

Scenario: Property Management System

Property Management is a property rental company that operates as an intermediary between landlords and tenants, with no direct contact between the two parties. All customers of the company are either landlords or tenants, and they must be registered in the system before using its services.

Landlords register their properties with Property Management, which manages the rental process on their behalf. When a potential tenant inquires about renting, the staff first verify whether the tenant is already registered. If not, they complete the registration.

The staff then assist the tenant in selecting a suitable property from the list of available options. If the ideal property is unavailable, alternative suggestions are provided. Once a tenant selects a property, an invoice is generated for an advance payment consisting of one month's rent and a refundable deposit.

After receiving the payment, Property Management issues a receipt and prepares a rental agreement, signed by both tenant and landlord. The selected property is then marked as unavailable. The tenant is required to pay rent monthly, upon receiving a new invoice, with payments made directly to Property Management.

Property Management deducts a commission from the rent and transfers the remaining amount to the landlord. A detailed invoice and receipt are provided to the landlord for each transaction.

Once the rental period ends, the tenant's deposit is returned, minus any deductions for damages. The property is then listed back on the market.

No	Questions	Marks	CLO/PLO
1.	a Explain term Object oriented programming with the example of given Property Management System	[2]	CLO-1 Level-1,5
	b Analyze how object-oriented programming (OOP) concepts can be applied to model the Property Management system. Identify at least four key real-world scenarios from the system and explain how OOP principles such as classes, inheritance, encapsulation, abstraction, and polymorphism are used to represent and manage those scenarios.	[6]	CLO-1 Level-4,6
2.	a Draw a class diagram for avobe Property Management System using NLA step by step.	[5]	CLO-2 Level-5,1
	b You must show relation ,multiplicity ,abstraction.	[3]	CLO-2 Level-5
3.	a Write java code for any class of 2a with attribute and method .	[4]	CLO-3 Level-5
	b Write constructor for the given class ? Why do you use toString methon?	[2+2]	CLO-3 Level-5
4.	a Explain the concept of Exception in Java. Discuss types of exceptions and how exception handling is done using try-catch-finally.	[4]	CLO-4,5 Level-6
	b Explain the concepts of cohesion and coupling in software engineering. How do they affect software design quality?	[4]	CLO-5 Level-5
5.	a What is the difference between a List and a Set in Java Collection Framework?	[4]	CLO-5 Level-5,2
	b You are given a class Property with attributes: propertyId, location, and rentAmount. i) Write code to implement Comparable to sort properties by rentAmount. ii) Write a separate Comparator to sort properties by location.	[4]	



Daffodil International University

Faculty of Science & Information Technology

Department of Computing and Information System

Final Examination, Spring-2025

Course Code: CIS 211, Course Title: Computer Networks

Level:2 Term:2

Exam Duration: 2 Hours

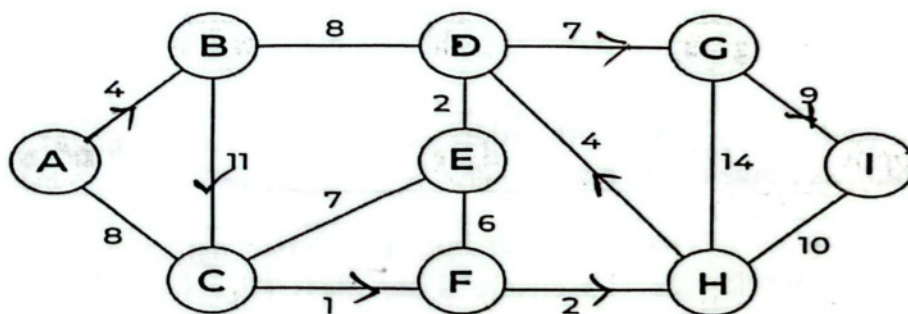
Marks: 40

Answer ALL Questions [Optional]

[The figures in the right margin indicate the full marks and corresponding course outcomes. All portions of each question must be answered sequentially.]

1.	A company has been allocated the IP block 192.168.0.0/24. The company has three groups with the following requirements- Group 1: 60 devices, Group 2: 29 devices, Group 3: 11 devices. Answer the following questions:		CO3
a)	Determine the optimal subnet mask for each group to avoid wasting IP addresses.	3	
b)	What would be each group's Network Address, Broadcast Address, and Valid user IP address range of the company?	5	
2.	A company is optimizing its service to deliver both <u>live broadcasts</u> and on-demand videos to users worldwide. To ensure a seamless experience, the company must decide between TCP and UDP protocols for different types of data transmissions.		CO2
a)	Which protocol (TCP or UDP) would be better suited for each type of streaming (live vs. on-demand)? Explain your answer, referencing the characteristics of TCP and UDP protocol?	4	
b)	Describe the end-to-end congestion control approaches TCP uses to manage network traffic.	4	
3.	A user opens a web browser and types <u>www.example.com</u> in the address bar. The browser first resolves the domain name to an IP address using the DNS protocol. Once the IP address is obtained, the browser sends an HTTP request to load a web page that contains 6 images, 2 CSS files, and 1 JavaScript file.		CO4
a)	Explain the steps involved in DNS name resolution in this scenario.	4	
b)	Compare the time and resource usage if the browser uses non-persistent HTTP versus persistent HTTP to load all the resources from the web server.	4	

