

TILAK MAHARASHTRA VIDYAPEETH, PUNE
MASTER OF COMPUTER APPLICATIONS
EXAMINATION: DECEMBER - 2024
SEMESTER - I

Sub : Software Engineering (MCA24-105)

Date : 30/12/2024

Total Marks : 60

Time: 10.00 am To 12.30 pm

Instruction:

1. All questions are compulsory unless and otherwise stated.
2. Bold figures to the right of every question are the maximum marks for that question.
3. Candidates are advised to attempt questions in order.
4. Answers written illegibly are likely to be marked zero.
5. Use of scientific calculators, Log tables, Mollier Charts is allowed.
6. Draw neat and labelled diagram wherever necessary.

Q. 1. Answer the following in 2 - 3 lines. (Any 5) (10)

1. What is a node? Where we use it?
2. What is software engineering?
3. What are the different types of software?
4. What are some common tools used in software development?
5. Why is software engineering important?
6. What is UML, and why is it used?
7. When fork - and – join are used in activity diagram.

Q. 2. Answer the following in short. (Any 4) (20)

1. What does inheritance look like in a UML diagram?
2. What is the purpose of a sequence diagram?
3. What are the characteristics of software?
4. What are the objectives of requirement analysis?
5. What is an actor in a use case diagram? Give an example.
6. Explain relationships used in UML.

Q. 3. Answer the following in detail. (Any 3) (30)

1. Draw a sequence diagram for the Login Process of a web application.
2. What are the main phases of the software development life cycle (SDLC)?
3. Identify actors, use cases for an Online Food Delivery System, and draw the use case diagram.
4. Design a class diagram for an E-commerce System, highlighting the relationships between Customer, Product, Order, and Payment.
5. Draw an activity diagram to represent the process of Patient Admission in a hospital.
