INTERNATIONAL UNIVERSITY OF EAST AFRICA
'Learning to Succeed'

FACULTY OF SCIENCE AND TECHNOLOGY

END OF SEMESTER EXAMINATIONS - APRIL 2025

PROGRAMME: DCS
YEAR/SEM: YEAR 2/SEMESTER 2
COURSE CODE: DCS2205
NAME: E-COMMERCE ON THE INTERNET

DATE:
TIME:

INSTRUCTIONS TO CANDIDATES:

SECTION A

Attempt All Questions

Question 1:

Lisa is the owner of a small business selling handmade jewelry in her local community. She primarily sells through a physical store but has seen an increase in customer inquiries from different regions. To expand her business, Lisa is considering launching an online store and integrating multiple digital payment options, including mobile money and cryptocurrency. However, she is unfamiliar with the technical aspects of e-commerce, security risks, and customer preferences.

Questions(40 Marks)

a) Explain the advantages of launching an e-commerce store for Lisa's business. (10 marks)

b) Identify any four e-commerce platforms that Lisa can use to set up her online store. (8 marks)

c) Discuss the security measures Lisa should implement to protect customer data and ensure secure transactions. (8 marks)

d) What are the benefits and challenges of integrating mobile money and cryptocurrency as payment options for Lisa's online store? (8 marks)

e) Recommend a digital marketing strategy that Lisa can use to attract more customers to her online store. (6 marks)

Question 2:

Mark runs a popular café in a busy city center. Most of his customers are young professionals who prefer fast and convenient payment methods. Recently, Mark noticed that customers are increasingly asking about digital payment options like mobile wallets (Apple Pay, Google Pay), contactless card payments, and cryptocurrency. However, some customers are concerned about security risks, while others prefer traditional cash payments. Mark wants to introduce digital payment systems but needs to understand their impact on his business.

Questions(40 Marks)

a) Explain the benefits of adopting digital payment systems for Mark's café, both for the business and its customers. (10 marks)

b) Compare mobile wallets (e.g., Apple Pay, Google Pay), credit/debit card payments, and cryptocurrency in terms of convenience, security, and transaction costs. (8 marks)

c) What security risks are associated with digital payments, and what measures should Mark take to ensure safe transactions for his customers? (8 marks)

d) How can Mark balance digital payment adoption while still catering to customers who prefer traditional cash payments? (7 marks)

e) Propose a marketing strategy to encourage customers to use digital payment options in his café. (7 marks)

SECTION B

Choose any Three(3) Questions

Question 1:

Sarah owns a popular boutique selling handmade fashion accessories. Over the years, her customers have suggested she expand her business online, but she is unsure whether it would be worth the investment. She is concerned about costs, logistics, and whether she can effectively market her products to a larger audience. Additionally, she is uncertain about which type of e-commerce model would suit her business best.

Questions(20 Marks)

a) Define e-commerce and state two key characteristics. (3 marks)
b) Explain three benefits Sarah could gain from adopting an e-commerce model. (5 marks)
c) Identify and explain two challenges she might face when transitioning to e-commerce. (4 marks)
d) Differentiate between B2B and B2C models and suggest the best fit for Sarah’s business. (6 marks)
e) Recommend one key feature her online store should include to attract more customers. (2 marks)

Question 2:

Techify, a startup in the tech industry, aims to create an online marketplace connecting gadget sellers with buyers. The company is debating which revenue model to adopt: a **subscription model**, where sellers pay a fixed monthly fee; an **advertising model**, where revenue comes from brands displaying ads; or a **transaction fee model**, where a percentage of each sale is taken. The founders want to select a model that is sustainable, scalable, and profitable while ensuring customers and sellers have a seamless experience.

