Duration: 2 hours   **Max Marks: 60**

Instructions: *1) Figures to the right indicate Full Marks.*
                 2) All Questions are compulsory, however there are internal choices.
                 3) Draw diagrams wherever necessary.

Q1. Answer any 5 of the following.   **5 x 2 = 10**

i. List any 4 characteristics of a good software engineer.
ii. What is a Software Development Life Cycle?
iii. Define "Lines of code" metric used in Software Project Management.
iv. What is a Gantt Chart?
v. Define the term 'Cohesion'.
vi. List the symbols used in a Use-Case Diagram.
vii. Define the term 'Composition' with respect to Class diagrams.

Q2. Answer any 5 of the following.   **5 x 2 = 10**

i. Define Black Box testing.
ii. List any 2 methods (formulas) to compute the Cyclomatic Complexity.
iii. Define Loop Testing .
iv. What is Beta testing ?
v. State any 2 benefits of software quality assurance.
vi. State any 4 techniques of requirements elicitation.
vii. State the 5 CMM Levels.

Q3. Answer the following.   **10**

A. Explain the Waterfall model of software development.
               OR
B. Explain the Spiral Model of software development.
C. Draw a level 1 DFD for Movie Ticket Booking. State the assumptions clearly.

Q4. Answer the following.   **10**

A. Discuss Work Breakdown Structure. Explain with an example.
               OR
B. Explain the PERT chart.
C. Explain Class Diagram with an example.

Q5. Answer the following.   **10**

A. Explain Mutation Testing.
               OR
B. What is Software Testing? State any 2 objectives of testing.

C.   What is a state-chart diagram? Explain.

Q6. Answer the following.   10

A.   Explain the Boundary Value Analysis Testing method.
                          OR
B.   Describe Compatibility Testing?
C.   Explain Data Flow testing.

=========ALL THE BEST==========