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Daffodil International University

Department of Information Technology & Management
Faculty of Science & Information Technology
Final Examination, Fall 2025
Course Code: ITM 123 ; Course Title: Software Requirement Analysis
Sections & Teachers: A, NJ

Time: 2:00 Hrs **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.]

Daffodil International University regularly organizes academic, cultural, and recreational events such as seminars, workshops, club activities, and cultural programs at venues like the University Library Auditorium, Student Lounge, and Boishakhi (Bonomaya) Cultural Zone. Due to limited seating and increasing student participation, manual event registration has become inefficient and error-prone. To address these issues, the university plans to implement an Event Booking System through the DIU mobile application.

Story :

Rima, a third-year student of Daffodil International University, logs into the DIU mobile app using her student ID and password. After successful login, she opens the "Campus Events" section, where she can view upcoming events along with details such as event name, venue, date, time, and seat availability. Event availability is shown using color indicators where green represents available seats, yellow represents limited availability, and red indicates fully booked events. Rima selects a Tech Talk event scheduled at the Library Auditorium from 3:00 PM to 5:00 PM, chooses her preferred seat category, and confirms the booking. The system then generates a confirmation message with event details and a QR code. Before the event starts, Rima receives a reminder notification. On the event day, she scans the QR code at the venue entrance to gain access to the event.

Budgeting Problem:

The university has limited funds to develop this system. They cannot implement all features at once. The development team must prioritize requirements.

1	a)	Draw a Use Case Diagram for the DIU Event Booking System, identifying actors and major use cases.	[Marks-5]	CLO-3 *Level-3*
	b)	Write a Use Case Description for the "Book Event Seat" functionality.	[Marks-5]	
2.	a)	Develop a Software Requirements Specification (SRS) for the Event Cancellation feature of the DIU Event Booking System.	[Marks-6]	CLO-4 *Level-3*
3	a)	Design a prototype for the Event Selection and Booking screen, including: • Event list with availability status • Event details (venue, date, time) • Seat category selection • Booking confirmation option	[Marks-6]	

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4	a)	**List** some prioritization parameters	[Marks-2]	CLO-4 *Level-4*
	b)	Explain how Requirement Prioritization helps in developing the DIU Event Booking System under limited budget constraints. Mention any one prioritization technique. (MoSCoW)	[Marks-5]	
5	a)	Develop a detailed scenario (paragraph form) describing how a student manages an event cancellation using the DIU Event Booking System.	[Marks-5]	CLO-4 *Level-3*
6	b)	Create a **Requirements Traceability Matrix (RTM)** for the **Event Room Booking System**. Your traceability matrix should map the functional requirements to their corresponding use cases and test cases. Include the following columns in your RTM: UC-XX TC-XX 1. **Requirement ID:** A unique identifier for each functional requirement. (R-XX) 2. **Requirement Description:** A brief description of the requirement . 3. **Use Case ID:** Reference to the use case(s) addressing this requirement. 4. **Test Case ID:** Reference to the test case(s) ensuring the requirement is fulfilled.	[Marks-6]	

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