

Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA - SEMESTER - II EXAMINATION - SUMMER 2025

Subject Code: MB02096021

Date: 10-06-2025

Subject Name: IT Project Management

Time: 10:30 AM TO 01:30 PM

Total Marks: 70

Instructions

- 1. Attempt all questions.**
- 2. Make suitable assumptions wherever necessary.**
- 3. Figures to the right indicate full marks.**
- 4. USE of SIMPLE calculators AND non-programmable scientific calculators are permitted.**

	Marks
Q.1 ALL 7 Questions must be Compulsory.	14
(a) COCOMO	
(b) RAD	
(c) ROI	
(d) Project Management	
(e) Project charter	
(f) PERT	
(g) SDLC	
Q.2 (a) What is a Project? Discuss the various factors contributing to the success of IT Projects, as per CHAOS studies.	07
(b) What is PLC? How does it differ from SDLC? Discuss IT Project methodology in detail.	07

OR

- (b) What is a business case? Discuss the steps involved in developing the business case.

Q.3 (a) What is a Gantt chart? Explain it by taking a suitable example.

- (b) List different models used for IT Project management. Explain Waterfall and Iterative waterfall models in brief. **07**

OR

- (a) A software development team is planning to build an application with an estimated 100,000 lines of code (KLOC). Using the Basic COCOMO model, determine the estimated effort (in person-months) and development time (in months) for the project if it falls under the Semi-Detached category. The project parameters for Semi-Detached projects are: **07**
- Effort equation: $(E = 3.0 \times (KLOC)^{1.12})$
 - Development time equation: $(T = 2.5 \times (E)^{0.35})$

- (b) What is LOC? How does it differ from the Function Point matrix? Which is the better size estimation technique in your opinion? Justify your answer. 07

Q.4 (a) What is quality management? Discuss the importance of quality management in an IT Project. Also, discuss different standards of ISO. 07

- (b) What is Risk Management? Discuss risk identification and assessment in IT Project management. 07

OR

- (a) What is testing? Why is it important? Discuss Black box and White box testing in brief. 07

- (b) What is acceptance testing? Explain the different types of it in detail.

Q.5

Case Study: Online Course Management System for EduTech

EduTech, a growing online learning platform, wants to develop a robust Online Course Management System (OCMS) to streamline operations and enhance the learning experience for students. The system will help students register for courses, track progress, and interact with instructors.

The IT team at EduTech has been assigned to develop this system as part of their strategic initiative. The company's leadership expects the system to be user-friendly, scalable, and efficient. Below are the core functional requirements:

Functional Requirements

1. User Management

- Students and instructors will have separate user accounts.
- Admins will manage course categories and monitor system performance.

2. Course Registration

- Students can browse courses and enroll in their chosen subjects.
- Instructors can create courses and assign assignments.

3. Interactive Learning

- Students can submit assignments and receive feedback.
- A discussion forum allows interaction between students and instructors.

4. Progress Tracking

- Students will have dashboards displaying completed modules, grades, and performance.
- Instructors can track student progress and assess performance.

5. Payment Processing

- Secure payment gateway integration for course enrollment fees.

6. Notifications & Alerts

- Email notifications and in-app alerts for upcoming deadlines, announcements, and exam schedules.

- (a) Represent the Database by an ER-Diagram for the above system. 07

- (b) Based on the functional requirements represented in the above case, draw 1st Level and 2nd Level of DFD. 07

OR

- (a)** Do the object-oriented analysis and draw a use-case diagram for the above system. **07**
- (b)** Elaborate on different cases of a use-case diagram by drawing a sequence diagram for each case. **07**
