KENYA METHODIST UNIVERSITY
FIRST TRIMESTER EXAMINATIONS, APRIL 2009

FACULTY	**:**	**ARTS AND SCIENCES**
DEPARTMENT	**:**	**COMPUTER INFORMATION SYSTEMS**
COURSE CODE	**:**	**CISY 231**
COURSE TITLE	**:**	**TELECOMMUNICATION NETWORKS I**
TIME	**:**	**2 HOURS**

Instructions:

Answer ALL questions in Section A and any other TWO questions in Section B.

Section A (30 Marks)

i. Give four reasons for the popularity of the TCP/IP model.   (4 Marks)

ii. Describe any three encryption algorithms.   (6 Marks)

iii. Discuss the role of telecommunications in business.   (4 Marks)

iv. What is the importance of having layers in networks?   (2 Marks)

v. Three terms used with reference to network performance are speed, bandwidth and

throughput. Describe each of them.   (6 Marks)

vi. Give three disadvantages (/ costs) of networking.   (3 Marks)

vii. What is CSMA/CD? How does it work?   (3 Marks)

viii. Explain the role played by the repeater at the physical layer.   (2 Marks)

Section B (40 Marks)

Question One (20 Marks)

i. Define WAN and describe the operating characteristics of any three WAN technologies.

(10 Marks)

ii. Describe any two modulation techniques modems use to modulate data.   (6 Marks)

iii. Describe how the following network security threats affect an organization:

    a. Denial of service attacks

    b. Viruses   (4 Marks)

Question Two (20 Marks)

i.   Describe the function of the TCP/IP layers.   (8 Marks)

ii. Briefly describe any three transmission media selection criteria.   (3 Marks)

iii. Describe how the following telecommunication media functions:

    a. Fiber optic cables

    b. Coaxial cables

    c. Twisted pair cables.   (9 Marks)

Question Three (20 Marks)

i.   Define LAN and describe any three LAN technologies/ standards.   (10 Marks)

ii. Compare the following communication hardware: routers, switches, and hubs.(6Marks)

iii. Differentiate between:

    a. Codecs and modems

    b. Repeaters and amplifiers.   (4 Marks)