role in scientific inquiry.

Discuss these two aspects of scientific inquiry as routes to the construction of reliable scientific knowledge. Make use of examples from chemistry in your discussion. [30]

QUESTION 3

Lavoisier and Dalton are just two of the early scientists that contributed significantly to the development of chemistry and the chemical revolution.

Show how the ideas of these two individuals led to significant changes and improved understanding in chemical phenomena despite resistance from other scientists of the time. [30]

QUESTION 4

As part of the school science curriculum chemistry is expected to contribute to each learner's intellectual, personal, social, and physical development. As such Mbajiorgu (2006) advises that a number a factors need to be considered when designing and developing chemistry curricula.

Identify six factors and discuss their importance for consideration in designing chemistry curricula [30]

QUESTION 5

"The idea behind the STS program is to provide a real-world connection for the student between the classroom and society ... STS views school science in a much broader sense than does the typical discipline-centred, textbook-driven science course..." (King, n.d.).

Using your readings to support your views, discuss STS principles that reflect the perception presented by King. [30]