



NATIONAL OPEN UNIVERSITY OF NIGERIA
14-16 AHMADU BELLO WAY, VICTORIA ISLAND LAGOS
SEPTEMBER/OCTOBER 2015 EXAMINATION
SCHOOL OF SCIENCE AND TECHNOLOGY

COURSE CODE: CIT 311

COURSE TITLE: COMPUTER NETWORKS

INSTRUCTION: *Answer any five questions out of Seven*

Time: 3HOURS

- 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