Questions(20 Marks)

a) Explain the difference between the three revenue models. (5 marks)
b) Identify and discuss one advantage and one disadvantage of the subscription model. (4 marks)
c) Discuss one challenge of implementing the transaction-based revenue model. (3 marks)
d) What strategies can Techify use to maximize profitability while using transaction fees? (6 marks)
e) Recommend the best revenue model with justification. (2 marks)

Question 3:

Techify, a startup in the tech industry, aims to create an online marketplace connecting gadget sellers with buyers. The company is debating which revenue model to adopt: a **subscription model**, where sellers pay a fixed monthly fee; an **advertising model**, where revenue comes from brands displaying ads; or a **transaction fee model**, where a percentage of each sale is taken. The founders want to select a model that is sustainable, scalable, and profitable while ensuring customers and sellers have a seamless experience.

Questions(20 Marks)

a) Explain the difference between the three revenue models. (5 marks)

b) Identify and discuss one advantage and one disadvantage of the subscription model. (4 marks)
c) Discuss one challenge of implementing the transaction-based revenue model. (3 marks)
d) What strategies can Techify use to maximize profitability while using transaction fees? (6 marks)
e) Recommend the best revenue model with justification. (2 marks)

Question 4:

David runs a small but growing bookstore in his town and wants to sell books online. However, he has limited technical skills and is unsure which e-commerce platform to use. He is considering **Shopify** for its ease of use but is also interested in **WooCommerce**, which offers more customization. In addition, he is worried about online security threats such as **payment fraud, data breaches, and phishing attacks**.

Questions(20 Marks)
a) Compare Shopify and WooCommerce based on ease of use and cost. (6 marks)
b) Identify two key security risks in online transactions. (4 marks)
c) What are two essential cybersecurity measures for e-commerce? (3 marks)
d) Explain how SSL certificates enhance security. (5 marks)
e) Suggest one way David can ensure compliance with data privacy regulations. (2 marks)

Question 5:

A fashion retailer has noticed an increasing number of customers using smartphones to browse and purchase items. However, their website is not mobile-friendly, and they are debating whether to **invest in a mobile app or optimize their website for mobile users**. Additionally, they want to explore **push notifications, AI-driven personalized recommendations, and one-click checkout** to improve customer experience.

Questions(20 Marks)
a) Define m-commerce and how it differs from e-commerce. (3 marks)
b) Identify two advantages of a mobile shopping app. (4 marks)
c) Discuss one challenge of mobile app development and how to overcome it. (5 marks)
d) How can mobile apps improve customer engagement? (6 marks)
e) Recommend one feature that enhances the shopping experience. (2 marks)

Question 6:

A café owner is considering implementing cashless payment options such as **Apple Pay, Google Pay, and contactless credit card payments**. However, some **customers are hesitant** to adopt mobile payments due to **security concerns and transaction failures**. The owner wants to ensure that the system is secure, **fast, and convenient** while also encouraging more customers to use digital payments.

Questions(20 Marks)
a) Explain how mobile payment systems work. (5 marks)
b) Identify two benefits of mobile payments for the café owner. (4 marks)
c) Discuss one security concern and a solution. (3 marks)
d) How does encryption improve mobile payment security? (6 marks)
e) Suggest one way to encourage customers to adopt mobile payments. (2 marks)

Question 7:

A fintech company is planning to introduce **mobile money services in a rural village** where **traditional banks are scarce**. Most people in the village rely on **cash transactions** and are unfamiliar with digital payments. The fintech company aims to **increase financial inclusion** by providing **secure and accessible financial services** via mobile phones.

Questions(20 Marks)

a) Define mobile money and differentiate it from mobile banking. (5 marks)
b) Explain how mobile money enhances financial inclusion. (3 marks)
c) Identify two challenges in implementing mobile money in rural areas. (4 marks)
d) Suggest two strategies for educating people about mobile money. (6 marks)
e) Recommend one feature to ensure secure transactions. (2 marks)

Question 8:

A **logistics company** wants to improve transparency and efficiency in its supply chain. They are considering using **blockchain technology** to track shipments, verify transactions, and **reduce fraud**. However, company executives are unfamiliar with blockchain and need guidance on how it works.