4.	A small internet café has a network of 20 computers connected to a single router that uses NAT to allow all the computers to share one public IPv4 address. However, due to IP address exhaustion, NAT complexity, and limited peer-to-peer connectivity, the administrator is considering upgrading to IPv6 for better efficiency and scalability.		CO2
a)	Describe how NAT works in this scenario to enable multiple devices to access the internet using a single public IPv4 address.	4	
b)	Explain key advantages of transitioning to <u>IPv6</u> in this scenario, particularly in terms of address availability, Enhanced Security and Quality of Service?	4	
5.	a) Explain the key differences between packet switching and circuit switching in terms of connection setup, data delivery, and efficiency.	3	CO3
	b) Apply the link state routing algorithm in the following figure to calculate the shortest route from source node A to destination I.	5	





Daffodil International University

Faculty of Science & Information Technology
Department of Computing and Information System

Final Examination, Spring-2025

Course Code: ACC213 Course Title: Accounting

Teacher's Initial: MJA

Level: 2 Term: 1

Exam Duration: 2hrs

Marks: 40

Answer ALL Questions

[The figures in the right margin indicate the full marks and corresponding course outcomes.

All portions of each question must be answered sequentially.]

1. Following are transactions occurred first month of operations of Jane Kent business,

May 1	Kent invested \$25,000 cash.
2	Hired a secretary-receptionist at a salary of \$2,000 per month.
3	Purchased \$2,500 of supplies on account from Read Supply Company.
7	Paid office rent of \$900 cash for the month.
11	Completed a tax assignment and billed client \$2,100 for services provided.

a)	Show the Journal entries of above transactions.	[4 Marks]	CLO: 5, 6 Level- 2
b)	Prepare ledger accounts for all of the journal entries.	[6 Marks]	

2. Answer the following questions:

Grey Advertising Limited

Trial Balance

October 31, 2022

Debits		Credits	
Cash	\$ 15,200	Notes Payable	\$ 5,000
Supplies	2,500	Accounts Payable	2,500
Prepaid Insurance	600	Capital	10,000
Salaries and wages Expense	4,000	Unearned Service Revenue	.
Equipment	5000	Service Revenue	1,200
Drawings	500		10,000.
Rent	900		
	<u>\$28,700</u>		<u>\$28,700</u>

2170

Analysis reveals the following additional data.

- Supplies on hand at October 31 total \$500.
- Expired insurance for the month is \$120.
- Depreciation for the month is \$50.
- Services related to unearned service revenue in October worth \$600 were performed.
- Services performed but not recorded are \$360.
- Interest accrued at October 31 is \$95.
- Accrued salaries at October 31 are \$1,625.

a)	Analyze the above adjustments and journalize the adjusting entries at October 31.	[5 Marks]	CLO: 6, 8 Level-4
b)	List all the accounts in an adjusted trial balance.	[5 Marks]	

3. Based on the transactions and adjustments provided above in Question 2, prepare the following financial statements

Required:

a)	Analyze the adjustments from question 2 and prepare an income statement and a balance sheet at June 30.	[5 Marks]	CLO: 8, 10 Level: 4
b)	Apply your knowledge on closing journal entries and prepare a post-closing trial balance.	[5 Marks]	

4. Presented below is information for Obley Company for the month of March 2020.

- Cost of goods sold \$212,000
- Rent expense \$ 32,000
- Freight-out 7,000
- Sales discounts 8,000
- Insurance expense 12,000
- Sales returns and allowances 13,000
- Salary expense 58,000
- Sales 370,000

a)	Determine the gross profit rate.	[2 Marks]	CLO: 14, 15 Level-5
b)	Determine the net income from a multiple-step income statement.	[3 Marks]	

5. Using the information provided in the question no 4 prepare the following entries:

a)	Through a physical count, Obley Company determines that its actual merchandise inventory at year-end is \$200,000. Compile this adjusting entry.	[2 Marks]	CLO: 14, 15 Level-6
b)	Construct closing entries for Obley Company.	[3 Marks]	

12630