TILAK MAHARASHTRA VIDYAPEETH, PUNE
MASTER OF COMPUTER APPLICATIONS
EXAMINATION : DECEMBER - 2023
SEMESTER - I
Sub : Software Engineering & Testing   (MCA- 103-22)

Date : 30/12/2023   **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 the difference between static and dynamic testing?
2. What are the different levels of software testing?
3. What are the roles of system analyst?
4. What is a testcase?
5. What are the characteristics of system?
6. Define SQA.
7. Define agile development.

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

1. Explain the role of documentation in software engineering. Why is it important and what types of documentation are commonly used?
2. What is the difference between functional and non-functional testing?
3. What are some common software development challenges, and how can they be addressed?
4. Write a short note on RAD model.
5. What is STLC? Explain.
6. Difference between QA and QC.

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

1. Draw and discuss spiral model for system development.
2. Explain any 10 quality factors that provide software quality.
3. Draw data flow diagram for railway ticket reservation system.
4. Explain equivalence partitioning in software testing.
5. Explain how waterfall model works with illustrative diagram.