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

MARCH 2018 EXAMINATION

COURSE CODE: CIT 305
COURSE CREDIT: 3
COURSE TITLE: NETWORKING AND COMMUNICATION TECHNOLOGY
TIME ALLOWED: 3 HOURS
INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER FOUR (4) QUESTIONS

QUESTION

1a. A common phenomenon in Networking and Communication Technology is the Integrated Services Digital Network (ISDN). Mention and briefly explain the two (2) main types of access provided in the ISDN. **(6 marks)**

1b. Describe the concept of 'Multiplexers as it relates to electronics' **(2 marks)**

1c. An innovation in Networking and Communication Technology is the Digital Subscriber Line (DSL). Give a concise description of how this technology works. **(4 Marks)**

1d. Itemize four (4) features of the DSL. **(4 Marks)**

1e. Mention and briefly explain two (2) benefits of the DSL. **(4 Marks)**

1f. State any two (2) drawbacks of the DSL. **(2 Marks)**

[Total = 22 marks]

2a. Outline the core peculiarities of the following forms of wireless technologies:

i. Terrestrial microwave (3 marks)
ii. Communication satellite (3 marks)
iii. Cellular and PCS system (3 marks)

2b.Networks can be classified based on their scale. Write down any three (3) of such scale-based networks. **(3 Marks)**

[Total = 12 marks]

3a. State three (3) major functions of the Data link layer. **(3 Marks)**

3b. Mention and briefly describe with the aid of a common example, the three categories of basic data- link configurations that can be used. **(9 Marks)**

[Total = 12 marks]

4a. Give a concise description of the 'network protocol' **(4 Marks)**

4b. Provide a tabular comparison of the following protocols in terms of cable type and topology:

i. Ethernet **(2 marks)**

ii. LocalTalk **(2 marks)**

iii. Token Ring **(2 marks)**

iv. ATM **(2 marks)**

[Total = 12 marks]

5a.The IEEE 802 standard is typical in Networking and Communication Technology. State the implication of this standard. (3 marks)

5b.Name and briefly discuss any three (3) strategies for ensuring efficient network security. (9 marks)

[Total = 12 marks]

6a.Mention and briefly explain any three (3) forms of threats to an enterprise network.

(9 Marks)

6b. With respect to IP addresses, describe how an enterprise network is configured.

(3 Marks)

[Total = 12 marks]