

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)
ORGANISATION OF ISLAMIC COOPERATION (OIC)
Department of Computer Science and Engineering (CSE)

MID SEMESTER EXAMINATION
DURATION: 1 HOUR 30 MINUTES

WINTER SEMESTER, 2023-2024
FULL MARKS: 75

CSE 4531: E-Commerce and Web Security

Programmable calculators are not allowed. Do not write anything on the question paper.

Answer all 3 (three) questions. Figures in the right margin indicate full marks of questions with corresponding COs and POs in parentheses.

1. a) Imagine you have decided to buy a digital camera. Compare the process of shopping for it online versus in a physical store. In your answer:
 - i. Describe the steps you would take to shop for the camera in a physical store. 1
 - ii. Explain how you would shop for the same camera online, including how you would research, compare prices, and evaluate options. 2
 - iii. Discuss the advantages and disadvantages of both shopping methods (online vs. physical store). 3
(CO1)
 - iv. State which shopping method you prefer and explain why. 1
- b) Daraz is a leading e-commerce platform in South Asia, operating as an online marketplace where brands and retailers sell their products directly to consumers. It offers a wide variety of product categories, such as electronics, fashion, home goods, and more.

In addition to marketplace transactions, Daraz also sells products from its own inventory, which allows the company to control pricing and provide consistent customer service. Daraz enables individual sellers to create accounts and list their products, encouraging peer-to-peer transactions and expanding the range of products available on the platform.

The company has heavily invested in its logistics and delivery infrastructure, offering services like same-day delivery in certain areas. This investment improves the customer experience and distinguishes Daraz from traditional marketplaces. In summary, Daraz serves a broad customer base and diverse sellers within the e-commerce industry.

Now, answer the following questions by analyzing the information provided, drawing on your knowledge and experience with Daraz, and comparing it with your understanding of other e-commerce platforms. Apply critical thinking to form your responses.

- i. What is Daraz's *customer value proposition* in the e-commerce market? 3
(CO1)
- ii. What *revenue model* does Daraz use in its operations? 4
(CO1)
- iii. In which marketspace does Daraz operate, and what are the key characteristics of this marketspace? 2
- iv. Who are Daraz's main competitors and indirect competitors in the e-commerce sector? 3
(CO1)
- v. What *competitive advantages* does Daraz have over its competitors? 2
(CO1)
- vi. What seems to be Daraz's *market strategy* in the e-commerce landscape? 4
(CO1)

2. Emma Rodriguez, a rising fashion designer, is planning to launch her own online clothing store. She is focused on making the site secure and efficient as she prepares to go live.
- a) To ensure a secure shopping experience, Emma must identify potential undesirable system behaviors. What are some of the undesirable behaviors she should avoid on her e-commerce site? 5
(CO2)
- b) To protect her business and earn customer trust, Emma needs to implement essential security measures. Can you briefly list and explain the critical security measures she should adopt to ensure complete security for her online store? 8
- c) What specific security mechanisms can Emma use to guarantee the *confidentiality* and *integrity* of the information stored on her e-commerce site? 7
(CO2)
- d) How can Emma distinguish between a flawed approach and a more effective one when designing and developing her e-commerce website with security in mind? 5
(CO2)
3. a) Why do large e-commerce brands like Amazon typically rank higher in search results? Why is *PageRank* particularly important for e-commerce websites in terms of visibility and sales? 6
- b) How do *White Hat*, *Black Hat*, and *Red Hat* hackers differ in terms of their intentions and their impact on web security? 4
- c) What is *Web 2.0*, and what is the core idea of the *Symbiotic Web*? 4
- d) Clarify the concepts of *vulnerability*, *threat*, and *attack* for an e-commerce site, providing relevant examples for each. 6
(CO2)
- e) Provide appropriate examples of *B2C*, *B2B*, *C2C*, *social e-commerce*, and *mobile e-commerce*. 5

MARKS SUMMARY TABLE

Question	Marks	Keywords
1.a)i	1	
1.a)ii	2	
1.a)iii	3	
1.a)iv	1	
1.b)i	3	
1.b)ii	4	
1.b)iii	2	
1.b)iv	3	
1.b)v	2	
1.b)vi	4	
2.a	5	
2.b	8	
2.c	7	
2.d	5	
3.a	6	
3.b	4	
3.c	4	
3.d	6	
3.e	5	
Total	75	

Annex
Question Moderation Form for Mid and Semester Final Examination
Islamic University of Technology (IUT)

Course Title: E-Commerce and Web Security			
Program: B.Sc. Engg. CSE	Course Code: CSE 4531	Semester: Winter	AY: 2023-2024
Teacher's Name: Ashraful Alam Khan			
Examination: Mid Semester Examination			

CO Statements and Mapping with POs

CO Statement	PO
CO1 Understand the e-commerce principles, business models, and technology infrastructure.	PO1
CO2 Apply core security principles to safeguard e-commerce systems.	PO2
CO3 Evaluate marketing strategies to identify effective approaches for real-world scenarios.	PO6
CO4 Analyze legal, ethical, and regulatory issues related to e-commerce.	PO8

To be Completed by Course Teacher		To be Completed by Moderator(s)	
Question No.	Question Addressing CO	Question Addresses the CO Satisfactorily (Yes/No/NA)	Comments
1.a)iii	CO1		
1.b)i	CO1		
1.b)ii	CO1		
1.b)iv	CO1		
1.b)v	CO1		
1.b)vi	CO1		
2.a	CO2		
2.c	CO2		
2.d	CO2		
3.d	CO2		

Signature of the Course Teacher:	Name and Signature of the Moderator(s):
Signature of the Head of the Department:	