Roll No:

MCA
(SEM III) THEORY EXAMINATION 2025-26
SOFTWARE PROJECT 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 Project Management.	1	K2
b.	What is project evaluation?	1	K2
c.	Define project life cycle.	2	K1
d.	What is effort estimation?	2	K2
e.	What is risk management?	2	K1
f.	Define earned value analysis.	3	K2
g.	What is organizational behavior in software projects?	5	K1

SECTION B

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

a.	Explain the activities and importance of software project management. Discuss categorization of software projects and project portfolio management.	1	K3
b.	Describe software process and process models. Explain choice of process models and rapid application development (RAD). For a software project of 10 KLOC in organic mode, calculate effort and development time using basic COCOMO (a=2.4, b=1.05, c=2.5, d=0.38). Show steps.	2	K3
c.	Discuss objectives of activity planning and project schedules. Explain forward pass and backward pass techniques in network planning models.	2	K3
d.	Explain cost monitoring and earned value analysis. For a project with Planned Value (PV)=200, Earned Value (EV)=150, Actual Cost (AC)=180, calculate Cost Variance (CV), Schedule Variance (SV), CPI, and SPI.	3	K4
e.	Describe best methods of staff selection and motivation. Explain the Oldham-Hackman job characteristic model.	5	K4

SECTION C

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

a.	Explain cost-benefit evaluation technology, risk evaluation, and stepwise project planning.	1	K3
b.	Discuss strategic program management and management principles in software project management.	1	K3

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

a.	Explain agile methods and extreme programming in managing interactive processes.	2	K3
b.	Describe COCOMO II as a parametric productivity model for effort estimation.	2	K3

PAPER ID-310322

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

MCA
(SEM III) THEORY EXAMINATION 2025-26
SOFTWARE PROJECT MANAGEMENT

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

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

a.	Explain risk identification, assessment, planning, and management. Describe PERT technique for risk evaluation.	2	K3
b.	Discuss resource allocation, creation of critical paths, and cost schedules. Draw a network diagram for activities: A(2 days), B(3 days after A), C(4 days after A), D(5 days after B and C); find critical path and duration.	2	K3

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

a.	Explain framework for management and control, visualizing progress, and prioritizing monitoring.	3	K4
b.	Discuss change control and software configuration management.	3	K4

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

a.	Explain working in teams, decision making, and dispersed/virtual teams.	5	K2
b.	Discuss communication genres, communication plans, and leadership in staffing software projects.	5	K2