



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikwe Express Way, Jabi-Abuja

FACULTY OF SCIENCE
July Examination 2017

Course Code: CIT311

Course Title: Computer Networks

Credit Unit: 3

Time Allowed: 3 Hours

Total: 70 Marks

Instruction: Answer Question One and Any other 4 Questions

1. a. Explain briefly the following network types
 - (i) Local Area Network **3 marks**
 - (ii) Metropolitan Area Network **3 marks**
- b. Using sketches explain these three Network Topologies
 - (i) Bus Topology **4 marks**
 - (ii) Star Topology **4 marks**
 - (iii) Ring Topology **4 marks**
- c. Differentiate between point to point and broadcast networks **4 marks**
2. Briefly explain the following:
 - (i) Transmission Control Protocol (TCP) **4 marks**
 - (ii) User Datagram Protocol (UDP) **4 marks**
- b) Briefly explain what is meant by transmission medium **4 marks**
3. (a) Explain clearly what is meant by multiplexing, describing two techniques used to implement it. **6 marks**
(b) Briefly explain what Media Access Control is describing two types of protocols used for it. **6 marks**
4. (a) Distinguish between **adaptive** and **non-adaptive** routing algorithms **6 marks**
(b) Write briefly explains on each of the following routing algorithms
 - (i) Shortest Path routing **3 marks**
 - (ii) Flooding **3 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 **(2 marks)**
 - (ii) Bridge **(2 marks)**
 - (iii)** Hub **(2 marks)**
6. (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 **(3 marks)**
 - (ii) Broadband **(3 marks)**