BOWEN UNIVERSITY IWO, OSUN STATE
COLLEGE OF COMPUTING AND COMMUNICATION STUDIES
CYBER SECURITY PROGRAMME
B. SC. DEGREE SECOND SEMESTER EXAMINATION   SESSION: 2022/2023
COURSE TITLE: SYSTEM AND NETWORK ADMINISTRATION
COURSE CODE: CYB 202   TIME ALLOWED: 2 HOURS   CREDIT: 3 UNITS
INSTRUCTION: Answer any four (4) questions in all.

QUESTION 1

a. You have just been hired as a network administrator at Bowen University. On assumption of duty, you were directed to create a duplicate record of all the staff and students on campus in an external storage or cloud storage.

    i. In your opinion, which concept in network administration described what you have been directed to do and also state their uses. **(5marks)**

    ii. Explain the four (4) importance of the concept mentioned above to Bowen University. **(8marks)**

    iii. Succinctly explain the three (3) types of the concept mentioned in question a(i) and state when each of them should be used. **(12marks)**

QUESTION 2

a. Suppose that you have recently moved your computer from the Accounting Department to the Advertising Department, and now you cannot access the Web. Outline the three troubleshooting procedures to solve the problem. **(7marks)**

b. State the Loopback address and Test. **(4marks)**

c. Discuss three (3) causes of failure in Computer Network. **(6marks)**

d. Explain four (4) simple diagnostic tricks and simple fixes in a Computer Network. **(8marks)**

QUESTION 3

a) A firewall is a concept that can be implemented using different technologies either by using a single device or group of devices; hence explain three (3) technologies that can be used in implementing the technologies. **(6marks)**

b) Succinctly explain three common properties that a good firewall should possess. **(6marks)**

c) Briefly State four (4) protective measures and limitations of firewall. **(8marks)**

d) Bowen University wishes to check all incoming electronic mail for computer viruses; hence, explain how the above scenario can be implemented. **(5marks)**

QUESTION 4

a. Explain the concept of Authentication, Authorization and Accounting (AAA) in system and network administration. Hence, why is the AAA framework important in network security? **(8marks)**

b. Describe the two (2) types of AAA for networking. **(4marks)**

c. Explain two (2) methods that can be used to implement AAA. **(5marks)**

d. There are several protocols that incorporate the elements of AAA to ensure identity security. Explain four (4) protocols. **(8marks)**

QUESTION 5

a. What do understand by a User Access Security. **(2marks)**
b. Is it possible to have a secure system if you have employees who telecommute or work otherwise non-traditional schedules? **(6marks)**
c. Initiating security procedures benefit users. Itemize these three (3) benefits. **(5marks)**
d. Itemize three (3) countermeasures each that must be put in place to safeguard networking site(s) and equipment in the following aspects:
    i.   User accesses. **(3marks)**
    ii. Account and Authentication procedures (Known as log-in procedures). **(3marks)**
    iii. Physical Security. **(3marks)**
    iv. Remote access systems. **(3marks)**

QUESTION 6

a. Write short note on the types of Cloud Storage available for businesses. **(9marks)**
b. Enumerate five (5) best practices or considerations that must be upheld when deploying firewall in a network. **(5marks)**
c. Is the use of passwords an effective strategy for securing a system? **(6marks)**
d. In an organization where system and network security are paramount. What does the figure below depict? **(5marks)**

WARNING!

This is a restricted network. Use of this network, its equipment, and resources is monitored at all times and requires explicit permission from the network administrator. If you do not have this permission in writing, you are violating the regulations of this network and can and will be prosecuted to the full extent of the law. By continuing into this system, you are acknowledging that you are aware of and agree to these terms.