NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF SCIENCE AND TECHNOLOGY EDUCATION

DEPARTMENT OF SCIENCE, MATHEMATICS AND TECHNOLOGY EDUCATION

PST6403 TRENDS IN COMPUTER SCIENCE EDUCATION

Main Examination Paper   **First Semester**

November/December 2024

This examination paper consists of two printed pages

Time Allowed: 3 hours

Total Marks: 100

Special Requirements: None

Examiner's Name: Mr D. Mkwananzi

External Examiner: Dr B. Moyo

INSTRUCTIONS

1. Answer any 4 questions
2. Calculators can be used where possible
3. You may use diagrams to support your explanation of concepts

MARK ALLOCATION

QUESTION		MARKS
1.		25
2.		25
3.		25
4.		25
5.		25
TOTAL		100

Question 1

a) Discuss the risks of Blockchain technology in education. [10]

b) Explain the following:
   i. Blended learning. [2]
   ii. 5G technology. [2]
   iii. Project based learning. [2]
   iv. Machine learning. [2]
   v. Cluster Computing [2]

c) How is the Internet of Things filtering into the education system in Zimbabwe?
   [5]

Question 2

a) Discuss three ways in which AI is influencing the drive towards smart schools.
   [15]

b) Explain the role of Computer Science Education in the Heritage Based curriculum
   [10]

Question 3

a) Explain any three notable examples of advancements towards smart cities in Zimbabwe. [9]

b) Discuss how any two social media platforms are influencing education practice. [16]

Question 4

a) Computers are considered "Thinking Machines". Discuss. [12]

b) With reference to the Zimbabwean situation, explain how computers have contributed to positive social practices? [13]

Question 5

a) Explain the concept of smart schools.
   [10]

b) Evaluate the influence of each of the following education policy frameworks on education in Zimbabwe:
   i. Competency Based Curriculum. [5]
   ii. STEM Education. [5]

End of paper