UNIVERSITY OF SWAZILAND

FACULTY OF EDUCATION

DEPARTMENT OF CURRICULUM AND TEACHING

MAIN EXAMINATION QUESTION PAPER (MAY, 2018)

TITLE OF PAPER:	**CURRICULUM STUDIES IN COMPUTER SCIENCE II**
COURSE CODE:	**CTE 538**
PROGRAMME:	**PGCE**
DURATION:	**THREE (3) HOURS**

INSTRUCTIONS:

1. This paper contains five (5) questions. Answer any four (4) questions.
2. Each question has a total of 25 marks.

THIS PAPER SHOULD NOT BE OPENED UNTIL PERMISSION HAS BEEN GRANTED BY THE INVIGILATOR

QUESTION ONE

The National Information and Communication Infrastructure (NICI) Policy and Plan development process in Swaziland is geared towards recognising the areas where ICT could effectively contribute towards the achievement of the vision enshrined in the National Development Strategy (NDS) and the Transformation Policy Statement. Premised on this assertion: [25 marks]

a) Explain any five (5) specific objectives proposed by the Swaziland National Information and Communication Infrastructure (NICI). [15 marks]

b) Explain any five (5) strategies to achieve the objectives proposed by the Swaziland National Information and Communication Infrastructure (NICI). [10 marks]

QUESTION TWO

a) Within the context of Computer Science education, explain any three (3) of the following technology trends: [09 marks]

  i. Cloud computing

  ii. Games and gamification

  iii. Mobile learning

  iv. Virtual laboratories

b) Different types of teleconferencing are discernable, based on the level of sophistication and interactivity of the technology involved in their implementation and utilization. Identify and discuss four (4) types of teleconferencing. [16 marks]

QUESTION THREE

a) Technologies are developed and utilized to engage learners in intellectually challenging tasks and scaffold their needs. Explain the role of computers in scaffolding, within the context of Computer Science subject in high schools.
[09 marks]

b) Identify any four (4) benefits and four (4) challenges experienced in constructivist instruction in Computer Science. [16 marks]

QUESTION FOUR

The core issues surrounding computer ethics are based on the scenarios arising from the use of the Internet, user interaction with websites, software and related services. Explain any five (5) of the 'Ten commandments' governing computer ethics as propounded by the Computer Ethics Institute (2005).   [25 marks]

QUESTION FIVE

a) The rules governing etiquette are as important in cyberspace as they are in the real world. Explain any five (5) basic *netiquette* expected of a high school Computer Science learner.   [15 marks]

b) Explain any two (2) of the following morally questionable behaviour emanating from the use of computers and computer networks in education: [10 marks]

   i)   Digital plagiarism
   ii)   Copyright and software theft
   iii) Hacking