UNIVERSITY
OF
JOHANNESBURG

FACULTY	: Education
DEPARTMENT	: Science and Technology Education
CAMPUS	: APK
MODULE	: METHODOLOGY AND PRACTICUM: NATURAL SCIENCE 3A (MOSPNA3)
SEMESTER	: First
EXAM	: May 2020

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MODERATOR   :DR S RAMAILA

DURATION   :SUBMISSION   **MARKS**   : 50

NUMBER OF PAGES: 3 PAGES

INSTRUCTIONS:

1. Answer ALL THE QUESTIONS.
2. Number your answers clearly.

QUESTION 1

The South African curriculum is based on Tyler's (1949) Model of Curriculum Design. This model addresses three (3) important aspects when designing a curriculum.

1.1   Identify the three aspects that the Tyler (1949) Model of Curriculum Design uses.   **(3)**

1.2   Select any two (2) of the aspects you mentioned in Question 1.1 and discuss why it is important for curriculum developers to take them into consideration when drafting/designing a curriculum.   **(8)**

[11]

QUESTION 2

You have been assigned the task of setting a *standardised final examination* paper as part of a Natural Science cluster group.

2.1   Using the Grade 8 Natural Sciences syllabus as an example, discuss the cognitive levels that the final examination paper should cover based on the CAPS requirements for Natural Sciences and how you would ensure that these levels are met.   **(12)**

2.2   Elaborate on the type of assessment and tools that are used for a *standardised final examination.*   **(7)**

[19]

QUESTION 3

3.1   Critically discuss the significance of Pedagogical Content Knowledge (PCK).   **(6)**

3.2   An analogy is usually referred to as a *double-edged sword*. Discuss the relevance of this statement using any Natural Science concept.   **(4)**

3.3   Miss Luthuli wants to introduce Potential Energy and Kinetic Energy to her class. However, learners are not familiar with these concepts. Critically discuss any two (2) pedagogical representations proposed by Shulman (1986) that Miss Luthuli could use to make the concepts of Potential Energy and Kinetic Energy understandable to her learners.   **(10)**

[20]

TOTAL: 50