

Mount Kenya University



UNIVERSITY EXAMINATION 2014/2015

SCHOOL OF PURE AND APPLIED SCIENCES
DEPARTMENT OF INFORMATION TECHNOLOGY

ALL BACHELORS
SCHOOL BASED

UNIT CODE: BUCU002

UNIT TITLE: COMPUTER
APPLICATIONS

DATE: AUGUST 2015

MAIN EXAM

TIME: 2 HOURS

INSTRUCTIONS:

ANSWER QUESTION ONE AND ANY OTHER TWO.

QUESTION ONE (30 MARKS)

- a) A computer laboratory should be constantly kept dust and smoke free.
Specify **two** effects that dust would have on the operation of computers. (2 Marks)
- b) Explain the meaning of backup, as used in computers. (2 Marks)
- c) Differentiate between a primary key and a foreign key while designing a database. (2 Marks)
- d) Distinguish between 'count' and 'countif' functions as used in spreadsheets. (2 Marks)
- e) For each of the following file organization methods, state an appropriate storage medium: (2 Marks)
 - i) Serial.
 - ii) Random

- f) State **two** magnetic Storage devices. (2 Marks)
- g) What is Artificial Intelligence? (2 Marks)
- h) Match the following statements with repeater, router or a bridge.(2 Marks)

STATEMENT	DEVICE
Operates at data link layer	
Determine the best path for data to follow	
Regenerates signals	
Forwards everything which it doesn't recognize	

- i) In Kenya Tea Packers Company, several people are employed as record clerks, typists and messenger. The company intends to introduce a computerized system in all the departments. Suggest **three** reasons that would make workers unhappy with the new system. (3 Marks)

QUESTION TWO (20 MARKS)

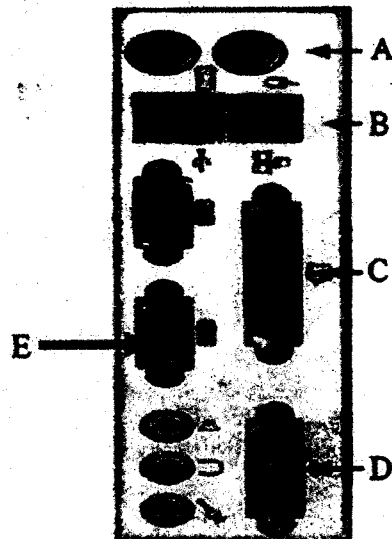
- a) Give **three** advantages of storing files in folders. (3 Marks)
- b) Explain the impact of Information Technology on organization in each of the following areas. (4 Marks)
- i) Competition.
 - ii) Pace of growth.
- c) Explain the following internet related terms. (4 Marks)
- i) Sign In
 - ii) Search engine
 - iii) Surf
 - iv) Sign up
- d) Most computerized security systems make use of Biometric analysis, name **three** physical features of human beings that can be considered in this analysis.

(5 Marks)

Explain **two** coding schemes used in data representation techniques. (4 Marks)

QUESTION THREE (20 MARKS)

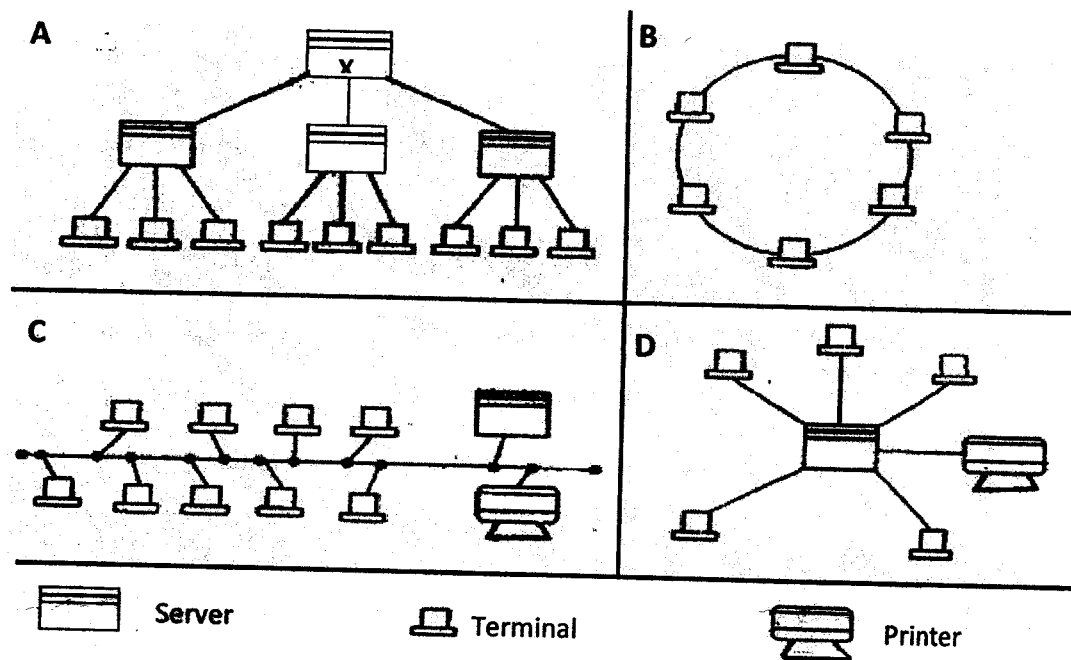
- a) What will happen if you attempt to delete a folder while a file contained in it is **Open**? (2 Marks)
- b) State **two** properties that an operating system displays about a file. (2 Marks)
- c) State **three** functions of Central Processing Unit. (3 Marks)
- d) Identify the types of ports labeled by letters A, B, C and D. (4 Marks)



(e) Discuss any five functions of a computer (10marks)

QUESTION FOUR (20 MARKS)

- a) Draw the block diagram of a computer system and discuss about each part in detail. (5 Marks)
- b) The diagram **below** shows four common network topologies **A, B, C** and **D**.



- i) Name the network topologies labeled **A**, **B**, **C** and **D**. (4 Marks)
- ii) Explain what happens if server **X** in topology **A** fails. (1 Mark)
- iii) List **two** problems associated with network topology **B**. (2 Marks)
- iv) List **two** disadvantages associated with network topology labeled **D**. (2 Marks)

c) Differentiate between Internet and World Wide Web. (2 Marks)

d) Describe the following network services and identify their applications. (4 Marks)

- i) Voice mail.
- ii) Video conferencing.

QUESTION FIVE (20 MARKS)

a) Discuss applications of Information Technology in education & research. (10 Marks)

b) What is Internet? Discuss various services available on Internet.

(10 Marks)

c. Explain **two** functions of an operating system.

(4 Marks)

d. How is information technology helpful for the daily life applications of human beings? What are the different applications of Information Technology?

(5 Marks)