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**KIRIRI WOMEN'S UNIVERSITY OF SCIENCE AND TECHNOLOGY**  
**UNIVERSITY EXAMINATION, 2024/2025 ACADEMIC YEAR**  
**FIRST YEAR, FIRST SEMESTER EXAMINATION**  
**FOR THE BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**  
**KIT 2102 INFORMATION SYSTEMS FUNDAMENTALS**

Date: 8<sup>TH</sup> AUGUST 2024  
Time: 8:30AM – 10:30AM

**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTION ONE (COMPULSORY) AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

Teladoc is a Telemedicine startup in the healthcare sector that provides remote consultation services that reduce the need for physical infrastructure and offer more convenient options for patients. Using the Porters competitive model, answer the following questions.

**Questions:**

- a) Using two relevant examples, explain how the company can use information systems to analyze the market trends, optimize registration, manage pricing strategies, and improve customer service experiences in Teladoc. **(4 Marks)**
- b) Evaluate two roles of information systems in shaping the company's competitive strategy and responding to dynamic market conditions in the health sector. **(4 Marks)**
- c) Discuss how telemedicine services are influencing the entry of new competitors in the healthcare industry? **(5 Marks)**
- d) Explain four regulatory challenges that new entrants face in the healthcare sector. **(4 Marks)**
- e) Discuss how these challenges can be overcome in the health sector. **(4 Marks)**
- f) Explain how the need for high capital investment can affect the entry of new players in specialized healthcare services? **(4 Marks)**
- g) Discuss five types of information systems that are being used in the health sector. **(5 Marks)**

**QUESTION TWO (20 MARKS)**

Bazaar technology limited is a company that deals with website development and software development. It plans to expand its market presence to foreign countries.

- a) Explain how the company can use information systems to adapt its products and services to local market preferences and regulatory requirements. **(3 Marks)**
- b) Discuss how Bazaar technology limited can benefit from the adoption of customer relationship management (CRM) systems and data analytics tools in understanding customer needs, tailoring marketing campaigns, and driving sales growth in diverse cultural contexts. **(4 Marks)**

- c) Evaluate the challenges and opportunities associated with market localization in the context of globalization. **(5 Marks)**
- d) Discuss four market entry strategies that Bazaar Technology Limited can implement in order to expand its website and software development services into foreign countries? **(4 Marks)**
- e) Explain how Bazaar Technology Limited effectively localize and customize its website and software development services to meet the diverse needs of foreign markets while maintaining its core brand identity? **(4 Marks)**

### **QUESTION THREE (20 MARKS)**

Neon is a digital firm operating in the financial services sector. The firm wants to gain a competitive edge by harnessing the power of big data analytics to analyze market trends, predict customer behavior, and identify investment opportunities.

- a) Using five relevant examples, discuss how the firm can integrate advanced analytics modules into its management information system to process large volumes of data, uncover actionable insights, and make informed investment decisions in real-time. **(5 Marks)**
- b) Explain two potential benefits and two challenges associated with leveraging big data analytics within the financial services industry. **(4 Marks)**
- c) Discuss two factors that Neon should take to implement a robust big data analytics system, and what challenges might the firm face during this process? **(4 Marks)**
- d) Explain the ethical considerations and potential privacy concerns Neon must address when collecting and analyzing customer data, and how can the firm ensure compliance with relevant regulations? **(4 Marks)**
- e) Discuss how predictive analytics be utilized by Neon to forecast customer behavior, and what specific data points should be analyzed to enhance the accuracy of these predictions? **(3 Marks)**

### **QUESTION FOUR (20 MARKS)**

Mazzap Technologies is a digital firm specializing in e-commerce. The company has been experiencing challenges in managing its inventory and analyzing customer trends.

- a) Discuss two inventory management techniques and technologies that Mazzap Technologies can implement to improve inventory accuracy and efficiency, and how might these solutions address the current challenges. **(4 Marks)**
- b) Explain how Mazzap Technologies can leverage data analytics tools to better understand and predict customer trends, and what specific data metrics should the company focus on to gain actionable insights? **(5 Marks)**
- c) **Discuss four** the potential benefits and challenges Mazzap Technologies might encounter when integrating its inventory management system with customer relationship management (CRM) and analytics platforms. **(4 Marks)**
- d) What strategies can Mazzap Technologies adopt to optimize its supply chain management in light of the inventory management issues, and how can these strategies enhance overall operational efficiency? **(3 Marks)**
- e) Using two relevant examples discuss how the firm can use an information system to optimize its inventory management and enhance overall operational efficiency. **(4 Marks)**

### **QUESTION FIVE (20 MARKS)**

A bank is facing pressure to increase operational efficiency and reduce costs. Using the value chain model, analyze how the bank can streamline its operations, customer service processes, and financial product distribution channels.

- a) Discuss the role of value chain analysis in identifying opportunities for digital banking, automation of services, and strategic partnerships to optimize resource utilization and improve profitability in the competitive banking industry. **(5 Marks)**
- b) Analyze the existing distribution channels (physical branches, online banking, mobile apps) to determine the most cost-effective and efficient methods for delivering financial products to customers **(4 Marks)**
- c) Explain four factors that can be considered in streamlining customer interactions, improve response times, and leverage technology to provide a seamless banking experience. **(4 Marks)**
- d) Discuss how the bank can use the value chain model to identify and eliminate inefficiencies in its core banking operations. **(3 Marks)**
- e) Explain three strategies the bank can implement in order to enhance its customer service processes through value chain analysis. **(2 Marks)**