



NATIONAL OPEN UNIVERSITY OF NIGERIA
**PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWAY, JABI-
ABUJA**
FACULTY OF SCIENCE
DEPARTMENT OF COMPUTER SCIENCE
2021 EXAMINATION
QUESTIONS

COURSE CODE: DAM361
COURSE TITLE: BUSINESS COMMUNICATION AND NETWORKS
CREDIT UNIT: 2
TIME ALLOWED : 2HRS
INSTRUCTION: ANSWER QUESTION ONE AND ANY OTHER THREE

- a. What factors can one use to categorize the type of networks to be used in an organization? Demonstrate the answer with examples (2 marks) **(5 marks)**
- b.
 - i. What is a protocol architecture such as TCP/IP/?
 - ii. How should protocol architectures work?
 - iii. Name two examples of protocol architectures in networking **(4.5 marks)**
- c. Your company wants to utilize the private Class C IP Address of 192.168.1.0. You are tasked with Subnetting the Address to get the most networks with at least 30 Hosts per Subnet. How many Networks will be created after you subnet? Also, what is the first usable IP Address in the Second Network range? Demonstrate how you got your answer **(2.5 marks)**
- d. The Internet has given today's companies a new set of capabilities. Among those capabilities is the ability to operate a new information channel. Describe how information can be used by the marketer in this new channel. **(1.5 marks)**
- e. Assume that you have been given the task of assisting a company in designing its marketing planning process. What components should be in such a process? Be specific in your answer. **(2.5 marks)**
- f. What are the three main features of market orientation? **(3 marks)**
- g. How Does Market Orientation Work? **(6 marks)**

Question 2

- a. What typical network devices operate at the following layers of OSI 7 Layer Model? **(2 marks)**
- b. Indicate the Protocol Data Unit (PDU) used at each layer of the OSI Layer Model. **(2.5 marks)**
- c. Explain the 9 key differences between the OSI Layer model and the TCP/IP Reference model. **(4.5 marks)**
- d. With diagram, describe how the processes of encapsulation/de-encapsulation work within the TCP/IP Reference Model. Expand your answer by using an example of a well-known protocol,

such as HTTP, for an end-to-end conversation between a client and server (assume a direct connection between both devices) **(6 marks)**

Question 3

- a. Describe the key differences between circuit switching and packet switching networks. For each type, provide examples of two typical technologies **(6 marks)**
- b. Explain the problems that a large international organization might have when operating a large leased line full mesh network. Detail how a managed service such as Frame Relay might alleviate those problems. **a. Problems with leased line full mesh network include: (2.5 mark)**
- b. Frame Relay managed service might offer **(1.5 mark)**
- c. Explain how a cost-conscious business with multiple sites might benefit from using the Internet as a public network to provide WAN connectivity between its sites. Detail the technical considerations, technologies and security operation necessary to utilize this option **(5 marks)**

Question 4

- a. What is marketing mix and what are its three benefits in marketing decision making? **(5 marks)**
- b. Explain the Four Ps of Marketing Mix and how does it affect the digital era **(8.5 marks)**
- c. What is a Digital Marketing Mix? **(1.5 mark)**

Question 5

- a. Given the following scenarios, indicate the recommended type of network medium of Layer 2 technologies and maximum transmission rates **(3 marks)**
- i. A large research-based organization involved into particle physics research with large data sets in needs to send between test sites in the same country but several hundred kilometers apart **(3 marks)**
- ii. A student house accommodating 6 students with their own laptops, desktops, tablets and phones which are used throughout the house. A conventional POTS connection is available at the property **(3 marks)**
- b. Describe the techniques by which broadband technologies such as Cable & xDSL can utilize a conventional local loop to offer both voice and data services to consumers. Mention should be made of the technologies that need to be present in both the consumers premises and at service providers premises to allow this to happen **(3 marks)**
- c. Explain and discuss the advantages and disadvantages of achieving confidentiality by using physical and wireless media for digital transmission **(3 marks)**