



**NATIONAL OPEN UNIVERSITY OF NIGERIA**  
**University Village, 91 Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja**  
**FACULTY OF SCIENCES**  
**COMPUTER SCIENCE DEPARTMENT**  
**SEPTEMBER 2020\_1 EXAMINATIONS**

**CIT 461 – Internet Architecture and Communication**

**Credit: 3 units**

**TIME ALLOWED: 2½ Hours**

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

**QUESTION ONE**

- (a) List three advantages of bridges over routers. **(3 marks)**
- (b) Explain why most networks have a limit to the number of repeaters that can be used to connect segments. **(3 marks)**
- (c) Write short notes on any two of the following internetworking and intranetworking products:
  - (i) Routers
  - (ii) Gateway
  - (iii) Switches
  - (iv) Modems **(5marks)**
- (d) What are web browsers? **(4 marks)**
- (e) Highlight 5 services offered by Internet Service Providers (ISPs). **(5marks)**
- (f) State 4 advantages of Hyper Text Mark-up Language (HTML). **(2marks)**

**QUESTION TWO**

- (a) Define web design and list any four elements that make up a good web design. **(4marks)**
- (b) List and explain the basic aspect of web design. **(4marks)**
- (c) Illustrate four basic types of Destination-unreachable messages. **(4marks)**

**QUESTION THREE**

- (a) Discuss the strategies for securing email accounts and messages. **(10 marks)**
- (b) List 4 types of useful message generated by the Internet Control Message Protocol (ICMP) messages. **(2marks)**

#### **QUESTION FOUR**

- (a) Identify four ways by which e-mail privacy can be compromised if there are no security precautions. **(6 marks)**
- (b) Cite examples of any four application layer protocol stating one application of each **(4marks)**
- (c) List two methods to connect a network or the LAN to the Internet. **(2 marks)**

#### **QUESTION FIVE**

- (a) Discuss the advantages of the circuit switched network over the packet switched network. **(6marks)**
- (b) Differentiate between bridge and router. **(5marks)**
- (c) Write short note on the Multiplexer. **(1mark)**

#### **QUESTION SIX**

- (a) Critique the free web hosting option as opposed to the other available options. **(8 marks)**
- (b) Enumerate any four features of web browsers. **(4marks)**