2023
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 <u>five</u> *questions, taking* <u>one</u> *from each unit.*

UNIT–I

1. (a) Explain why software engineering is important?   6
   (b) List and explain the umbrella activities in software process.   8

2. (a) What is SDLC? Explain the seven phases of SDLC.   1+7=8
   (b) Write a note on the spiral model.   6

UNIT–II

3. (a) What do you understand by software requirement analysis?   2
   (b) Explain all the characteristics that a good SRS should have.   12

4. (a) What are the four requirement engineering processes?   8
   (b) Explain with the help of illustrations 0-level, 1-level, and 2-level DFD.   6

UNIT–III

5. (a) What do you mean by software quality management? What are its core components?   2+3=5
   (b) Explain the activities performed by a SQA group.   9

6. (a) What are software metrics? Explain the classification of software metrics.   1+3=4

(b) List the differences between quality assurance and quality control.   7

(c) Why do we need software measurement?   3

UNIT–IV

7. (a) Explain the fundamental software design concepts.   7

   (b) What is box-diagram? Give an example of a box-diagram vs a flowchart.   2+5=7

8. (a) Explain the different types of architectural patterns.   10

   (b) What do you mean by transform mapping? Explain in brief transform flow and transaction flow.   2+2=4

UNIT–V

9. (a) What is software testing? What are the types of software testing?   1+2=3

   (b) What is the classification of manual testing?   6

   (c) Write five differences between white-box and black-box testing.   5

10. (a) List and explain the different levels in software testing.   10

   (b) Write a note on basis path testing.   4

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