BCA/ D-15
SOFTWARE ENGINEERING
PAPER-BCA-234

Time Allowed: 3 Hours   Maximum Marks: 80

Note: Attempt five questions in all, selecting at least one question from each Unit.
Question No. 1 is compulsory. All questions carry equal marks.

Compulsory Question

1. (a) Justify the term "Software is Engineered".
   (b) Distinguish between Process, Methods, Tools.
   (c) Give an example of a design fault that leads to failure.
   (d) What is Software Architecture?
   (e) What is meant by Software change?
   (f) In general, how do we know when to stop testing software and declare it "done", or at least done for now?
   (g) What is the role of Data dictionary?
   (h) Define software quality.

UNIT-I

2. (a) What do you mean by Waterfall model? How prototyping overcomes some disadvantages of waterfall model?
   (b) Discuss the term "Software Crisis – problem and causes" with example

3. Discuss the following in detail
   (a) Evolutionary and Sprial models.
   (b) Role of Metrics.

UNIT-II

4. (a) What is the aim of requirements analysis and specification phase of software development? Discuss various activities undertaken during this phase
   (b) What is Feasibility study? Discuss different aspect of conducting a feasibility study.

5. (a) What is the difference between Verification and Validation? Discuss in detail with the help of proper example.
   (b) What do you mean by Software Requirement Specification (SRS)? Discuss the characteristics of goods SRS.

UNIT-III

6. (a) What is Data Flow Diagram (DFD)? What is the difference DFD and Flow Chart? Explain using suitable examples.
    (b) Write short notes on the following:
        (i) ER Diagram
        (ii) Decision tree.

7. (a) Enumerate different types of Coupling and Cohesion between modules. What problems arise if two modules have high coupling and if one module has low cohesion?
    (b) What is Software Maintenance? Discuss different types of maintenance in detail.

UNIT-IV

8. (a) What do you meant by Software project planning? Why is it so Important? State major issues of consideration in project planning.
    (b) What is Software project estimation? Discuss COCOMO model in Detail.

9. Write short notes on the following :
    (a) Unit testing
    (b) Integration testing
    (c) Validation testing
    (d) System testing.