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Daffodil International University

Faculty of Science & Information Technology

Department of Computing and Information System

Final Examination, Summer-2026

Course Code: CIS 413 Course Title: INFORMATION SYSTEM MANGEMENT

Level: 4 Term:1

Exam Duration: 2 Hours Marks: 40

1.		**Scenario:** A large hospital network is experiencing increasing patient waiting times, rising operational costs, and declining patient satisfaction. Management is considering either expanding hospital facilities or investing in a digital patient-management system.		CO1
	a)	Classify this business challenge as a structured, semi-structured, or unstructured problem. Justify your answer by applying the Systems Approach.	4	L4
	b)	Analyze how a Decision Support System (DSS) can assist management in addressing this problem. Clearly explain the essential components of the DSS—data, model, and user interface—and describe how each contributes to the decision-making process.	6	L4
2.		**Scenario:** A food-processing company plans to introduce a new packaged product. However, the company is uncertain about production costs because raw-material prices fluctuate, while customer demand may vary significantly during different seasons.		CO3
	a)	Explain how you would develop a spreadsheet-based management model to estimate the product's cash flow, profitability, and suitable selling price.	5	L3
	b)	Explain how What-If Analysis (Data Manipulation) can be used to evaluate different business scenarios. Give suitable examples involving raw-material cost, selling price, production volume, and customer demand.	5	L3
3.		Scenario: An insurance company wants to develop a rule-based Expert System to automatically evaluate automobile insurance claims. Currently, experienced insurance officers examine claims and decide whether they should be approved, rejected, or sent for further investigation.		CO4
	a)	Describe the Knowledge Capture (Knowledge Acquisition) process. Explain how developers can obtain the decision-making knowledge of experienced insurance officers.	5	L3
	b)	Explain multiple levels of knowledge representation, including meta-knowledge, and demonstrate how these levels can be represented as rules in the proposed insurance Expert System.	5	L4

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4.		**Scenario:** A rapidly growing e-commerce company has expanded its operations across several countries. However, sales teams, warehouse staff, regional managers, and top executives are using separate systems, resulting in delayed reports, duplicated information, and poor coordination.		CO2
	a)	Analyze TWO different types of Management Information Systems (MIS), such as a Transaction Processing System (TPS) and an Executive Information System (EIS).	5	L4
	b)	Evaluate how each system supports the information and decision-making needs of different organizational levels in e-commerce.	5	L5

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