UNIVERSITY
—OF—
JOHANNESBURG

FACULTY	: Education
DEPARTMENT	: Science and Technology Education
CAMPUS	: APK
MODULE	: TEACHING METHODOLOGY AND PRACTICUM: FET LIFE SCIENCES (MPFLSY1)
SEMESTER	: Second
EXAM	: November 2020

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MODERATOR   : DR P KAVAI (WITS)

DURATION   : SUBMISSION   **MARKS** : **100**

NUMBER OF PAGES: 3 PAGES

INSTRUCTIONS:

1.   Answer ALL THE QUESTIONS.

2.   Number your answers clearly.

3.   Follow the order in which the questions are asked.

QUESTION 1: LESSON PLANNING

1.1 Identify a specific topic in Grade 12 Life Sciences and formulate **two** objectives for each of the categories of Bloom's taxonomy.

1.1.1 Analysis. (2)

1.1.2 Creating. (2)

1.2 Construct **one** question that you could ask your learners in each of the categories.

1.2.1 Application. (2)

1.2.2 Evaluation. (2)

1.3 Design a memo/rubric that you could use to mark the questions in:

    a) 1.3.1 (3)

    b) 1.3.2 (5)

[16]

QUESTION 2: PEDAGOGICAL CONTENT KNOWLEDGE (PCK)

Preparing and engaging learners in laboratory experiments is a demanding task requiring teachers to have sophisticated knowledge of: content and process, how learners learn, assessment of learning, and how to design instruction to support the multiple goals of Life Sciences education.

2.1 Comment on the validity of this statement with reference to your experiences during work integrated learning (WIL). (10)

2.2 By referring to a specific grade and topic, demonstrate your pedagogical content knowledge by:

2.2.1 Designing a meaningful and short laboratory task for your learners. (10)

2.2.2 Critically analyse the suitability of that laboratory activity in enhancing learners' understanding of the concepts. (10)

[30]

QUESTION 3: TECHNOLOGICAL PEDAGOGICAL AND CONTENT KNOWLEDGE (TPACK)

The use of technology in Life Sciences teaching has become inevitable especially with the COVID-19 pandemic which forced virtual learning at all levels.

3.1 Comment on the relevance of the following statement with reference to the current situation the education system is experiencing. (10)

3.2 *"The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn". Alvin Toffler, Future Shock* (1970).

Evaluate one specific learning technology that can be used in Life Sciences teaching and learning. (10)

[20]

QUESTION 4: ROLE OF CONTEXT

4.1 Critically analyse how your beliefs as a teacher and those of learners influence your teaching and learners' understanding of the following Life Sciences concepts.

4.1.1 Albinism. (5)

4.1.2 Abortion. (5)

4.2 Constructivists propose that meaningful learning occurs through rethinking old ideas and coming to new conclusions about new ideas which conflict with our old ideas. Evaluate the applicability of this proposition when teaching specific Life Sciences topic/concept. (10)

[20]

QUESTION 5: UNDERSTANDING THE CURRICULUM

In Grades 10, 11 and 12 you are supposed to teach the impact of human beings on the environment. Discuss how you can instill in learners an awareness of what it means to be a responsible citizen in terms of the environment and life-style choices that they make. (14)

[14]

TOTAL: 100