



Daffodil International University
Faculty of Science & Information Technology
Department of Software Engineering

MID Examination, Fall 2026
 Course Code: SE 411; Course Title: Software Project Management & Documentation
 Sections & Teachers: (AE: A-D), (FC: E,F), (JK: G-J), (AHR-K)

Time: 1 Hour 30 Minutes

Marks: 25

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.	A corporate company plans to develop a <u>Payroll Management System</u> to calculate employee salaries, bonuses, and tax deductions. The HR and Finance departments have different requirements, the budget is limited, and the company expects the system to be delivered within a short deadline. a) Construct a Requirements Traceability Matrix (RTM) for the given project. b) Determine the major challenges the project team may face in completing the project successfully.	[Marks-3] [Marks-3]	CLO-1 Level-3
2.		[Marks-6] [Marks-5]	CLO-2 Level-4
	a) Analyze the given network diagram to complete the PERT chart by determining the duration and predecessor relationships of each activity. After completing the table, identify the parallel tasks and explain shortly why they can be performed simultaneously. Note: All durations are given in days. b) Illustrate the network diagram based on your answer to Question 2(a). Identify all possible paths and highlight the critical path.		

- c) A company plans to invest in a new software development project. The initial investment and additional yearly investments, estimated income, and interest rates are given below. Identify cash flow for the following information and Continue until the cash flow becomes positive.

[Marks-4]

Year	0	1	2	3	4
Investment	150,000	15,000	12,000	10,000	8,000
Income	0	80,000	90,000	100,000	110,000
Net Income/Net Cash flow					
Interest Rate	6%	6%	7%	8%	9%
Discount Factor					
Discounted Net Income/Discounted Net Cash flow					
Cumulative Cash flow/Cash flow					

- d) **Problem Statement:** The Smart Healthcare Coordination System fails to dispatch an ambulance immediately after receiving an emergency request, resulting in delayed emergency response as well as increased risk to patients.

[Marks-4]

Select the quality issue from the given problem statement and analyze the issue considering the cause-and-effect quality improvement technique.

Mention at least 2 possible causes under each category.

Note: Ignore duplicate root case issue, which is suitable for 2/3 category. If yes (duplicate listed), then write the solution way for each category.