NATIONAL OPEN UNIVERSITY OF NIGERIA
University Village, 91 Cadastral Zone, Nnamdi Azikwe Expressway, Jabi, Abuja
FACULTY OF SCIENCES
COMPUTER SCIENCE DEPARTMENT
2021 EXAMINATIONS ...

CIT 461 – Internet Architecture and Communication
Credit: 3 units
TIME ALLOWED: 2½ Hours
INSTRUCTION: Answer Question 1 and any other FOUR (4) Questions

QUESTIONS

1a) Briefly describe each of the following:
   i) Internetworking.*(2 marks)*
   ii) Internet Protocol.   . *(2 marks)*
   iii) Internet Browser.*(2 marks)*
   iv) Internet Technology.*(2 marks)*
   v) Internet Access.*(2 marks)*

b) Explain the following E-business Security concerns:
   i) Confidentiality
   ii) Non-Repudiation
   iii) Availability**(6 marks)**

c) Describe common header fields of e-mail   *(6 marks)*

2a) In tabular form, list **six(6)** domain names suffixes with their associated organizations**(3 marks)**
2b) Describe the main functions of Internet Protocol   **(3 Marks)**

2c) Define Internet Control Message Protocol and highlight four (4) different types of messages its generates.   **(6 marks)**

3a) TCP corresponds to the transport layer (Layer 4) of the OSI reference model, describe **three (3)** services TCP provides in an IP environment.**(6 marks)**

3b) Briefly discuss User Datagram Protocol

3c) State four (4) application-layer protocols that UDP supports

4a) Describe the following network devices

   i.   Repeater
   ii. Router**(5 marks)**

4b) List and explain two (2) types of Packet Switching Systems   **(5 marks)**

4c) Enumerate four (4) e-business security solutions   **(2 marks)**

5a) Most Web browsers share the same user interface features, state **six (6)** of these features. **(6marks)**

5b) Connectivity supports company's business in a number of ways, state four (4) reasons why company uses the Internet. **(4 marks)**

5c) Highlight **typical issues** that need to be considered before internet connections can be implemented **(2 marks)**

6a) The Internet Service Provider (ISP) has a major influence on the effectiveness of your Internet connectivity design and implementation, Highlight the factors to be considered well selecting ISP. **(6marks)**

6b) Describe two types of internet connection.**(4 marks)**

6c) For large organizations a T1 line can be used to connect the whole office to the Internet, state four (4) main characteristics of T1 line. **(4 marks)**