THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF MANAGEMENT STUDIES

BACHELOR OF MANAGEMENT STUDIES HONOURS
BMSHONS IN ACCOUNTING AND FINANCE
BMSHONS IN HUMAN RESOURCE MANAGEMENT
BMSHONS IN MARKETING MANAGEMENT

OSU4309 – INFORMATION TECHNOLOGY FOR BUSINESS
FINAL EXAMINATION– 2024 / 2025
DURATION – THREE (03) HOURS

Date: 20th of December 2025 *Time: 01.30 pm-04.30* pm

INSTRUCTIONS:

- This question paper consists of TWO parts: Part A and Part B.
- Part A contains a Case Study with FIVE (05) compulsory questions. (40 marks)
- Part B contains FOUR (04) essay questions. You are required to answer **ONLY THREE (03)** questions from **Part B.** (60 marks)
- Write clearly and legibly.
- Start each new question on a NEW PAGE in your answer script.

Part A

Case Study – EcoMart

Read the case study and answer the questions given at the end.

EcoMart is one of Sri Lanka's leading retail companies, operating 25 physical stores across the country and a rapidly expanding e-commerce platform operation as well. Over the past three years, the company has collected massive amounts of data from various sources, including customer transactions, product inventory, supply chain logistics, employee performance, marketing campaigns, and customer feedback. Currently, most of this data is stored in separate Excel spreadsheets, outdated legacy databases, and unstructured documents such as PDFs and Word files.

This fragmented storage has led to data redundancy, inconsistencies, and inaccuracies, making it difficult for management to extract meaningful insights. For example, customer contact details and product codes are often duplicated across multiple files, which slows down reporting and can lead to errors in stock replenishment and promotions. Additionally, much of EcoMart's operational knowledge exists only in employees' heads, creating risks when staff members leave or are unavailable.

To address these challenges, EcoMart has decided to upgrade its IT infrastructure. Plans include implementing a centralized database system to store all customer, inventory, and operational data consistently. The company also intends to develop a data warehouse that will store historical data for analytical and reporting purposes, enabling trend analysis, sales forecasting, and marketing evaluation.

EcoMart will adopt Business Intelligence (BI) tools such as Tableau or Power BI to visualize key metrics, monitor marketing campaigns, track seasonal demand patterns, and optimize product placement. Furthermore, the company aims to explore data mining and machine learning techniques to improve inventory management, enhance customer personalization, and predict customer buying behavior. For instance, machine learning models could suggest promotions for customers based on past purchases or detect stock shortages before they occur.

Another critical initiative is the introduction of a knowledge management (KM) system. This system will capture tacit knowledge from experienced employees, document standard operating

procedures, and facilitate organizational learning. By doing so, EcoMart hopes to improve staff training, support innovation, and ensure business continuity even when key personnel leave.

Security and ethical management of data are top priorities. EcoMart plans to implement role-based access controls, encryption, and secure backups to protect sensitive customer and operational data. Employees will also be trained on ethical handling of information to comply with privacy laws and maintain customer trust. Through these initiatives, EcoMart expects to streamline daily operations, improve decision-making, reduce errors, and gain a competitive advantage in both physical retail and e-commerce channels. The combination of modern hardware, advanced software, centralized databases, business intelligence, and knowledge management will transform EcoMart's operations into a highly efficient, data-driven enterprise.

I. Explain the hardware components and secondary data storage devices that EcoMart should consider when implementing a centralized database and data warehouse. How would this hardware support fast and reliable data processing *(Marks 8)*

II. Identify suitable input and output devices that EcoMart could use for its physical stores and e-commerce operations. Explain how these devices support daily business operations, such as sales tracking, reporting, and customer interaction. *(Marks 8)*

III. Explain the advantages of using a centralized database over Excel spreadsheets and legacy databases. How does this improve data integrity, reduce redundancy, and support better decision-making? *(Marks 8)*

IV. Explain how EcoMart could use data mining and machine learning to optimize inventory management, marketing, and customer personalization. Give practical examples of predictive analytics in retail. *(Marks 8)*

V. Discuss how Business Intelligence (BI) tools can help EcoMart visualize trends, monitor marketing campaigns, and forecast demand. *(Marks 8)*

(Total Marks =40 Marks)

Part B

Question 1:

A medium-sized accounting firm is planning to purchase new computers and output devices for its staff. The manager wants the devices to improve efficiency in daily operations.

I. Recommend the most suitable printer type for this office and justify your choice with advantages and disadvantages. *(Marks 10)*

II. Explain the different types of output devices that can be used with PCs and their specific uses in an office environment. Include examples such as monitors, printers, speakers, and projectors. *(Marks 10)*

Question 2:

A small business is planning to upgrade its computer systems. The manager is confused about the types of software they need and how to obtain it.

I. Explain the difference between operating software and application software. Provide examples for each type. *(Marks 10)*

II. Recommend the best method(s) for the business to obtain its software requirements (off-the-shelf, in-house, outsourced, or open source). Discuss the merits and demerits of each method in the context of this business. *(Marks 10)*

Question 3:

I. Define computer software and explain how instructions are prepared and stored for execution within a computer system. *(Marks 08)*

II. Explain the concept of computer software and discuss its role in processing data into meaningful information. Support your answer with real-world examples showing how software interacts with computer hardware and supports organizational operations.

Hints: Your answer may include:

- Examples of application software in business (e.g., ERP, accounting software, CRM)
- Interaction between software and hardware
- Benefits such as efficiency, accuracy, and decision-making
- Challenges or limitations *(Marks 12)*

Question 4:

Explain how Information Technology (IT) improves and supports the daily operations of the following industries. In your answer, discuss:

- Key IT systems used in the industry
- How digital technologies support daily operations
- Benefits and challenges
- Real-world examples

You must answer all four (04) industries:

a) Education

d) Banking and Finance

*(10 Marks * 2=Marks 20)*

(End of the Question Paper)

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