KENYA METHODIST UNIVERSITY
END OF TRIMESTER EXAMINATION, APRIL 2009

FACULTY   : ARTS AND SCIENCES
DEPARTMENT   : COMPUTER INFORMATION SYSTEMS
COURSE CODE   : CISY 432
COURSE TITLE   : DISTRIBUTED SYSTEMS
TIME   : 2HRS

Instructions: Attempt Question 1 and any other two questions.

Section A (30 marks)

a) Explain the following terms as used in distributed systems   (5marks)
   i.   Distributed systems
   ii.   Protocol
   iii. Remote procedure call
   iv.   Local procedure call
   v.   Client/server

b) Discuss how the remote procedure call takes place from the initial stage (a call) to the last stage (response)   (5marks)

c) Discuss any three types of distributed system models   (6marks)

d) Explain any four characteristic of a reliable distributed system   (4marks)

e) Explain five advantages of distributed systems   (10 marks)

Section B
Question Two (20 marks)

a) Discuss the OSI reference model   (8marks)

b) Explain the differences between the OSI model and the TCP/IP model   (4marks)

c) List any three reasons for a distribute file system   (3marks)

Question Three (20 marks)

a) What is the advantage of multi threading concept in RMI on distributed systems (2marks)

b) Explain the Asynchronous Transfer mode networks   (2marks)

c) Discuss any four types of transparency necessary in a distributed computing environment   (8marks)

d) Explain any three advantages of distributed data storage   (3marks)

Question Four (20 marks)

    a) Define the following terms   (3marks)
- i. Component
- ii. Network
- iii. Message

    b) State any five types of failures in a distributed system environment   (5marks)

    c) Explain any three differences between TCP and UDP   (3marks)

    d) Explain the differences between peer to peer and client/server systems   (2marks)

    e) describe the purpose of the distributed object model   (2marks)