

**W1-2-60-1-6**

## JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

**UNIVERSITY EXAMINATIONS 2017/2018**

**YEAR 1 EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN GEOMATIC ENGINEERING AND GEOSPATIAL INFORMATION SYSTEMS (GEGIS AND GIS)**

**ICS 2174: INTRODUCTION TO COMPUTER SCIENCE**

**DATE: JANUARY 2018 TIME: 2 HOURS**

INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS

QUESTION ONE

a) Identify any six major components of a digital computer system explaining contribution of each to the overall performance of the system (12 marks)

b) Differentiate between:

i) Digital and Analog computer (2 marks)

ii) Main frame and super computers (2 marks)

iii) System software and application software (2 marks)

iv) Data and information (2 marks)

c) State any four facilities offered by a spread sheet program (4 marks)

d) State and explain three factors to consider when choosing a word processor (6 marks)

QUESTION TWO

a) Explain the following:

i) Registers are expensive and have low capacity yet they are used in a digital computer system (2 marks)

ii) Secondary storage devices operate slowly yet they are important in a digital computers system (2 marks)

b) Differentiate between:

i) ROM and RAM (2 marks)

ii) PROM and EPROM (2 marks)

ci) With aid of a diagram outline the internal organization of the hard disk drive (4 marks)

ii) In relation to a disk differentiate between seek time and rotational delay (2 marks)

d) Briefly explain three differences between DVDs and CDs that contribute towards a higher capacity for DVDs as compared to CDs (6 marks)

QUESTION THREE

a) State and briefly explain any five input devices used in a digital computer system (10 marks)

b) Differentiate between graph plotters and actuators (2 marks)

c) Write short notes on each of the following printers:

i) Infjet printers

ii) Laser printers

iii) Character printers

iv) Line printers (4 marks)

d) State four factors to consider in selection of a printer (4 marks)

QUESTION FOUR

ai) Explain the term spreadsheet and give two examples of spreadsheet programs (3 marks)

ii) State steps to be followed in creating a chart in Ms Excel (4 marks)

iii) The formula for calculating power is given by P=I2R. Explain how you can apply the formula in Ms Excel (3 marks)

b) Differentiate between the following terms as used in Ms Excel.

i) Cell and Range (2 marks)

ii) Worksheet and work book (2 marks)

c) Taking into consideration the various facilities offered by spreadsheet programs identify and briefly explain any three areas that a university can apply the program in the processing of students’ data (6 marks)