



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**FACULTY OF SCIENCE AND TECHNOLOGY EDUCATION**  
**DEPARTMENT OF ART, DESIGN AND TECHNOLOGY EDUCATION**  
**PST 1101 THEORETICAL FOUNDATIONS IN STEM EDUCATION**

**Examination Paper**

**November, 2024**

This examination paper consists of 2 pages

**Time Allowed:** 3 hours  
**Total Marks:** 100  
**Special requirements:** None  
**Examiner's Name:** Manokore. K(Mr)  
**External Examiner:** Dr L. Hadebe

**INSTRUCTIONS**

1. Answer question **ONE** and any **THREE** questions.
2. All questions carry equal marks.
3. Begin each question on a fresh page and put all parts of the same question together.

**MARK ALLOCATION**

<b>QUESTION</b>	<b>MARKS</b>
1.	25
2.	25
3.	25
4.	25
5.	25
<b>TOTAL</b>	<b>100</b>

**QUESTION 1**

Critique the notion of 'teacher as a facilitator' in the Zimbabwean Heritage-Based Curriculum. [25 marks]

**QUESTION 2**

Evaluate the application of Brunner's spiral curriculum in STEM education. [25 marks]

**QUESTION 3**

Analyse any three tenets of Humanism as they apply to your area of specialisation. [25 marks]

**QUESTION 4**

Assess the role of Empiricism in shaping the learning and teaching approaches in STEM education. [25 marks]

**QUESTION 5**

Examine the three main factors that contributed to the development of sociology as a discipline in the 19<sup>th</sup> century. [25 marks]

**QUESTION 6**

Discuss the extent to which citizenship education can inform STEM education to prioritise civic engagement and social responsibility. [25 marks]

**END OF EXAMINATION**