



NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, 91 Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja
FACULTY OF SCIENCES
COMPUTER SCIENCE DEPARTMENT
2020_2 EXAMINATION

CIT 461 – Internet Architecture and Communication **Credit:** 3 units

TIME ALLOWED: 2½ Hours

INSTRUCTION: Answer Question 1 and any other FOUR (4) Questions

1. a) What is Internet Technology? **(2½ marks)**
b) How is information transmitted through the internet? **(2½Marks)**
c) Write short notes on the following technologies used for providing Internet access stating three characteristics of each.
 - i) Broadband Internet Connection **(2 Marks)**
 - ii) Dial-Up Connection - 56K **(1½ Marks)**
 - iii) ISDN (Integrated Services Digital Network) **(1½ Marks)**
d) Write short notes the following three protocols used in data transmission in the internet **(7 Marks)**

e) List any 5 issues of concern with E business and an example of how the effect of these concerns can be mitigated. **(7½ Marks)**
2. a) What is WWW and its architecture? **(3 Marks)**
b) What are the components of Web architecture? **(4 Marks)**
c) How does dynamic host configuration protocol aid in network administration? **(3 Marks)**
d) What is the better way of sending data or information through the net? **(2 Marks)**
3. What do you understand by the following terms?
 - a) A Firewall **(5 Marks)**
 - b) DNS **(7 Marks)**
4. a) Write short notes on three internetworking devices and state their location in the network architecture **(8 Marks)**
b) What are the three key parts to packet switching? **(1 Marks)**
c) i) What are Brouters? **(2 Marks)**

ii) What was the essence of developing Brouter? **(1 Mark)**

5. a) Briefly explain Data Encapsulation **(3 Marks)**
- b i) What is VPNs? **(2 Marks)**
- ii) Describe the two ways that VPN can be configured? **(4 Marks)**
- c) i) What do you understand by the term tunnel? **(2 Marks)**
- ii) The term Tunnel is also referred to as what? **(1 Mark)**
6. a) What is the use of encryption and decryption? **(3 Marks)**
- b) Explain how it can be used to provide a secure e-business transaction system **(4½ marks)**
- c) What is HTTPs? **(2½ Marks)**
- d) What port does it use? **(2 Marks)**