UNIVERSITI KUALA LUMPUR
BUSINESS SCHOOL

FINAL EXAMINATION
OCTOBER 2025 SEMESTER

COURSE CODE	: **EAB11203**
COURSE NAME	: **INTRODUCTION TO INFORMATION TECHNOLOGY**
PROGRAMME NAME (FOR MPU: PROGRAMME LEVEL)	: **BACHELOR IN ACCOUNTING (HONS)**
DATE	: **24 JANUARY 2026**
TIME	: **9.00 AM - 12.00PM**
DURATION	: **3 HOURS**

INSTRUCTIONS TO CANDIDATES

1. **Please CAREFULLY read the instructions given in the question paper.**
2. **This question paper has information printed on both sides of the paper.**
3. **This question paper consists of TWO (2) sections; Section A and Section B.**
4. **Answer ALL questions from Section A and Section B.**
5. All questions must be answered in **English** (any other language is not allowed).
6. **This question paper must not be removed from the examination hall.**

THERE ARE SEVEN (7) PAGES OF QUESTIONS, EXCLUDING THIS PAGE.

SECTION A (Total: 40 marks)

INSTRUCTION: Answer ALL questions.
Please use the answer booklet provided.

Question 1

Explain the concept of improved decision making with **FOUR (4)** examples on how businesses can achieve improved decision making.

(10 marks)

Question 2

Using Porter's Five Forces Model, outline the competitive pressures faced by a manufacturing company and suggest how Information Technology (IT) can address these challenges.

(10 marks)

Question 3

A mobile banking application provides various financial services to customers through digital platforms. Discuss **FIVE (5)** revenue models that mobile banking application can use and explain how each model generates revenue.

(10 marks)

Question 4

A college uses online systems to store student records, examination results, and teaching materials. Compare **FIVE (5)** tools or technologies that can be used to protect these information resources from security threats.

(10 marks)

SECTION B (Total: 60 marks)

INSTRUCTION: Answer ALL questions.
Please use the answer booklet provided.

CASE STUDY 1

DP World Takes Port Management to the Next Level with RFID

Dubai Ports (DP) World has reason to be proud of its accomplishment of becoming one of the leading terminal operators in the world. Today, DP World has 50 terminals in 31 countries, and 11 new terminals are under development. The firm employs an international professional team of more than 30,000 people to serve customers in some of the most dynamic economies in the world.

DP World has adopted a customer-centric approach to enhancing its customers' supply chains by providing quality, innovative services to effectively manage container, bulk, and other terminal cargo. The firm invests heavily in terminal infrastructures, technologies, and people to best serve its customers.

Like other global port and terminal operators, DP World helps shippers around the world address the often complex and costly challenges of managing the supply chain. One of the typical problems encountered in container terminal operations is traffic congestion at port entry points. This congestion is often due to delays introduced by lengthy procedures and paper-based logistics. In response, DP World has introduced many IT-based solutions to enhance terminal capacity utilization. These solutions include the electronic customs release of cargo, electronic data interchange (EDI) reporting, two-way digital radio communications, and the 'e-token' advance booking system.

DP World management wanted to take things a step further and decided to make the loading and unloading of containers operate on just-in-time principles to improve container turnaround. It found that radio frequency identification (RFID) technology was an effective way of increasing the efficiency of truck movements through port access gates. Today, DP World uses RFID-enabled automatic gate systems at the port terminals it operates in Dubai and Australia. According to Mohammed Al Muallem, managing director of DP World U.A.E., "By

introducing the automated gate system, we are not only eliminating traffic congestion but also eradicating a number of lengthy procedures, increasing productivity at our ports, and improving customer satisfaction. Our customers will now be able to have their goods cleared and shipped at much faster speed."

Prior to the RFID deployment, DP World spent several months performing proof-of-concept trials involving several competing RFID suppliers. Because of the rugged environmental conditions at the ports, DP World required that 99.5 percent of all tags be read successfully, which was a key challenge for many vendors. After extensive testing and evaluation, DP World selected Identec Solutions, a global leader in active wireless tracking solutions, as its RFID supplier.

