



<u>FACULTY</u>	: Education
<u>DEPARTMENT</u>	: Science and Technology Education
<u>CAMPUS</u>	: APK
<u>MODULE</u>	: MOFPCA3 TEACHING METHODOLOGY AND PRACTICUM 3A: CIVIL TECHNOLOGY
<u>SEMESTER</u>	: First
<u>EXAM</u>	: May 2018

<u>DATE</u>	: 31 May 2018	<u>SESSION</u>	: 16:30-17:30
<u>ASSESSOR(S)</u>	: DR CF VAN AS		
<u>MODERATOR</u>	: MR W ENGELBRECHT		
<u>DURATION</u>	: 1 HOUR	<u>MARKS</u>	: 50

NUMBER OF PAGES: 3 PAGES

INSTRUCTIONS:

1. Answer ALL the questions.
 2. Number your answers clearly.
 3. You may consult the NCS, CAPS and your lesson plans.
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QUESTION 1

- 1.1 Briefly define the concept of Civil Technology. (2)
- 1.2 Distinguish between the respective **areas** of specialisation within Civil Technology as a school subject. (6)
[8]

QUESTION 2

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 per term for Grade 10 in the CAPS and comment on how this improvement benefits the teaching of Civil Technology.

[6]

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 lesson in the specialisation **construction** 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 Analyse the content to be covered under the topic **materials** for Grade 10 and identify the main concepts to be taught. (8)
[11]

QUESTION 5

- 5.1 Briefly explain how you can use observation in a formative way, **as** an assessment technique, effectively during a practical session in the civil technology class. (4)
- 5.2 Briefly explain how the learner can use **self-assessment** during the execution of the practical assessment task. (2)
[6]

QUESTION 6

Grade 10 learners are supposed to know the national building regulations regarding strip foundations (CAPS, p. 55).

- 6.1 What are the minimum specifications for a strip foundations for a one-brick (220mm) wall according to the national building regulations? (2)

- 6.2 Briefly reflect on the following if you have to plan a lesson on how to teach strip foundations as part of the sub-structure of a building:
- 6.2.1 What is the underlying geometrical principle on which the minimum specification for the foundation of a one-brick (220mm) wall is based? **(3)**
- 6.2.2 What will your instructional approach be, to teach the minimum specifications for the foundation of a one brick wall, and which instructional strategies will you use? **(4)**
- 6.2.3 How will you ensure that the learners understand the minimum specifications by relating to the underlying geometrical principle? **(2)**
- [11]**

TOTAL: 50