



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI - ABUJA**  
**FACULTY OF SCIENCES**  
**JULY 2017 EXAMINATIONS**

**COURSE CODE:** CIT722  
**COURSE TITLE:** COMPUTER NETWORKS  
**CREDIT UNITS:** 3  
**TIME ALLOTTED:** 2 HOURS, 30 MINUTES

**INSTRUCTION:** ***Answer Question 1 and any other FOUR questions. Cordless nonprogrammable calculators may be used.***

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

iv. Router  
marks)

(6

6.

a) Briefly explain what an ATM Network is listing four of its benefits.  
(6 marks)

b) Write a brief note on each of the following types of communication using  
examples to illustrate:

i. Baseband

ii. Broadband

(6 marks)