MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)
University Examinations for 2015/2016 Academic Year

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

………..SEMESTER EXAMINATION FOR DIPLOMA IN TELECOMMUNICATION ENGINEERING

EED 315: NETWORKS

DATE: TIME:

INSTRUCTIONS:
Answer question ONE and any other two questions from section B

SECTION A: (COMPULSORY)

1.   a)   State three roles of each of the following organizations in computer networking.
      i)   International Telecommunications Union (ITU)   (2 marks)
      ii)   Institute of Electrical and Electronics Engineers (IEEE)   (2 marks)
      iii)   Explain four disadvantages of Polling as used in networks.   (8 marks)

    b)   Explain any four applications of computer networking   (8 marks)

SECTION B: ANSWER ANY OTHER TWO QUESTIONS

2.   a)   Define "high speed LAN "as used in networking   (2 marks)

    b)   Compare the TCP/IP and OSI model   (6 marks)

    c)   List any four Network Software commonly used in computer networking
              (4 marks)

    d)   Highlight any four Applications that Require High Speed LANs .   (8 marks)

3. a)   Explain any four Categories of UTP Cables and their uses   (8 marks)

    b)   Highlights three Advantages of Local Area Networks   (4 marks)

    c)   Explain the following *Carrier Sense Multiple Access* (CSMA) methods.

         i)   Collision Detection
         ii)   Collision Avoidance: (4 marks)
    d)   Explain "Round Robin" Technique in network data transmission.   (4 marks)

4. a)   Explain the difference in function between a router and a router switch as used in
         networking   (4 marks)

    b)   Explain four reasons for designing Medium Access Control techniques. (8 marks)
    c)   Compare 100BASE-TX and 100BASE-T4 Ethernet specifications.   (8 marks)

5. a)   With the aid of a well labeled diagram, explain the OSI model.   (14 marks)

    b)   Explain three Disadvantages of Peer-to-Peer network   (6 marks)