How does the RFID tracking system work? Trucks that visit a port terminal are equipped with active RFID tags supplied by Identec Solutions that are fixed on the rear chassis. As a truck moves towards the gate, its unique tag ID number is read by an RFID reader, which is integrated with an automated gate system. At the gate, an optical character recognition (OCR) system determines if the truck is loaded with a container, identifies the ID number of the truck's container, and reads the truck license plate number as a backup identification. The system uses the supplied information to automatically issue a ticket to the driver that specifies the lane the truck should proceed to in order to load or unload the container. The system can also automatically determine if the truck is on time, which is essential information for the efficient pick-up and drop-off of containers. As the truck leaves the gate, the RFID tag is read once again, and the driver receives a receipt for the completed transaction.

RFID has enabled DP World to increase the productivity of container handoffs, speed the entry and exit of trucks through terminal gates, and increase fuel efficiency. Victoria Rose, regional office project coordinator at DP World Sydney stated, "We saw that RFID could improve gate efficiency through improved truck management, reduce queues and congestion around gates, and remove the number of trucks from public roads by streamlining truck processing procedures."

Identec's RFID-based solution has also enabled DP World to improve customer satisfaction by enhancing the efficiency of customers' supply chains through smoother, faster, and more effective delivery of their containers at terminal gates. The elimination of lengthy paper transactions and manual inspections at gates and the reduction in manual data input errors

demonstrate DP World's customer-centric approach to delivering a superior level of service. The technology also allows transport companies to save time, increase revenues, and reduce costs.

DP World's use of RFID has also helped it to tighten security by providing better accuracy on inbound and outbound truck movements through the terminals. For instance, the system can automatically check whether a truck has a booking and whether it is authorized to enter the port. As a next step, DP World will consider expanding its use of RFID-enabled scanning and tracking technology to further optimize supply chain flow. "Investigation around its use within the yard, and how the data captured can be used, will be the focus of the coming months," Rose added.

(a) Investigate **THREE (3)** main operational problems faced by DP World before the implementation of RFID technology.

(6 marks)

(b) Evaluate **THREE (3)** reasons why DP World conducted proof-of-concept trials before selecting an RFID vendor.

(6 marks)

(c) Examine **THREE (3)** impacts of RFID implementation at DP World that contributes to improvised supply chain efficiency for its customers.

(6 marks)

(d) Demonstrate **THREE (3)** ways how RFID technology improves security and control within DP World's terminal operations.

(6 marks)

(e) Assess **TWO (2)** benefits of RFID implementation for DP World as an organization.

(4 marks)

(f) Propose **ONE (1)** additional way DP World could expand its use of RFID technology to further optimize port or supply chain operations.

(2 marks)

CASE STUDY 2

UPS Competes Globally with Information Technology

United Parcel Service (UPS) started out in 1907 in a closet-sized basement office. Jim Casey and Claude Ryan - two teenagers from Seattle with two bicycles and one phone - promised the "best service and lowest rates." UPS has used this formula successfully for more than 100 years to become the world's largest ground and air package delivery company. It's a global enterprise with over 408,000 employees, 96,000 vehicles, and the world's ninth largest airline.

Today, UPS delivers more than 15 million packages and documents each day in the United States and more than 200 other countries and territories. The firm has been able to maintain leadership in small-package delivery services despite stiff competition from FedEx and Airborne Express by investing heavily in advanced information technology. UPS spends more than $1 billion each year to maintain a high level of customer service while keeping costs low and streamlining its overall operations.

It all starts with the scannable bar-coded label attached to a package, which contains detailed information about the sender, the destination, and when the package should arrive. Customers can download and print their own labels using special software provided by UPS or by accessing the UPS Web site. Before the package is even picked up, information from the "smart" label is transmitted to one of UPS's computer centers in Mahwah, New Jersey, or Alpharetta, Georgia, and sent to the distribution center nearest its final destination.

