UNIVERSITY OF JOHANNESBURG

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| **FACULTY** | : Education |
| **DEPARTMENT** | : Science and Technology Education |
| **CAMPUS** | : APK |
| **MODULE** | : METHODOLOGY AND PRACTICUM: FET LIFE SCIENCES (MPFLSY1) |
| **SEMESTER** | : Second |
| **EXAM** | : SSA January 2021 |

**ASSESSOR(S)** : DR L MAVURU
MS K PILA

**MODERATOR** : DR P KAVAI (Wits)

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

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NUMBER OF PAGES: 3 PAGES

INSTRUCTIONS:

1. Answer ALL THE QUESTIONS.
2. Number your answers clearly
3. Follow the order in which questions are asked.

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**QUESTION 1:** UNDERSTANDING THE CURRICULUM AND PCK

One of the general aims of Life Sciences curriculum states that “Life Sciences serves the purpose of valuing indigenous knowledge system, acknowledging the rich history and heritage of this country as important contributors to nurturing the values contained in the constitution” (Department of Basic Education, 2011, p.5).

1.1. As a Life Sciences teacher, evaluate the relevance of this general aim using practical examples in the classroom. (6)

1.2. Critically discuss how you can teach a specific Life Sciences topic/concept whilst integrating indigenous knowledge. (10)

**[16]**

**QUESTION 2:** PRACTICAL WORK IN LIFE SCIENCES

Practical work can stimulate and engage learners learning at different levels, challenging them mentally and physically in ways that other science experiences cannot (SCORE, 2009b).

2.1 Evaluate this statement using practical examples from Life Sciences classroom. (10)

2.2. Imagine you are teaching at an under resourced school and you have to conduct a practical activity. Design a practical work that you can perform with your learners using improvised materials. (10)

2.3. Discuss the pros and cons of using improvised resources/materials when teaching Life Sciences. (10)

**[30]**

**QUESTION 3:** TECHNOLOGICAL PEDAGOGICAL AND CONTENT KNOWLEDGE

Due to the uncertainties of the future, a flexible and resilient science education system is required to keep up with the ever-changing times. In light of this statement, you are required to change the mode of instruction from face-to-face to remote teaching and learning.

3.1. Plan an online lesson for a specific Life Science class. Include the following:

a) Online teaching platforms and teaching strategies you would use. (10)

b) Assessment platforms and the strategies. (10)

3.2. Discuss some of the benefits and challenges that you (the teacher) and learners may experience due to the change from face to face to remote instruction. (10)

**[30]**

**QUESTION 4:** CONSTRUCTIVIST TEACHING PHILOSOPY AND STRATEGIES

4.1 Constructivist pedagogy redefines the role of teacher and the learner and their interrelationship by creating a nurturing environment. Critically evaluate the applicability of constructivist teaching and learning strategies in a Life Sciences classroom. (15)

4.2 Discuss three teaching strategies that you can use to accommodate the diverse group of learners in your Life Sciences classroom. (9)

**[24]**

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**TOTAL: 100**