



UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION
JUNE EXAMINATION 2015

PROGRAMME: PGCE (SENIOR PHASE)
MODULE: LEARNING AREA METHODOLOGY AA: NATURAL SCIENCES
CODE: LMNAA10
TIME: 2 hours
MARKS: 100
EXAMINER: Dr RC Grobler
MODERATOR: Prof JJ de Beer (NWU)

(This paper consists of 2 pages)

INSTRUCTIONS

Read the following instructions carefully before answering the questions:

1. This question paper consists of four questions.
2. Answer ALL the questions.
3. Questions can be answered in any sequence – just ensure that you clearly number your answers.

QUESTION 1

State and explain each of the specific aims for Natural Sciences as indicated in the CAPS document.

(12)

QUESTION 2

According to Sanders (2010) science teachers need to have a repertoire of knowledge and skills. Discuss the types/areas of knowledge that effective science teachers need to have, and indicate the reason/s for each type.

(45)

QUESTION 3

Design a rubric for assessment of guided experimental investigations in the laboratory. Use four criteria for learner assessment and describe three levels of achievement.

(23)

QUESTION 4

- 4.1 Distinguish between the *ostensive* and the *heuristic* teaching strategies in the Natural Sciences classroom. (10)
 - 4.2 What are the advantages of the heuristic approach? (5)
 - 4.3 Give one example to illustrate how you would incorporate the heuristic teaching strategy in your classroom. (5)
- (20)**

TOTAL: 100

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