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Daffodil International University

Faculty of Science & Information Technology

Department of Software Engineering

Midterm Examination, Fall 2026

Course Code: SE 113; Course Title: Introduction to Software Engineering

Sections & Teachers: A, B, C, D (RHH), E, F, G, H (MBH)

Time: 1 Hour 30 Mins **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)*	**Scenario A:** A student uses a program to create documents, format text, insert images, and prepare assignments for university courses. **Scenario B:** A computer starts and uses a program that manages the CPU, memory, keyboard, mouse, and other hardware so that other programs can run properly. **Scenario C:** A computer user runs a program to remove unnecessary files, free up disk space, and improve the computer's storage management. **Determine** the software types based on the scenarios and **demonstrate** these software types with examples.	[Marks-3]	CLO-1 *C3*
	b)	A software company is developing a large healthcare management system, but frequent requirement changes cause rework. The team faces tight deadlines, limited budgets, rapidly changing technologies, and a shortage of experienced engineers while trying to maintain software quality and security. **Demonstrate** the major challenges of Software Engineering presented in the scenario.	[Marks-4]	
	c)	A bank is developing a new online banking system. The project manager wants the team to plan testing activities alongside development and ensure that each development phase has a corresponding testing phase before the software is released. **Decide** which SDLC model is described in the scenario. **Draw** the model and **provide** a detailed explanation of the SDLC model.	[Marks-8]	
2.	*a)*	A software company follows two different SDLC approaches. In the first approach, the development team continuously adapts to changing customer requirements and delivers working software frequently. In the second approach, the team works in short, fixed-length development cycles, holds daily meetings, and reviews progress at the end of each cycle. **Differentiate** between the two SDLC models described in the scenario.	[Marks-5]	CLO-2 *C2*
	b)	Are the Daily Scrum meeting and Sprint Review mandatory events in the Scrum process? **Express** your opinion with proper explanation.	[Marks-5]	