



Scott Christian UNIVERSITY

SCHOOL OF PROFESSIONAL STUDIES

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

UNIT CODE/NAME: DCT 101: INTRODUCTION TO COMPUTERS AND OPERATING SYSTEMS

September- December 2019/2020 End Semester Exam

- Time: 2 Hours

Instructions: Answer Question ONE (Compulsory) and any other TWO questions.

QUESTION ONE

- a) Define the following Terms: (3 Marks)
 - i. Information
 - ii. Data processing
 - iii. Datum
- b) Outline the milestones of computer evolution (3 Marks)
- c) Why are laptops computers expensive compared to desktop computers? (4 Marks)
- d) Computers may be classified according to functionality, size and purpose. According to functionality there are three subcategories. Discuss the three subcategories. (3 Marks)
- e) Define the term operating system. (2 Marks)
- f) Discuss the role of the following in a computer: (8 Marks)
 - i. Primary Memory
 - ii. RAM
 - iii. Control unit
 - iv. Arithmetic Logic Unit
- g) Scott Christian University ICT department is planning to purchase new computers to replace all aging computers in the institution. As an ICT student, outline the computer Procurement considerations to be used in order to help the concerned department. (3 Marks)
- h) Outline the differences between RAM and ROM (4 Marks)

QUESTION TWO

- a) Define the term auxiliary storage (2 Marks)
- b) Differentiate between a system software and an application software (4 Marks)
- c) Why is ROM preferred for installing all system files necessary for computer booting? (2 Marks)
- d) Differentiate between proprietary software and open source software (4 Marks)

e) The following are functions of Operating systems. Describe what each of them entails

- i. Memory Management
- ii. Interrupt Handling
- iii. File management

(3 Marks)

QUESTION THREE

a) Define the term computer network

(1 Mark)

i. Outline the characteristics of a computer Network

(6 Marks)

ii. State two roles of A network Interface Card in a Computer.

(4 Marks)

b) An ordinary computer operating system which is characterized by Graphical User interface. Define the term Graphical User interface

(2 Marks)

c) Differentiate between intranet and internet

(2 Marks)

QUESTION FOUR

a) Define the term process

(2 Marks)

i. Differentiate between a process and process scheduling

(4 Marks)

ii. Differentiate between a device and device driver

b) A computer is system like any other hence it has components. Discuss the components of a computer system

(6 Marks)

c) An operating is regarded as a resource manager. Discuss the various resources an operating manages

(3 Marks)

QUESTION FIVE

a) Using a diagram, demonstrate how an operating system facilitates the interaction between the Hardware, users and application programs. Write short notes.

(6 Marks)

b) Using a diagram, demonstrate how different hardware units interact in a computer system. Write short notes

(6 Marks)

c) Explain the following terms with regard to data storage in a computer.

(3 Marks)

- i. Bit
- ii. Byte
- iii. word