



<b><u>FACULTY</u></b>	: Education
<b><u>DEPARTMENT</u></b>	: Science and Technology Education
<b><u>CAMPUS</u></b>	: APK
<b><u>MODULE</u></b>	: CURRENT ISSUES IN TECHNOLOGY EDUCATION (HCITE0Y)
<b><u>SEMESTER</u></b>	: Second
<b><u>EXAM</u></b>	: SSA January 2020

**ASSESSOR(S)** : PROF PJ ANKIEWICZ  
DR CF VAN AS

**MODERATOR** : DR W RAUSCHER (UP)

**DURATION** : 3 HOURS **MARKS** : 100

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NUMBER OF PAGES: 3 PAGES

INSTRUCTIONS:

1. Answer ALL THE QUESTIONS.
  2. This is an open book examination, you may consult your notes.
  3. Your answers should be authentic and not plagiarised.
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**QUESTION 1**

- 1.1 Explain the nature and key features of technology and technology education. (10)
- 1.2 Discuss the difference between STEM literacy and S.T.E.M literacies. (4)
- 1.3 Briefly discuss three (3) viable approaches to STEM Education. (6)
- 1.4 With reference to your answer in 1.3, argue which approach will have the least negative consequences for technology education. (6)
- [26]**

**QUESTION 2**

Discuss the key aspects of the modern philosophy of technology as based on Mitcham's (1994) four modes in which technology manifests itself.

**[16]**

**QUESTION 3**

- 3.1 Technological capability involves the learner's capacity to engage in technological activities such as thinking, decision-making, problem-solving and design. Briefly discuss your understanding of these processes. (12)
- 3.2 Explain why problem solving in technology is integral to 21<sup>st</sup> century skills. (5)
- [17]**

**QUESTION 4**

Scholars in technology education believe that the “T” can be the “integrator” of the “S”, the “E” and the “M” in STEM education. Write a narrative on your understanding of this statement by referring to an example.

[12]

**QUESTION 5**

Distinguish between the various categories, namely technical (formal, practical or values of function) and non-technical values (non-intrinsic, instrumental or values of usage) and types of values in technology and technology education.

[8]

**QUESTION 6**

Student’s technological concepts and attitudes have been researched for over three decades. Briefly discuss the perceptions and attitudes of pupils toward technology under the following headings:

- 6.1 General research findings regarding students’ attitudes toward and concepts of technology, in particular in the PATT studies. (8)
- 6.2 Future opportunities for attitude studies in technology. (4)

[12]

**QUESTION 7**

Briefly discuss the complementarity between indigenous technology knowledge systems and western technology knowledge systems by also referring to Mitcham’s philosophy of technology.

[9]

**Total: 100**

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