

M. Tech 2nd Semester (CSE) Examination,

May-2015

SOFTWARE VERIFICATION VALIDATION & TESTING

Paper-MTCE-608-A

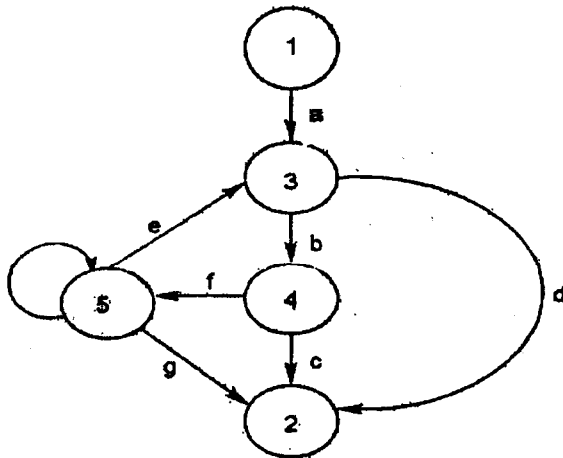
Time allowed : 3 hours]

[Maximum marks : 100

Note : Attempt any five question. All questions carry equal marks.

1. (a) What do you mean by software testing ? Explain its role in software development. 10
- (b) Explain various parameters that determine the limitation of testing ? How software testing is related to software reliability ? 10
2. (a) Define Fault, error, bug and failure. 10
- (b) Explain testing life cycle model. 10
3. (a) Differentiate between software verification and validation. How software verification and validation helps in improving software quality ? 10
- (b) Write notes on :
 - (i) V and V standards.
 - (ii) Verification of architectural design. 10

4. What do you mean by black box testing ? Explain various methods for black box testing. 20
5. (a) Consider the flow graph shown in the fig. and draw the graph and connection matrices. Find out cyclomatic complexity and two / three link paths from a node to any other node. 10



- (b) Write notes on : 10
- (i) Data flow testing
- (ii) Graph matrices.
6. (a) Explain structured walk through technique. 10
- (b) Explain various types of static testing. 10

7. Write notes on :

- (a) System testing
- (b) Performance testing
- (c) Coupling and cohesion
- (d) Driver stub. 20

8. (a) Explain design principle for test cases. How we can reduce the no. of test cases ? 10

(b) Explain the following :

- (i) Bug classification
- (ii) Testing metrics. 10