NATIONAL OPEN UNIVERSITY OF NIGERIA,
PLOT 91 CADASTRAL ZONES, NNAMDI AZIKIWE EXPRESSWAY, JABI – ABUJA
FACULTY OF SCIENCES

APRIL 2019 EXAMINATION

COURSE CODE: CIT 722
COURSE CREDIT: 3
COURSE TITLE: COMPUTER NETWORKS
TIME ALLOWED: 2 ½ HOURS
INSTRUCTION: ANSWER QUESTION ONE (1) AND ANY OTHER FOUR (4) QUESTIONS

QUESTIONS

1a. You have just been invited as a Guest Speaker in a conference for Network Administrators. Your role is to describe with the aid of relevant diagrams, any two (2) classes of network topology, highlighting the key benefit of each class. Write a short note for this presentation at the conference. **(9 marks)**

1b. State how networks are classified on the basis of their connection types. **(2 marks)**

1c. Based on the lessons learnt from the course material on Computer Networks, discuss how a network can be certified as an effective network. **(9 marks)**

1d. Give a brief explanation of the concept of 'Routers'. **(2 marks)**

[Total = 22 marks]

2a. TCP and UDP are the most widely used protocols that are built on the top of an Internet Protocol (IP). State any five (5) distinctions between these two protocols. **(10 marks)**

2b. State the main signicance of the Transmission Control Protocol and Internet Protocol. (TCP/IP) **(2 marks)**

[Total = 12 marks]

3a. Describe with the aid of a diagram, **how proxy servers protect the computer network. (7 marks)**

3b. Mention and briefly explain five (5) ways in which data is transferred in computer networks. **(5 marks)**

[Total = 12 marks]

4a. Write short notes on the following: (i) Peer-Peer networks
(ii) Server-based networks
(iii) Pipelining **)2 marks each; 2x5=10 marks**
(iv) Encoder
(v) Decoder

4b. A common acronym in computer networks is 'DHCP'. Give the full meaning of this acronym and a concise description of this acronym**.** **(2 Marks)**

[Total = 12 marks]

5a. Generally, in computer networks, computers are organised in two different ways: in terms of their Domains and Workgroups. State any five (5) distinctions between a Domain and a Workgroup. **(10 marks)**

5b. Give a brief explanation of the concept of 'Decryption' in computer networks. **(2 marks)**

[Total = 12 marks]

6. With the aid of a well-labelled diagram, describe the four (4) components of the TCP/IP model.

[Total = 12 marks]