



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA
FACULTY OF SCIENCE
OCTOBER/NOVEMBER 2016 EXAMINATION

COURSE CODE: CIT722
COURSE TITLE: COMPUTER NETWORKS
CREDIT UNITS: 3
TIME ALLOTTED: 2 HOURS, 30 MINUTES
INSTRUCTION: ***Answer any FIVE questions. Cordless nonprogrammable calculators may be used.***

1.
 - a) Briefly describe the following network types:
 - i. **Local Area Network**
 - ii. **Metropolitan Area Network**
 - iii. **Wide Area Network**
 - b) Distinguish between **point-to-point** and **broadcast** networks.
2.
 - a) Using sketches describe three different types of network **topologies**.
 - b) Briefly describe the OSI Reference model listing all its layers in their proper order.
3.
 - a) Write a brief note on each of the following:
 - i. Transmission Control Protocol (TCP)
 - ii. User Datagram Protocol (UDP)
 - b) Briefly explain what transmission medium is, listing three examples.
4.
 - a) Explain clearly what is meant by multiplexing, describing two techniques used to implement it.
 - b) Briefly explain what Media Access Control is describing two types of protocols used for it.
5.
 - a) Distinguish between **adaptive** and **non-adaptive** routing algorithms.
 - b) Write brief notes on each of the following routing algorithms:
 - i. Shortest Path routing
 - ii. Flooding
6.
 - a) Briefly explain the function of a Domain Name System (DNS) in a TCP/IP Network.
 - b) Write a brief note on each of the following:
 - i. Switch
 - ii. Bridge
 - iii. Hub
 - iv. Router
7.
 - a) Briefly explain what an ATM Network is listing four of its benefits.

- b) Write a brief note on each of the following types of communication using examples to illustrate:
- i. Baseband
 - ii. broadband