

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

**JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY**

**UNIVERSITY EXAMINATIONS 2014/2015**

 **EXAMINATION FOR THE DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY**

**BIT 2204: NETWORK SYSTEMS ADMINISTRATOR**

**DATE:AUGUST 2015 TIME: 2 HOURS:**

**INSTRUCTIONS: Answer question one and any other two questions.**

**QUESTION ONE**

a. Define the following terms as used in Networks.

 i. Data rate

 ii. Bandwidth.

 iii. Alleniation

 iv. Protocol

 v. Client

 vi. Server. (6 marks)

b. Discuss any five aspects that needs to be considered before designing a network for a given organization.

c. Differentiate between the following terms

 i. CSMA/DC and token passing access methods.

 ii. Physical topology and logical topology.

 iii. Half duplex and duplex. (6 marks)

d. Explain the following under data transmission.

 i. packet switching.

 ii. Circulate switching

 iii. Message switching (6 marks)

e. Differentiate between guided and unguided media state two examples for each.

 (4 marks)

**QUESTION TWO (20 MARKS)**

a. Discuss particularly when RG, 8,9,10 and 58 59. Coaxial cable are best suited for Ethernets with respect to IEEE 802.E standard. (4 marks)

b. Explain the construction principles that makes fibre optic a superial conduit.

 (4 marks)

c. Illustrating with a diagram, explain the frame format of an Ethernet law. (6 marks)

d. Describe schematically the orientation of OSI layer, stating the functions of each layer.

**QUESTION THREE (20 MARKS)**

a. Routers use the least cost routing concept, describe this concept. ( 6 marks)

b. Describe the operating principles differentiating adoptive routing and non adoptive routing. (6 marks)

c. Repeaters are not just applicators – qualify this statement. (4 marks)

d. Describe any two modulation/encoding technique. (4 marks)

**QUESTION FOUR (20 MARKS)**

a. Describe the implementation of the following signal/propogation

 i. Trophersphere

 ii. Ionosphere.

b. Discuss the blue tooth technology. (10 marks)