

**CMR ENGINEERING COLLEGE: : HYDERABAD
UGC AUTONOMOUS**

**I–M.TECH–I–Semester End Examinations (Regular) - February- 2026
SOFTWARE QUALITY ENGINEERING
(CSE)**

[Time: 3 Hours]

[Max. Marks: 60]

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 10 marks. Answer all questions in Part A.

Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART-A**(10 Marks)**

1. a) Define software quality. [2M]
- b) List out the defect prevention techniques. [2M]
- c) How to improve software quality? [2M]
- d) Why is software testing required? [2M]
- e) State the limitations of checklist based testing. [2M]

PART-B**(50 Marks)**

2. Examine different perspectives and expectations of software quality. Elaborate how the customer, developer, and user perspectives differ. [10M]

OR

3. Define the correctness and defects in software quality. Discuss their properties and measurement techniques with suitable examples. [10M]
4. Analyze the defect reduction techniques. Inspect software inspection and testing as methods of direct fault detection and failure observation. [10M]

OR

5. Interpret defect containment in software systems. Elucidate the software fault tolerance, safety assurance, and failure containment mechanisms. [10M]
6. Demonstrate the activities and process of quality engineering in detail. [10M]

OR

7. Assess the procedure used for software quality assessment and improvement. [10M]
8. Illustrate the methodology for test planning and preparation. [10M]

OR

9. When to use test automation? Describe various tools, benefits and challenges of test automation. [10M]

10. Infer usage-based statistical testing using Musa's operational profile. [10M]

OR

11. How to construct the operational profiles? Explain. [10M]
