



UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION
MAY / JUNE
EXAMINATION 2016

PROGRAMME: B Ed (SENIOR AND FET PHASE)
MODULE: TEACHING METHODOLOGY AND PRACTICE
 CIVIL TECHNOLOGY
CODE: MOFPCA3
TIME: 1 hour
MARKS: 50
EXAMINER: Dr CF van As
MODERATOR: Mr W Engelbrecht

(This paper consists of 2 pages)

INSTRUCTIONS

Read the following instructions carefully before answering the questions:

1. Answer all the questions.
2. You may consult the NCS, CAPS and your lesson plans.

QUESTION 1

- 1.1 Briefly discuss the key aspects of civil *technology*. (2)
- 1.2 Briefly describe the rationale for *Civil Technology* as a school subject. (2)

QUESTION 2

- 2.1 In the NCS for Civil Technology the content and contexts of the subject per Grade can be found under the Assessment Standards applicable to Learning Outcome 3. Compare LO3 for Grade 10 (NCS) with the content outline for Grade 10 in the CAPS and comment on how the CAPS is an improvement on the NCS to the benefit of teaching Civil Technology. (6)
- 2.2 Is there any indication regarding the allocation of time for practical work in the CAPS? Yes or No? (1)

QUESTION 3

Conceptual knowledge relates to the links between knowledge items, to such an extent that when you can identify these links you will have conceptual understanding. Explain the FOUR types of conceptual knowledge by referring to the use of a drilling machine when drilling holes for screws in a cabinet. (8)

QUESTION 4

You have to plan a Civil Technology lesson for learners in Grade 10.

- 4.1 How will the situation analysis, prior to a practical session, have an influence on your planning? (3)
- 4.2 Where in the CAPS will you find reference to the topic materials for Grade 10? Give the page number. (1)
- 4.3 Analyze the content to be covered under the topic materials for Grade 10 and distil the 'Big ideas'. (6)
- 4.4 How can the use of Pedagogical and Professional experience Repertoires (PaP-eR) ensure effective teaching and learning? (3)

QUESTION 5

- 5.1 Briefly discuss how you can use informal assessment effectively during a practical session in the Civil Technology class. (3)
- 5.2 What are the formal assessment requirements for Civil Technology, according to the CAPS? (3)

QUESTION 6

Grade 10 learners are supposed to know how to set out a building (CAPS, p. 17).

- 6.1 Briefly explain the 3-4-5 method which is used to set out building lines on a building site. (3)
- 6.2 You have to plan a lesson on how to teach the 3-4-5 method:
 - 6.2.1 What is the underlying mathematical principle the 3-4-5 method is based on? (2)
 - 6.2.2 Briefly describe how you will combine the behavioural and constructivist instructional approaches to teach the 3-4-5 method, and which instructional strategies will you use? (4)
 - 6.2.3 Name the tools and accessories you will need to enable the learners to do this exercise practically. (3)

TOTAL: 50