

**University of Ruhuna- Faculty of Technology**  
**Bachelor of Information and Communication Technology Honors Degree**  
**Level 2 (Semester I) Examination, June/July 2023**  
**Academic year 2021/2022**

**Course Unit: ICT2152 - E-Commerce Implementation, Management and Security (Written)**

**Duration: 02 hours**

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This question paper consists of five (05) pages, including this 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.
- c) "eBusiness moves businesses from place to space!" Do you agree with this statement? Justify your answer.
- d) Use the following Case Study to answer the questions.

Ayurveda soap, shampoo, oil, and cream products manufacturing company has been in business in Sri Lanka for the last 30 years. The company, which is named "Bowatte Ayurveda" is owned by a traditional Ayurveda doctor Bowatte Wedamahaththaya and his son who is a reputed businessman. The products are scientifically produced and there are over 50 varieties of soap, cream, shampoo, syrup, Oil, arishta, kalka etc. The market in Sri Lanka is very competitive with many western medicines and creams, soaps, and other products. These "Bowatte Ayurveda" products are made 100% from local ingredients, raw materials, and medicinal plants. Heavy research has been carried out with the faculty of indigenous medicine before deciding on the medicinal value of the products. Local producers and importers from India and China are competing with "Bowatte Ayurveda" for the same product range. One of this industry's biggest problems is finding the various raw materials, leaves, plants, and barks to manufacture the products. Some farmers grow these medicinal plants who are scattered around the country. Buyers in Sri Lanka are still a little skeptical about the quality of the products though the Sri Lanka Ayurvedic Association approves them. There are many pharmacies, supermarkets, and dispensaries of Ayurvedic medicine who want these products to be sold as Sri Lankan buyers are beginning to realize the importance of herbal medicine. Requests are coming from many organizations to work as intermediary to sell these collaboratively. "Bowatte Ayurveda" has its head office in Kandy and its two factories in Pallekale and Kurunegala. Its customers are scattered around the country and the sales are done through supermarkets and pharmacies. After the covid 19 pandemic, they have strengthened their business to deliver products to customer doorstep by confirming the order through social media platforms. The current economic crisis has affected their daily revenue and profit as other businesses. "Bowatte Ayurveda" has a networked head office and deals with other corporate customers through email. More and more requests are coming through email and internet-based resources and they are finding it difficult to handle these due to lack of technical skills and other resources. In order to handle all these buyer, seller, and competitor-related requests, "Bowatte Ayurveda" has decided to commence a web-based solution to cater to these collaboration and communication needs.

- i) Perform a SWOT analysis for "Bowatte Ayurveda" using the given case study.
- ii) Perform an environmental analysis for "Bowatte Ayurveda".

2) Use the following case study to answer the questions.

**“Modern Homes”** is a leading construction company that has been in business for the last 18 years. The owner of **Modern Homes** has a wealth of experience in the construction industry in Sri Lanka and the company also has worked collaboratively with international construction companies gaining expert knowledge and experience along the way. **Modern Homes** has a good team of designers and constructors, including architects, surveyors, civil/mechanical/ electrical/ structural/ fire protection engineers, planning consultants, architectural consultants, and many layers of workers. **Modern Homes** has been constructing single houses, housing schemes, commercial buildings, and high-rise apartments. With the recession in the last few years, the construction industry slowed down, and **Modern Homes** lost its glory. Various new competitors with international reputations introduced their new designs with high technology and the latest machinery and equipment that **Modern Homes** is second to. **Modern Homes** had to face some difficulties related to the raw material suppliers with the current economic crisis. **Modern Homes** is considering building new collaborations with related industries such as tourism and hotels. In the North and the East, many hotel projects are giving new hope to the construction sector in Sri Lanka. They have recently signed an agreement with Royal Ceramics for 5 years period of time. **Modern Homes** plans to expand their business by opening an architectural design branch that provides modern architectural plans for local and international clients. The company plans to promote their ideas through internet-based technologies. **Modern Homes** has 03 branches and a head office in Panadura. The branches and the head office are linked with a basic integrated solution that manages their business's financial accounting side. It needs a more comprehensive solution to manage in this competitive environment. **Modern Homes** is looking at new technologies and collaborations to forge ahead in the industry.

- a) **Modern Homes** expects to proceed with their new architectural design branch with an existing business plan. Do you agree with them? Justify your answer.
- b) Select the suitable revenue model that suits for **Modern Homes**. What is the reason for selecting that revenue model?
- c) List **four (04)** market segmentation methods that can be used in market analysis.
- d) What is a Strategic alliance? Give a practical example from the **Modern Homes** scenario.
- e) Discuss the possible methods that can be followed by **Modern Homes** to improve their Customer Relationship Management.
- f) The company is planning to promote their business in some popular websites which have a large number of visitors. List **two (02)** types of ads that use to promote their business.

- g) Describe how the company maintains and builds good trust in the supply chain.
- 3)
- 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?
- 4)
- a)
- i) Explain what is a 'Scrip' 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)** main elements of a web server.
  - ii) List **four (04)** types of websites and briefly describe them using suitable examples.
  - iii) 'The web is platform neutral.' Justify this statement using an example.
  - iv) Describe the load balancing system used in web servers.

c) Write short notes on the following topics.

- Information Assurance
- Botnet
- Zombies

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