

April 2025
B.A./B.Sc.
Fourth Semester
CORE – 9
COMPUTER SCIENCE
Course Code: CSC 4.21
(Software Engineering)

Total Mark: 70

Pass Mark: 28

Time: 3 hours

Answer five questions, taking one from each unit.

UNIT-I

1. (a) What do you mean by software engineering? Explain the key principles of software engineering. 1+6=7
(b) Explain the types of software in detail with examples. 7
2. (a) List the advantages and disadvantages of software engineering. 6
(b) Explain any two SDLC models in detail. 8

UNIT-II

3. (a) Write a note on requirement analysis. List and explain the types of software requirements. 2+5=7
(b) Explain the types of DFD. Write a note on the various levels of DFD. 2+5=7
4. (a) List and explain the steps involved in software requirement analysis. 4
(b) Explain the features of a good SRS document. 4
(c) What is an ER diagram? Explain the components of an ER diagram. 1+5=6

UNIT-III

5. (a) What is software metric? Explain the functions and types of software metrics. 1+6=7

(b) What are the objectives of a software review? Explain the types of software reviews. 2+5=7

6. (a) Write a note on the activities of software quality assurance? Write one advantages and one disadvantages of an SQA. 5+2=7

(b) What is software measurement? Explain the principles of software measurement. 1+6=7

UNIT-IV

7. (a) What is software design phase? Explain the types of software design. 1+6=7

(b) Write a note on data flow architecture. Write the advantages and disadvantages of data flow architecture. 3+4=7

8. (a) Explain in detail the objectives of software design. 7

(b) Explain component design in detail. Write the characteristics of component based design. 3+4=7

UNIT-V

9. (a) Write a note on black box testing. Write the advantages and disadvantage of black box testing. 2+5=7

(b) Explain the steps involved in white box testing. 7

10. (a) Write a note on white box testing techniques. 7

(b) What is unit testing? Write the advantages and disadvantages of unit testing. 1+6=7
