UNIVERSITY OF ESWATINI

Faculty of Science and Engineering

Department of Computer Science

MAIN EXAMINATION

AUGUST 2021

Title of Paper: INTRODUCTION TO INFORMATION TECHNOLOGY

Course Code: CSC 113

Time Allowed: 3 Hours   Total Marks: 100

Instructions to Candidates:
This Question Paper Consists of FIVE (5) Questions. Answer ALL Questions.

Marks are indicated in Square Brackets.

NB: You Are Not Allowed To Open This Examination Paper Until Permission Has Been Granted By The Invigilator

QUESTION ONE   [25]

1. Define the term "*information technology*".   [1]

2. Briefly describe the following information systems:
   a. Management Information System (MIS)   [1]
   b. Decision Support System (DSS)   [1]

3. What does the following abbreviations stand for in terms of computer hardware?
   a. CC   [1]
   b. EEPROM   [1]
   c. DIMM   [1]

4. Briefly describe how the Instruction per Second is used to measure a CPU's
   performance.   [3]

5. State the four (4) basic functions of a computer.   [4]

6. Describe the following categories of computers:
   a. Workstation   [2]
   b. Supercomputer   [2]

7. With the aid of a diagram, describe the information processing cycle.   [4]

8. How is the performance of a CPU measured?   [4]

QUESTION TWO   [15]

1. State and explain any three (3) function of the operating system.   [3]

2. State and explain three (3) main components of the operating system.   [3]

3. With the aid of examples, briefly describe how the banking industry in Eswatini is
   benefiting from the advancement of information technology.   [4]

4. Briefly describe the functions of a Personal Information Manager (PIM).   [3]

5. Why is it important to update software?   [2]

QUESTION THREE   [25]

1. Define the following term:
   a. Virtual Private Network   [1]
   b. Domain name   [1]

2. Describe the following protocols:
   a. TCP/IP ⸱ [2]
   b. DNS [2]

3. What is meant by gateway in networking? [2]

4. What is a MAC address and what is its purpose in networking? [2]

5. Describe the following networks:
   a. Satellite Data Network [3]
   b. Public Telephone Networks [3]

6. How can the information found on the Internet be evaluated? [3]

7. What is the relationship between the Internet and the World Wide Web? [2]

8. Describe the email delivery process. [4]

QUESTION FOUR [15]

1. How does the proxy server work? [1]

2. Briefly describe the following cybercrimes:
   a. password cracking [2]
   b. spoofing [2]

3. Briefly describe how the following malware work.
   a. Worm [2]
   b. Trojan horse [2]
4. State and explain any two major computing legal issues that can be encountered by a university. [4]

5. What is the difference between proprietary software and open source software? [2]

QUESTION FIVE [20]

1. Define the following terms:
   a. Database Management System [1]
   b. Object Oriented Programming [1]
   c. Deep learning [1]
2. Describe the data modelling process in database design. [5]

3. Describe the implementation phase of the program development cycle. [6]

4. Write an algorithm and draw a flowchart to determine whether an integer is an even number or an odd number. [6]