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Daffodil International University

Department of Software Engineering

Faculty of Science & Information Technology

Mid Semester Examination Spring 2026

Course Code: SE113; Course Title: Introduction to Software Engineering

Sections & Teachers: IM (47-A), RM (47-B, 47-C, 47-D, 47-E), NML (47-F), FF (47-G)

Duration: 1:30 Hours **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 software company is hired to develop a **National Online Library Management System**. Project characteristics: • The system will serve thousands of users • Requires requirement analysis, design, implementation, testing, and maintenance • Some modules (search, login, reporting) can be developed separately • The government demands documentation and formal reviews • The team wants to understand which development process and models are appropriate before starting Answer the following questions based on the above scenario.			**CLO1** **Level 2**
	a)	**Explain** the importance of Software Engineering practices for this project.	**[Marks – 4]**	
	b)	**Describe** the phases of SDLC and **explain** how each phase would contribute to this project.	**[Marks – 5]**	
	c)	**Differentiate** between Waterfall and Spiral models using examples from the scenario.	**[Marks – 4]**	
	d)	The management considers using the V model. **Explain** how this model would work for this project and **describe** two advantages and two disadvantages of this model.	**[Marks – 5]**	
2.	A startup is developing a **Food Delivery Mobile App**. Project characteristics: • Requirements change every week • Customers frequently request new features • The team is small (6 developers) • Fast release and continuous improvement are required • Work items include both new features and bug fixes As a software engineer involved in the above project, select and apply an appropriate modern methodology among **Scrum, XP, or Kanban.**			**CLO2** **Level 3**
	a)	**Select** the most suitable methodology and **demonstrate** reasoning behind your selection.	**[Marks – 3]**	
	b)	**Demonstrate** how the software engineers will organize the workflow (form/graph/roles/events/board/iterations).	**[Marks – 4]**	