

(3 Hours)

[Total Marks: 80]

- Note: 1) Question no. 1 is compulsory.
2) Solve any three out of remaining five questions.
3) Assume suitable data wherever necessary.

- Q.1 a) What is software testing and what are its goals? (05)
b) Brief about regression testing. (05)
c) Define software metrics. List various types of software metrics. (05)
d) Differentiate alpha testing and beta testing. (05)
- Q.2. a) Describe the key components of a test plan. (10)
b) Explain the McCall's quality factors. (10)
- Q.3. a) What are the challenges in testing web based software? (10)
b) What is static testing? Explain the types of static testing. (10)
- Q.4 a) Explain the need for test automation and specify the guidelines for automated testing. (10)
b) Describe Function Point Analysis (FPA) in detail. (10)
- Q.5 a) Draw the control flow graph and find the cyclomatic complexity for a program that finds the smallest of three given numbers. (10)
b) Discuss benefits of verification and validation in a project. (10)
- Q.6 Write short notes on **any four**. (20)
- a) System Testing
 - b) Equivalence class Testing
 - c) Integration Testing
 - d) Software Failure
 - e) Testing Tools