D/G/TY

Reg. No: [redacted]

VIT
Vellore Institute of Technology

Summer Term Final Assessment Test – July 2025

Course: **CSI3015 - Software Project Management**

Class NBR(s): **0166 / 0188 / 1093** Slot: **E1+TE1+E2+TE2/E1+E2+TE1+TE2**

Time: **Three Hours** Max. Marks: **100**

- **KEEPING MOBILE PHONE/ANY ELECTRONIC GADGETS, EVEN IN 'OFF' POSITION IS TREATED AS EXAM MALPRACTICE**
- **DON'T WRITE ANYTHING ON THE QUESTION PAPER**

Answer ALL Questions

(10 X 10 = 100 Marks)

1. A company plans to build a custom ERP solution. Identify the key stakeholders and explain their roles in managing the project using the Software Project Management framework.

2. Illustrate the stepwise project planning process by applying it to the development of a mobile application.

3.a) A hospital management system project involves modules such as Patient Management, Appointment Scheduling, Billing, and Laboratory Reporting. Illustrate a hierarchical Work Breakdown Structure (WBS) for the project using a chart representation and explain how each level of the WBS supports project planning and monitoring.

OR

3.b) Interpret the concept of Critical Path Analysis (CPA) in software project scheduling. Also illustrate how project management software tools like Microsoft Project assist in identifying the critical path and managing activity dependencies.

4. Interpret the use of Failure Mode and Effects Analysis (FMEA) in identifying critical failure points in a software product lifecycle.

5. Apply the PERT technique to calculate the expected time to complete a project and analyze the critical path and activities involved.

Activity	Predecessor Activity	Optimistic time estimate (to days)	Most likely time estimate (tm days)	Pessimistic time estimate (tp days)
A	-	2	4	6
B	A	3	6	9
C	A	8	10	12
D	B	9	12	15
E	C	8	9	10
F	D, E	16	21	26
G	D, E	19	22	25
H	F	2	5	8
I	G	1	3	5

6. Illustrate how you would use client relationship management techniques to rebuild trust and ensure project continuity.

7. Describe the major steps in project cost management: estimation, budgeting, and control.

8. Explain the concepts of risk identification and control by providing an example from a software development project.

9. A cloud-based CRM project is being planned with fixed client funding. The client emphasizes both quality and timely delivery, but there are constraints due to limited access to skilled developers and premium tools. Apply resource planning and cost estimation techniques to demonstrate how cost constraints can be balanced while ensuring adequate resourcing at each phase of the project.

10.a) Consider a government-funded project aimed at developing a citizen grievance redressal portal. The project is under strict public scrutiny due to past failures, and stakeholders demand consistent quality from requirements to deployment. Demonstrate how the stages of software quality management—quality planning, quality assurance, and quality control can be implemented to ensure reliability and user satisfaction. Explain how each stage contributes to the overall quality of the project.

OR

10.b) In the context of managing a geographically distributed team developing an online Learning Management System (LMS), challenges arise due to remote work and differing time zones, particularly in maintaining code quality and academic compliance. Apply relevant quality control tools and standards to ensure consistent quality across the team.

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