PAPER ID-310123

Subject Code: MTCS012

Roll No: | | | | | | | | | | | | | |

MTECH
(SEM I) THEORY EXAMINATION 2025-26
SOFTWARE PROCESS & MANAGEMENT

TIME: 3 HRS **M.MARKS: 70**

Note: Attempt all Sections. In case of any missing data; choose suitably.

SECTION A

1. Attempt *all* questions in brief. **02 x 7 = 14**

Q no.	Question	CO	Level
a.	Define Software Development Life Cycle (SDLC).	CO1	K1
b.	What is Personal Software Process (PSP)?	CO1	K2
c.	Define functional requirements.	CO2	K1
d.	What is a Quality Attribute Workshop (QAW)?	CO2	K2
e.	What is COCOMO II?	CO3	K2
f.	Define configuration management.	CO4	K1
g.	What is CMMI?	CO5	K2

SECTION B

2. Attempt any *three* of the following: **07 x 3 = 21**

Q no.	Question	CO	Level
a.	Explain various software development life cycle processes. How do agile processes differ from traditional models?	CO1	K3
b.	Discuss Team Software Process (TSP) and Unified Process with suitable examples.	CO1	K3
c.	Explain requirements elicitation techniques and quality attributes in requirements management.	CO2	K3
d.	Discuss risk identification and mitigation strategies in software project planning.	CO3	K3
e.	Explain configuration control and version management in software projects.	CO4	K3

SECTION C

3. Attempt any *one* part of the following: **07 x 1 = 07**

Q no.	Question	CO	Level
a.	Explain Architecture Centric Development Method (ACDM) in requirements management.	CO2	K4
b.	Discuss requirements documentation, change management, and traceability.	CO2	K4

4. Attempt any *one* part of the following: **07 x 1 = 07**

Q no.	Question	CO	Level
a.	Explain estimation techniques using Function Points and Use Case Points.	CO3	K4
b.	Compare top-down and bottom-up estimation techniques.	CO3	K3

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5. Attempt any *one* part of the following: 07 x 1 = 07

Q no.	Question	CO	Level
a.	Explain project planning techniques: WBS, macro plans, and micro plans.	CO3	K4
b.	Explain tracking techniques using Earned Value Management (EVM).	CO3	K4

6. Attempt any *one* part of the following: 07 x 1 = 07

Q no.	Question	CO	Level
a.	Explain software quality assurance techniques including peer reviews and Fagan inspection.	CO4	K3
b.	Discuss software testing levels and defect tracking mechanisms.	CO4	K3

7. Attempt any *one* part of the following: 07 x 1 = 07

Q no.	Question	CO	Level
a.	Explain software process definition using ETVX model and process baselining.	CO5	K4
b.	Discuss process assessment and improvement models: CMMI and Six Sigma.	CO5	K4