

Roll No.

BCA/D-13

892
SOFTWARE ENGINEERING
Paper: BCA—353

Time: Three Hours]
[Maximum Marks: 80

Note: Attempt five questions in all. Question number 1 is compulsory. Attempt four more questions selecting one question from each unit. All questions carry equal marks.

(Compulsory Question)

1. (i) List the symbols used in ERD.
(ii) What is stamp coupling?
(iii) What is software metric?
(iv) What type of faults are detected by integration testing ?
(v) What is SCI?

UNIT—I

2. (a) What do you understand by software crisis ? Write a detailed note on the factors responsible for software crisis.
(b) What do you understand by democratic team structure? What are its applications and limitations?
3. (a) What are the factors affecting the cost of software? Discuss in brief COCOMO I.
(b) What is prototyping? Differentiate between evolutionary and throwaway prototyping.

UNIT—II

4. Differentiate between following using suitable examples:
(a) Functional and non-functional requirements
(b) Data coupling and control coupling.
5. (a) What is Data Flow Diagram (DFD) ? What is the difference between DFD and Flow Chart? Explain using suitable examples.
(b) What do you understand by temporal and functional cohesion? Explain using suitable examples.

UNIT—III

6. (a) What is structured programming? Discuss its effect on productivity of programmer and debugging.
(b) What is cyclomatic complexity? Write a note on cyclomatic path testing.
7. (a) What are functional testing and structural testing ? Types of faults are detected by them ? Discuss.
(b) Explain the Boundary Value Analysis using suitable example.

UNIT—IV

8. (a) What is maintenance process ? Differentiate between adaptive and perfective maintenance using suitable example.
(b) What is the difference between verification and validation? Discuss.
9. (a) What is beta testing ? What is the need of doing beta testing after alpha testing?
(b) Differentiate between top—down and bottom-up testing.

