NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, 91 Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja
FACULTY OF SCIENCES
COMPUTER SCIENCE DEPARTMENT ₁₂₃₄
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)