

SIR ARTHUR LEWIS COMMUNITY COLLEGE
FACULTY OF ENGINEERING
ACADEMIC YEAR (2024/2025) - SEMESTER TWO

END OF SEMESTER EXAMINATION

LECTURER(S) : **Mr Daniel Jn Baptiste**

PROGRAMME TITLE : **Computer & Information Technology and
Computer Systems Engineering**

COURSE TITLE : **Information Systems**

COURSE CODE : **CMP205**

LEVEL : **Associate Degree/Year Twos**

PAPER : **One**

DATE : **Friday, 2nd May 2025**

COMMENCEMENT TIME : **9:00 a.m.**

DURATION : **Two (2) hours**

INVIGILATOR(S) : **C. Biscette & C. Charles**

ROOM(S) : **VAR-OR- 03**

GENERAL INFORMATION AND INSTRUCTIONS

- This paper consists of Three (3) Sections.
- **Section A** contains Thirty (30) Multiple Choice Questions. You are required to answer all questions on the Multiple Choicer Answer Sheet. One mark is awarded for each correct answer.
- **Section B** contains Eight (8) Short Answer Questions. You are required to answer all questions on the foolscap provided. Five (5) marks are awarded for each question.
- **Section C** contains Three (3) Structured Type/Long Answer questions. You are required to answer any Two (2) on the foolscap provided. Fifteen (15) marks awarded for each question.
- Students must sign **IN** and **OUT** on the examination class list.
- Students must **not** write their names on their answer sheets, only their ID number.
- Students are reminded to read **all** questions and instructions in each section very carefully.
- Please number your responses accordingly.
- **Calculators are allowed.**

DO NOT TURN THIS COVER SHEET UNTIL
YOU ARE TOLD TO DO SO!!!

SECTION A: Multiple Choice Questions

Answer all questions. (One mark will be awarded for each correct answer)

- Which of the following is NOT a quality of good information?
 - Accurate
 - Relevant
 - Timely
 - Biased
- What does CRM stand for in the context of Information Systems?
 - Customer Relationship Management
 - Computerized Resource Management
 - Centralized Records Management
 - Communication and Reporting Mechanism
- Which of the following best describes a Data Warehouse?
 - A tool for data encryption
 - A repository of integrated data from various sources
 - A storage facility for sensitive data
 - A system for real-time data analysis
- In a relational database, what is a Primary Key?
 - A field that allows duplicate values
 - A unique identifier for each record in a table
 - A diagram showing relationships
 - A tool for optimizing queries
- Which protocol is used for file transfer over the Internet?
 - HTTP
 - FTP
 - DNS
 - SMTP
- What is the main purpose of a Firewall?
 - Enhance network speed
 - Prevent unauthorized access
 - Encrypt data
 - Manage email communication
- What does URL stand for?
 - Uniform Resource Locator
 - Universal Retrieval Locator
 - Uniform Retrieval Language
 - Universal Resource Language
- Which of these is NOT a primary function of an information system?
 - Data storage and retrieval
 - Decision-making support
 - Physical security management
 - Resource allocation
- What is a key feature of a Peer-to-Peer (P2P) network?
 - Centralized server required
 - Direct resource sharing
 - Internet mandatory
 - Corporate use only
- Which type of network covers large geographical areas like continents?
 - LAN
 - MAN
 - WAN
 - SAN

11. Which of the following is a database concept?
 - A) TCP/IP
 - B) Entity-Relationship Diagram
 - C) LAN
 - D) Operating System
12. The Waterfall Model is best described as:
 - A) Iterative
 - B) Linear & Sequential
 - C) Rapid Prototyping
 - D) Continuous testing
13. What is the purpose of Data Normalization in databases?
 - A) Data Encryption
 - B) Reducing redundancy
 - C) Increasing network speed
 - D) Enhancing graphics
14. What role does a Database Administrator (DBA) perform?
 - A) Writing code
 - B) Designing UI
 - C) Maintaining databases
 - D) Managing social media
15. Which of the following is a characteristic of Big Data?
 - A) Validation
 - B) Variability
 - C) Volume
 - D) Verification
16. Which layer of OSI model handles Transport Functions?
 - A) Network Layer
 - B) Session Layer
 - C) Data Link Layer
 - D) Transport Layer
17. Phishing refers to:
 - A) Encrypting data
 - B) Securing network connections
 - C) Tricking individuals for sensitive info
 - D) Data compression
18. What is a DSS (Decision Support System) used for?
 - A) Automating transactions
 - B) Executive decision support
 - C) Routine report generation
 - D) Supporting operational data
19. What does API stand for?
 - A) Advanced Program Interface
 - B) Application Programming Interface
 - C) Automated Protocol Invocation
 - D) Active Program Integration
20. The Spiral Model emphasizes:
 - A) Strict sequential order
 - B) Risk assessment & iteration
 - C) Completing tasks quickly
 - D) No testing required

