Name: **Enrolment No:**	

UPES

End Semester Examination, May 2025

Course: MCA **Semester: II**

Program: Software Engineering and Agile Practices **Time: 03 hrs.**

Course Code: CSEG7035 **Max. Marks: 100**

Instructions: Explain in short (60-70 words).

SECTION A

(5Qx4M=20Marks)

S. No.		Marks	CO
Q 1	Discuss the role of project manager in brief.	**4**	**CO1**
Q 2	Describe Extreme Programming (XP) methodology. Discuss how they differ from traditional models.	**4**	**CO2**
Q 3	Evaluate the strengths and weaknesses of the Scrum framework compared to the Waterfall Model.	**4**	**CO3**
Q 4	Explain the different types of requirements in software engineering, and in addition to that discuss their impact on software development process.	**4**	**CO4**
Q 5	Converse as how "iterative approach" in the Incremental Process Model differs from the prototyping approach in the Evolutionary Process Model in terms of managing changing user requirements.	**4**	**CO3**

SECTION B

(4Qx10M= 40 Marks)

Instruction: Write brief notes (100-150 words).

Q 6	Converse about three R's of software engineering in brief.	**10**	**CO1**
Q 7	Deliberate about the concept of "**Software Requirement Specification**" in detail.	**10**	**CO1**
Q 8	Highlight the importance of **Prototype** and **Spiral** model with an example. **OR** Examine the usage of **Data Flow Diagram (DFD)**. Clarify its significance in requirement analysis with a suitable example of 0,1,2 level DFD Library Management system.	**10**	**CO2**
Q 9	Discuss the techniques used in "**Requirement Elicitation**" with suitable examples.	**10**	**CO2**

SECTION-C

(2Qx20M=40 Marks)

Instruction: Write long answer (Up to 350 words while explaining).			
Q 10	a) Illustrate SEI Capability Maturity Model in detail. b) Design a hybrid Agile workflow for a software development team that integrates Scrum, Kanban, and Test-Driven Development (TDD) to address a project with rapidly changing requirements and a need for high code quality.	**(10+10=20)**	**CO3**
Q 11	a) Discuss the role of the project charter in guiding scope definition from the role of the Work Breakdown Structure (WBS) in ensuring effective scope management with the help of an example. b) Demonstrate the usage of ISO 9001 in terms of software engineering.	**(10+10=20)**	**CO4**