THE OPEN UNIVERSITY OF SRI LANKA

DEPARTMENT OF COMPUTER SCIENCE

B.Sc. DEGREE PROGRAMME 2023/2024

FINAL EXAMINATION

CSU5303: MANAGEMENT INFORMATION SYSTEM

DURATION: **TWO HOURS ONLY (2 HOURS)**

21ˢᵗ March 2024   **Time: 9.30 a.m. to 11.30 a.m.**

This question paper consists of **six (06)** questions on **three (03) pages.**

Answer **FOUR** Questions **ONLY**. All questions carry **equal marks.**

Q1) Businesses gain a strategic advantage through information systems, which provide opportunities and benefits in the competitive environment.

    a)   Define an information system.

    b)   What are the dimensions of information systems? Provide a brief description of two (2) dimensions.

    c)   Identify three (3) main categories of information systems designed to cater to various management levels and provide short descriptions for two (2) of these categories.

    d)   What are the common characteristics of an Organization?

    e)   Comment on "The organization must be aware of and open to the influences of information systems to benefit from new technologies".

Q2) To safeguard intellectual property, organizations must implement comprehensive cybersecurity measures and adhere to industry best practices.

    a)   List five (5) moral dimensions of the Information Age.

    b)   "Intellectual property is subject to a variety of protections under three different legal traditions". What are the three (3) different legal traditions to protect Intellectual property? Describe one of them.

    c)   Why does information technology cause difficulties in protecting intellectual property?

    d)   The most common threats to systems can be due to technical, organizational, and environmental factors compounded by poor management decisions. Briefly describe three (3) solutions that you can provide to your company as an IT Manager to overcome common threats.

    e)   Briefly explain Case-Based Reasoning (CBR), emphasizing its function as a method employed within expert systems.

Q3) **The World Wide Web helps companies create and capture profit in new ways by adding extra value to existing products and services or by providing the foundation for new products and services.**

    a) Give five (5) benefits of the Internet for Digital Firms.

    b) What are the three (3) major electronic commerce categories? Briefly explain two (2) of them with suitable examples.

    c) Analyze the positive impact of social media for one of the business categories you have mentioned in part (b).

    d) List three (03) electronic commerce payment systems and briefly describe two (2) of them.

    e) What is the use of a "Cookie" on electronic commerce websites?

Q4). **Business intelligence provides firms with the capability to analyze information, develop knowledge about operations, and change decision-making behavior to achieve business goals.**

    a) What are the two (2) main kinds Problems in business Describe one of them briefly.

    b) List four (4) kinds of structural organizational change made by Information Technology.

    c) "*Business process re-engineering (BPR) is a customer-focused approach that challenges managers and staff to fundamentally rethink the way they do things in order to maximize business effectiveness.*" Comment on this statement.

    d) What are the factors that could lead to success or failure when implementing /rolling out an Information System?

    e) Briefly discuss two (2) factors mentioned in part (d) that could lead to success or failure when implementing an Information System.

Q5). The cost of security measures must always be compared with the benefits received. The optimal level of security expenditure is when the combined cost of security measures and financial loss is minimized. The law of diminishing returns clearly applies here. Additional expenditures on security measures beyond a certain point are not likely to be cost-effective.

a) List three (03) main things that should be considered to determine the optimal security expenditure to minimize the security cost.

b) What are the "Application controls" used in the software industry to deter crime and minimize errors?

c) Describe the security threats associated with any web-based system and the countermeasures you would recommend.

d) Describe what a digital signature is and how it works.

e) *"Most systems use usernames and passwords as their primary authentication mechanism."* Discuss what practices you would follow for the creation of passwords.

Q6). A new information system is built as a solution to a problem or set of problems the organization perceives that it is facing.

a) Provide a brief overview of the steps involved in the system development process.

b) Briefly explain with examples the differences between Traditional life cycle development and prototyping.

c) Briefly describe object-oriented development and provide its advantages and disadvantages over structured development methods.

d) What difficulties arise when implementing a global Information System?

e) Briefly explain the connection between CASE tools and system development.