R19

Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech III Year I Semester Regular Examinations December-2021
SOFTWARE ENGINEERING & TESTING
(Computer Science & Information Technology)

Time: 3 hours   Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1	a	Compare the waterfall model and the spiral model of software development.	L2	6M
	b	Describe the rapid application development (RAD) model. Discuss each phase in detail.	L2	6M

OR

2	a	Explain in detail the following software metrics with example. i) Size metric. ii) Token Count.	L2	6M
	b	Write a factorial program in C language. List out the operators and operands and also calculate the values of software science measure like η, N, V, E, and λ?	L5	6M

UNIT-II

3	a	What is COCOMO Model? Explain Basic COCOMO model in detail	L2	6M
	b	Suppose that a project was estimated to be 400 KLOC. Calculate the effort, development time for each of the three modes (i.e., organic, semidetached and embedded and analyze.	L6	6M

OR

4	a	Explain the cost estimation models	L1	6M
	b	A database system is developed. The effort has been estimated to be 100 persons-months. Calculate the number of line of code and productivity in LOC/ persons-month.	L6	6M

UNIT-III

5	a	Illustrate software design framework.	L2	6M
	b	Define cohesion and coupling. Explain relationship between cohesion and coupling.	L1	6M

OR

6	Explain the following software reliability models: i) Basic Execution Time Model ii) Calendar Time Component Model.			L2	12M

UNIT-IV

7	a	What are the objectives of testing? Why is the psychology of a testing person important?	L1	6M
	b	Summarize an effect graphing testing technique.	L2	6M

OR

8	a	What is the difference between Alpha testing & beta testing	L2	6M
	b	What is the difference between Functional & structural testing	L2	6M

UNIT-V

9 a Classify different categories of software documentation.   L1   6M
   b Compare New software development and Re-engineering   L4   6M

OR

10 a Explain the phases of software maintenance with help of a diagram .   L5   12M

*** END ***