Dispatchers at this center download the label data and use special software to create the most efficient delivery route for each driver that considers traffic, weather conditions, and the location of each stop. UPS estimates its delivery trucks save 28 million miles and burn 3 million fewer gallons of fuel each year as a result of using this technology. To further increase cost savings and safety, drivers are trained to use "340 Methods" developed by industrial engineers to optimize the performance of every task from lifting and loading boxes to selecting a package from a shelf in the truck.

The first thing a UPS driver picks up each day is a handheld computer called a Delivery Information Acquisition Device (DIAD), which can access one of the wireless networks cell phones rely on. As soon as the driver logs on, his or her day's route is downloaded onto the

handheld. The DIAD also automatically captures customers' signatures along with pickup and delivery information. Package tracking information is then transmitted to UPS's computer network for storage and processing. From there, the information can be accessed worldwide to provide proof of delivery to customers or to respond to customer queries. It usually takes less than 60 seconds from the time a driver presses "complete" on a DIAD for the new information to be available on the Web.

Through its automated package tracking system, UPS can monitor and even re-route packages throughout the delivery process. At various points along the route from sender to receiver, bar code devices scan shipping information on the package label and feed data about the progress of the package into the central computer. Customer service representatives are able to check the status of any package from desktop computers linked to the central computers and respond immediately to inquiries from customers. UPS customers can also access this information from the company's Web site using their own computers or mobile phones.

Anyone with a package to ship can access the UPS Web site to check delivery routes, calculate shipping rates, determine time in transit, print labels, schedule a pickup, and track packages. The data collected at the UPS Web site are transmitted to the UPS central computer and then back to the customer after processing. UPS also provides tools that enable customers, such Cisco Systems, to embed UPS functions, such as tracking and cost calculations, into their own Web sites so that they can track shipments without visiting the UPS site.

In June 2009, UPS launched a new Web-based Post-Sales Order Management System (OMS) that manages global service orders and inventory for critical parts fulfillment. The system enables high-tech electronics, aerospace, medical equipment, and other companies anywhere in the world that ship critical parts to quickly assess their critical parts inventory, determine the most optimal routing strategy to meet customer needs, place orders online, and track parts from the warehouse to the end user. An automated e-mail or fax feature keeps customers informed of each shipping milestone and can provide notification of any changes to flight schedules for commercial airlines carrying their parts. Once orders are complete, companies can print documents such as labels and bills of lading in multiple languages.

UPS is now leveraging its decades of expertise managing its own global delivery network to manage logistics and supply chain activities for other companies. It created a UPS Supply Chain Solutions division that provides a complete bundle of standardized services to subscribing companies at a fraction of what it would cost to build their own systems and infrastructure. These services include supply chain design and management, freight forwarding, customs brokerage, mail services, multimodal transportation, and financial services, in addition to logistics services.

Servalite, an East Moline, Illinois, manufacturer of fasteners, sells 40,000 different products to hardware stores and larger home improvement stores. The company had used multiple warehouses to provide two-day delivery nationwide. UPS created a new logistics plan for the company that helped it reduce freight time in transit and consolidate inventory. Thanks to these improvements, Servalite has been able to keep its two-day delivery guarantee while lowering warehousing and inventory costs.

(a) Using the case, explain how UPS applies information technology to improve delivery route planning and operational efficiency.

(8 marks)

(b) Examine how the Delivery Information Acquisition Device (DIAD) improves communication and service quality between UPS and its customers.

(6 marks)

(c) Analyse the importance of real-time package tracking for UPS's internal operations and customer service.

(6 marks)

(d) Demonstrate how UPS's Web-based services add value for both UPS and its customers.

(4 marks)

(e) Evaluate how UPS's investment in information technology contributes to its long-term competitive advantage.

(6 marks)

END OF EXAMINATION PAPER