Questions(20 Marks)

a) Explain how blockchain technology works. (6 marks)
b) Identify two benefits of blockchain in supply chain management. (4 marks)
c) Discuss one limitation of blockchain in logistics. (3 marks)
d) How does blockchain improve security in financial transactions? (5 marks)
e) Suggest one industry other than logistics that can benefit from blockchain. (2 marks)

Question 9:

A startup wants to accept **cryptocurrency payments** and use **smart contracts** to automate **rental agreements for property leasing**. However, they need to understand the risks, advantages, and how to ensure security.

Questions(20 Marks)

a) Differentiate between Bitcoin and Ethereum. (4 marks)
b) Explain how Bitcoin functions as a payment system. (3 marks)
c) How do Ethereum smart contracts automate business agreements? (5 marks)
d) Identify one benefit and one risk of accepting cryptocurrency payments. (6 marks)
e) Recommend one security measure when accepting cryptocurrencies. (2 marks)

Question 10:

An **online retailer** is exploring ways to **offer both mobile money and cryptocurrency payments** to increase payment flexibility. However, they are concerned about **fraud, transaction speed, and regulatory compliance**.

Questions(20 Marks)

a) Explain two benefits of integrating mobile money into e-commerce. (6 marks)
b) Discuss one challenge of accepting cryptocurrency payments. (4 marks)
c) How does mobile money improve customer convenience in online shopping? (3 marks)
d) What security measures should an online retailer implement? (5 marks)
e) Recommend one way to educate customers on using these payment methods. (2 marks)

Question 11:

A retail company, Quick Buy, is planning to expand its online business by launching a dedicated mobile shopping app to improve customer engagement. Currently, they operate a website for online sales, but they have noticed an increasing number of customers browsing from mobile devices. The company wants to understand the scope of mobile commerce (M-Commerce), how it differs from traditional E-Commerce, and the potential benefits of adopting a mobile shopping app. Additionally, they are interested in learning about the latest trends in M-Commerce to stay competitive.

Questions (20 marks)

a) Define Mobile Commerce (M-Commerce) in your own words. (2 Marks)

b) Mention one key advantage of M-Commerce for businesses. (2 Marks)

c) Identify one major difference between E-Commerce and M-Commerce. (2 Marks)

d) Explain one reason why businesses might prefer M-Commerce over traditional E-Commerce. (2 Marks)

e) Name one popular mobile shopping app and mention its key feature. (2 Marks)

f) Explain one way mobile shopping platforms improve the online shopping experience. (2 Marks)

g) Mention one current trend in M-Commerce that businesses are adopting. (2 Marks)

h) Explain how this trend benefits customers. (2 Marks)

i) Identify one feature in a mobile shopping app that enhances customer convenience. (2 Marks)

j) Explain how a dedicated mobile app can improve customer loyalty. (2 Marks)

Question 12:

TechMart Ltd. is a growing retail company that has decided to expand its operations by launching

an e-commerce platform. The company aims to sell a variety of products online, targeting both

individual customers and businesses. However, the management is concerned about challenges

such as cybersecurity threats, logistics, customer trust, and

competition from established online

retailers. They are also exploring different e-commerce models to maximize revenue.

Questions(20 marks)

a) What is an e-commerce model, and why is it important for TechMart Ltd.? (2 marks)

b) Identify two types of e-commerce models that TechMart Ltd. can adopt and briefly explain

each. (4 marks)

c) Explain how launching an e-commerce platform can help TechMart Ltd. expand its market

reach. (2 marks)

d) Discuss one way e-commerce can reduce operational costs for TechMart Ltd. (2 marks)

e) Describe one cybersecurity threat that TechMart Ltd. may encounter when operating online. (2

marks)

f) Suggest a security measure that TechMart Ltd. can implement to protect customer data. (2

marks)

g) How can e-commerce improve customer engagement and satisfaction for TechMart Ltd.? (2

marks)

h) Identify one key logistical challenge that TechMart Ltd. might face when operating online and

suggest a solution. (2 marks)

i) Discuss one issue related to customer trust in online transactions and propose a way to address it.

(2 marks)