COPPERBELT UNIVERSITY

SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGY

CS 120 – Introduction to Computer Systems

TUTORIAL SHEET

Unit 1: Introduction

1. Define the following terms (6 marks)
   i. Qualitative information
   ii. Information Technology
   iii. Information System

2. Briefly describe 5 characteristics of data and information (5 marks)

3. Using a diagram, briefly explain the elements of the data process model (6 marks)

Unit 2: The File Concept

1. Define the following terms (10 marks)
   i. Computer file
   ii. Primary Key
   iii. Logical files
   iv. Physical files
   v. Volatility

2. There are 3 main types of files, describe two in detail and give examples of each (4 marks)

3. File organization can be achieved using 4 different methods; explain 2 of these, citing how files are organized, accessed, added and deleted (6 marks)

Unit 3: Classification of Computers

1. Distinguish between Analog and Digital Computers (4 marks)
2. Briefly describe 5 characteristics of computers (10 marks)
3. What electronic components are used in first through fifth generation computers? (5 Marks)
4. Kindly mention which generations below computers belong to: (4 marks)
   i. ENIAC
   ii. PDP 11

      iii.   CDC 1608
      iv.   Expert systems
5. Compare and contrast supercomputers and microcomputers, citing examples in each scenario. (4 marks)
6. The computer system is made up of 4 parts, briefly describe these and give examples where possible. (8 marks)

Unit 4: Elements of Digital Computers

1. Distinguish between Arithmetic logic unit and Control (4 marks)
2. The CPU has 6 major registers, name them and give their functions (6 marks)
3. Describe the steps or stages in the instruction cycle (8 marks)
4. Define the following terms and give examples: (10 marks)
    i. RAM
    ii. ROM
    iii. Cache
    iv. Primary memory
    v. Secondary memory
5. List the 4 key features of internal memory (4 marks)
6. List the 5 key features of external memory (4 marks)
7. Distinguish between DRAM and SRAM giving key features in each (4 marks)
8. What do the following acronyms stand for: (5 marks)
    i. POST
    ii. EPROM
    iii. PROM
    iv. EEPROM
    v. BIOS
9. Distinguish between sequential and direct access devices (4 marks)
10. Give 4 features of each of the following storage media: (4 marks)
    i. Magnetic tape
    ii. Magnetic disk

Unit 5: Input Devices, Methods and Systems

1. Input Devices are classified into two main groups, what are these? (2 marks)
2. Define the following terms: (10 marks)
    i. Input Unit
    ii. Output Unit
    iii. Pick Device
    iv. Light Pen
    v. Touch screen
3. Give a brief description of the following optical input devise: (9 marks)

      i. Magnetic Ink Character Recognition(MICR)

      ii. Optical Mark Recognition(OCR)

      iii. Optical Character Recognition(OMR)

4. Is there difference between a mouse and a trackball? Yes or no

5. What is the main use of a joystick?(2 marks)

6. Output can be in two forms, what are these? (2 marks)

7. Give 2 examples of devices that are used to produce each type of output(4 marks)

8. Different kinds of printers are available for different applications. Printers are classified into two categories- impact and non-impact printers. Give two examples of each. (4 marks)

9. An image on the monitor is created by configuration of dots, also known as _____. The clarity of the image on the computer screen depends on three factors. These are _____, _____ and _____.