Roll no.............................

Name of the Course: MCA
Semester:3rd
Name of the Paper: Software Engineering
Paper Code: TMC 303

Time: 1.5-hour

Maximum Marks: 50

Note:
- *(i)* Answer all the questions by choosing any one of the sub-questions
- *(ii)* Each question carries 10 marks.

Q1.   (10 Marks)
a. Explain the key challenges faced by software engineers in delivering high-quality software on time and within budget. CO5

OR

b. Discuss the advantages of using fourth-generation techniques (4GT) in software design. CO4

Q2.   (10 Marks)
a. Discuss the role of management in software development. Explain how planning, monitoring, and control contribute to project success.CO6

OR

b. Explain the concept of software abstraction. Discuss the different levels of abstraction used in design.CO4

Q3.   (10 Marks)
a. Discuss the importance of modularity in software design. How does partitioning help in achieving modularity?CO4

OR

b. What are design specifications and design verification? Discuss their importance in ensuring correct and reliable software.CO3

Q4.   (10 Marks)
a. Explain the Agile process model in detail. How does it differ from traditional models like Waterfall?CO1

OR

b. Explain how software engineering contributes to solving real-world problems in industries such as healthcare, finance, and education.CO2

Q5.   (10 Marks)
a. What are the principles of good software requirement specifications? Illustrate with examples.CO3

OR

b. Explain the role of coupling and cohesion in designing reusable and maintainable software.CO6