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 Regression Testing.
iv. What is Beta testing ?
v.   State any 2 benefits of software quality assurance.
vi. What is a formal technical review?
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. Describe the FURPS Quality factors.

Q6. Answer the following. 10

A. Explain the Boundary Value Analysis Testing method.
                OR
B. Describe Compatibility Testing?
C. Explain the process of Formal Technical Review.

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