SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCES AND BACHELOR OF ARTS

SCI 112: INTRODUCTION TO COMPUTER SYSTEMS
(Main Campus)

DATE: 06TH DECEMBER, 2017   TIME: 4.00 -6.00 PM

INSTRUCTION TO CANDIDATES

1. This question paper has **FIVE** questions

2. Answer question **ONE** and any other **TWO** question

QUESTION ONE (30 MARKS)

a) Define the following terms as used in computer programming   [3 Marks]

   i) Assembler

   ii) Compiler

   iii) Interpreter

b) Discuss main steps performed by control unit for every instruction fetched in machine cycle   [3 Marks]

c) Distinguish between volatile and non-volatile memory   [2 Marks]

d) Convert the following octal number 123_8 into decimal number   [4 Marks]

e) Explain the following terms as used in a Ms word screen   [4 Marks]

   i) Menu bar

   ii) Title bar

f) Write the following abbreviations used in computer technology   [3 Marks]

   i) EBCDIC

   ii) ASCII

   iii) IC

g) Distinguish between digital and analogue computers [2 Marks]

h) Define a spreadsheet and give example of such application [3 Marks]

i) Differentiate between the following [6 Marks]

      ii) BITS and BYTES

      iii) Word and character

      iv) RAM and ROM

QUESTION TWO (20 MARKS)

a) Giving example discuss two major types of programming languages and discuss Advantages and disadvantages of each [4 Marks]

b) Distinguish between CDMA/CD and CSMA with collision detection in computer networking [6 Marks]

c) Explain Central Processing Unit (CPU) and discuss the main components of CPU. [10 Marks]

QUESTION THREE (20 MARKS)

a) Difference between Primary storage and secondary storage [4 Marks]

b) Describe the characteristics of the **Third** and **Forth** Generations of computers [6 Marks]

c) Discuss **Five** functions of operating system [10 Marks]

QUESTION FOUR (20 MARKS)

a) Discuss steps performed by control unit for every instruction fetched in machine cycle [4 Marks]

b) State and discuss **three** network topologies commonly used in computer networking [6 Marks]

c) Define software and explain different types of software giving example for each [10 Marks]