THE COUNCIL OF COMMUNITY COLLEGES OF JAMAICA

BACHELOR OF SCIENCE EXAMINATION

SEMESTER II – 2019 MAY

PROGRAMMES:	**MANAGEMENT INFORMATION SYSTEMS**
COURSE NAME:	**ADVANCED COMPUTER NETWORKING**
CODE:	**CSYS4803**
YEAR GROUP:	**FOUR**
DATE:	**TUESDAY, 2019 MAY 07**
TIME:	**9:00 A.M. – 11:00 A.M.**
DURATION:	**2 HOURS**
EXAMINATION TYPE:	**FINAL**

This Examination Paper has 7 Pages

INSTRUCTIONS:

1. ANSWER **ALL** QUESTIONS FROM SECTION A

2. ANSWER ANY **TWO (2)** QUESTIONS FROM SECTION B

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SECTION B

*Instruction: In the booklet provided, answer any **TWO (2)** questions in this section.*

Question 1

A.   State **FOUR (4)** ways of measuring networking performance.   *(4 marks)*

B.   Name any **FIVE (5)** principles of multifactor authentication.   *(5 marks)*

C.   Describe **THREE (3)** procedures that can be used to identify network vulnerability and monitor usages.   *(9 marks)*

D.   Relate how networking attacks are orchestrated in each of the following:

    i.   Phishing
    ii.   Evil twin
    iii.   Man-in-the-middle
    iv.   Logic bomb
    v.   DoS reflection attack
    vi.   ARP poisoning   *(12 marks)*

(Total 30 marks)

Question 2

A.   Differentiate between network authentication and access control.   *(4 marks)*

B.   Distinguish network vulnerabilities and exploits. Provide an example of each.   *(6 marks)*

C.   Highlight differences between hot and cold site disaster recovery services and give an example of where each can be implemented.   *(8 marks)*

D.   Describe how each of the following types of network issues affect network performance:

    i.   Attenuation
    ii.   Latency
    iii.   EMI
    iv.   Crosstalk   *(12 marks)*

(Total 30 marks) .

Question 3

A.   Name **FIVE (5)** types of network access control technologies.   *(5 marks)*

B.   Explain how remote access VPN technology create a private scope for network communication.   *(5 marks)*

C.   What is the **MAIN** function of each of the following networking hardware tools?

      i.   Multimeter
      ii. Toner Probe
      iii. Punch-Down Tool
      iv. Loopback adapter
      v.   Time-domain reflectometer   *(10 marks)*

D.   Construct a logical topology, properly labelled, diagram for a high school which has **THREE (3)** computer labs. Your diagram should show the interconnection of at least **FIVE (5)** different essential networking hardware devices plus computers.   *(10 marks)*

(Total 30 marks)

Question 4

A.   List **SIX (6)** types of common network wireless connectivity and performance issues.   *(6 marks)*

B.   Describe any **FOUR (4)** types of network security protocols and technologies that can be implemented to control authorisation, authentication and accounting.   *(12 marks)*

C.   Use sketches to support your description of the following types of backup techniques:

      i.   Full
      ii. Differential
      iii. Incremental   *(12 marks)*

(Total 30 marks)

END OF EXAMINATION