

University of Ruhuna- Faculty of Technology
Bachelor of Information and Communication Technology Honors Degree
Level 2 (Semester II) Examination, November/December 2023
Academic year 2021/2022

Course Unit: ICT2243 E-Commerce Implementation, Management and Security (Written)
Repeat examination

Duration: 02 hours

This question paper consists of four (04) pages, including the instruction page.

IMPORTANT INSTRUCTIONS:

1. The medium of this examination is English.
2. This examination is a **Closed Book** examination.
3. This examination paper consists of **four (04)** questions with equal marks.
4. You must answer **all four (04)** questions.

- 1)
- a) List **five (05)** objectives of E-Commerce and briefly describe **one (01)** of them using a suitable example.
 - b) Describe **four (04)** disadvantages of E-Commerce applications.
 - c) The second wave of the E-commerce happened between 2004-2009.
 - i) List **three (03)** changes that made an impact on E-commerce during the second wave.
 - ii) What do you mean by 'M-commerce'?
 - d) Perform a SWOT Analysis for the following scenario. (03 points for each matrix)

A supermarket chain in the business for the last 30 years "FoodChain" is in the process of expanding it into many other areas including their main business, the supermarket. FoodChain is owned by a group of businessmen who formed it 30 years ago. They are financially very stable and have a strong brand name. Their prices have been very competitive and are aimed at the middle-income group of society. They have a set of semi-loyal customers, however, the customers are aware of prices offered by other supermarkets and are sensitive to changes in quality and price.

FoodChain has 50 supermarkets island-wide and they are thinking of expanding to 80 supermarkets altogether within the next 2 years. The cost-cutting venture that they started last year has had no positive results. Infact, it has created dissatisfaction and demotivation among the operational level staff due to the careful monitoring of all their activities by the senior staff. There is a danger of these skilled and experienced workers leaving the company as many supermarkets are opening up and the industry is quite lucrative. FoodChain has a great reputation for their efficient staff and services offered at their supermarkets and they would not want their well-experienced and in-house trained staff to leave in the middle of a company expansion.

Due to the very heavy competition among the supermarkets and shops, the top management wants to create a positive difference in the area of customer experience at FoodChain. They want to adopt new store formats, online shopping, and collaborations with other businesses to enhance the service they provide. At the moment, FoodChain has a website that gives prices of all the products they offer at their supermarkets. No online ordering is possible. At present, FoodChain has a network that links all their branches through the Internet to handle their internal financial matters. They want to upgrade it to link all their supermarkets island-wide to allow online shopping and delivery of goods.

Foodchain has an idea to collaborate with Sri Lankan shops in other countries to be their supplier of goods. This will allow a global approach and will ensure a steady supply of goods to other countries. Also, FoodChain wants to link up with vegetable wholesalers in Dambulla as well as farmers scattered in all parts of the country to have

a direct supply of vegetables and fruits Sri Lanka produces to help in the economic development of the country. They want to collaboratively work with possible corporate customers as well. Furthermore, FoodChain wants to have a system where they can monitor the trends of offline and online shoppers to provide them with a better service according to their buying trends.

The management of FoodChain feels that they need to carry out a more aggressive marketing campaign to win over new customers. They are looking at a more nationalistic approach to make people buy Sri Lankan made products to make a national contribution as well.

2)

a)

- i) Define the term 'Electronic Data Interchange (EDI)'
- ii) Explain the concept behind EDI using an example.
- iii) List **two (02)** advantages and **one (01)** disadvantage of VANs (Value added networks)

b)

- i) List **three (03)** categories of auction websites and describe **one (01)** of them using an example.
- ii) Briefly describe **three (03)** auction related services.
- iii) A telecommunication service provider has 100 customers. Calculate the network utility based on Reed's Law and Metcalf's Law.
- iv) The user controls the data is a key element of Web 2.0. Explain this statement using an example.

c) What is syndication used in Web 2.0?

3)

a)

- i) Explain what a 'Scrip' is using an example.
- ii) Compare and contrast charge cards and credit cards.
- iii) Briefly describe what is a merchant account used in the online payment concept.
- iv) List **two (02)** advantages and **two (02)** disadvantages of Electronic Cash.

- b)
- i) List **three (03)** key elements of a Brand.
 - ii) Define the term 'Customer Relationship Management' (CRM).
 - iii) Briefly describe **four (04)** advantages of using Internet technologies in Supply Chain Management.
- 4)
- a) Briefly describe three-tier client/server architecture and how a message flows in the three-tier client-server network by using a suitable diagram.
 - b)
 - i) What is cybersquatting?
 - ii) Write down **three (03)** ways that can be used by an attacker to do cybersquatting.
 - c) Briefly describe the **three (03)** types of security measures that can be used to provide security to an e-commerce system.
 - d) Write short notes on the following topics.
 - Denial-of-Service (DOS) attack
 - Page hijacking
 - Botnet
 - Malvertising

..... **End of the Paper**.....