21. Which of the following best describes Telecommuting?
 - A) Long-distance communication setup
 - B) Working remotely using tech
 - C) Testing security of systems
 - D) Setting up Wi-Fi

22. The main function of an MIS (Management Information System) is:
 - A) Routine report & summary generation
 - B) Expert-level decisions
 - C) Automating manufacturing
 - D) Network communication

23. Virtualization provides:
 - A) Physical server increase
 - B) Resource abstraction & flexibility
 - C) Reduced performance
 - D) No cost benefits

24. An Intranet is:
 - A) Public-facing website
 - B) Private internal network
 - C) Cloud-based service
 - D) Database software

25. VPN is used to:
 - A) Speed up internet
 - B) Securely connect to private network remotely
 - C) Block social media
 - D) Encrypt emails

26. Office Automation Systems include:
 - A) Spreadsheet software
 - B) ERP software
 - C) Intranets
 - D) VPNs

27. Which of these is NOT a type of network?
 - A) WAN
 - B) CPU
 - C) LAN
 - D) MAN

28. In a Content Management System (CMS), primary purpose is:
 - A) Hardware management
 - B) Digital content storage & organization
 - C) Financial data analysis
 - D) Software compilation

29. Which service allows secure remote access to company networks?
 - A) Intranet
 - B) VPN
 - C) Extranet
 - D) HTTP

30. What is Business Intelligence (BI) primarily used for?
 - A) Marketing
 - B) Data Analysis & Decision Support
 - C) Software Coding
 - D) Database Design

Total [30 Marks]

SECTION B: Short Answer Questions.

Answer all questions. (Five marks will be awarded for each correct answer)

1. Define data and information. Explain their differences with examples.
2. Explain the role of an Entity Relationship Diagram (ERD) in database design.
3. Discuss the concept of cybersecurity and list three common threats faced by organizations.
4. Explain the Client-Server Architecture and how it differs from Peer-to-Peer.
5. Describe the purpose of Decision Support Systems (DSS) and how they assist in decision-making.
6. Briefly describe the OSI Model and its significance in networking.
7. Discuss the key differences between Intranet and Extranet in organizations.
8. Define the Waterfall Model and compare it to Agile Methodology in system development.

Total [40 Marks]

SECTION C: Structured Type Questions

Answer ANY TWO questions. (Marks are awarded accordingly)

1. Discuss the various types of Information Systems (EIS, DSS, MIS, TPS, Expert Systems) used in organizations:
 - a) Define each type of Information System (EIS, DSS, MIS, TPS, Expert Systems). *(3 marks)*
 - b) Explain the primary function of each system in business operations. *(4 marks)*
 - c) Discuss how each system supports decision-making processes. *(4 marks)*
 - d) Provide real-world examples of each system type. *(4 marks)*

(15 marks)
2. Compare and contrast classical system development methodologies like Waterfall & SDLC with modern ones such as Spiral & Iterative Models:
 - a) Define the Waterfall model and SDLC methodologies. *(4 marks)*
 - b) Describe the Spiral and Iterative models. *(4 marks)*
 - c) Compare advantages and disadvantages of classical vs modern models. *(4 marks)*
 - d) Discuss scenarios where each approach is best applied. *(3 marks)*

(15 marks)
3. Describe the advantages and disadvantages of Cloud Computing:
 - a) Define Cloud Computing and its core characteristics. *(4 marks)*
 - b) Explain the key advantages of using Cloud Computing in organizations. *(4 marks)*
 - c) Discuss the disadvantages and potential risks associated with Cloud Computing. *(4 marks)*
 - d) Provide real-world examples of organizations effectively using Cloud Computing. *(3 marks)*

(15 marks)

Total [30 Marks]

END OF EXAMINATION!!!