Q.P. Code: 18CI0603

Reg. No:

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR

(AUTONOMOUS)

B.Tech III Year I Semester Regular Examinations Feb-2021

SOFTWARE ENGINEERING & TESTING (Computer Science & Information Technology)

Time: 3 hours

1

Max. Marks: 60

PART-A

	(Answer all the Questions $5 \times 2 = 10$ Marks)	
a	What do you understand by term software development life cycle?	2M
b	What is static multi variable model?	2M
c	Define cohesion and coupling.	2M
d	Define acceptance testing.	2M

Differentiate between re-engineering and new development 2M

PART-B

(Answer all Five Units $5 \times 10 = 50$ Marks)

UNIT-I

2 **a** Compare the waterfall model and the spiral model of software development. **5**M **b** Is software metrics required in software engineering? Why do we really need **5**M metrics in software?

OR

- **a** List the process maturity levels in SEI's CMM. Explain each level. 3 **5M**
 - **b** Define Software metrics. Classify software metrics and Explain advantages and **5M** disadvantages of software metrics.

UNIT-II

- List the characteristics of good SRS document and their requirements. 4 **5M** a
 - b A project size of 300 KLOC is to be developed. Software development team has **5M** average experience on similar type of projects. The project schedule is not very tight. Calculate the effort, development time, average staff size and productivity of the project.

OR

- Give the steps involved in initiating requirements engineering **5**M 5 a
 - **b** Model a Dataflow diagram for a "Library Management System". State and explain **5M** the functional requirements you are considering.

UNIT-III

- 6 Discuss the objectives of software design. How do we transform an informal design **5M** a to a detailed design?
 - **b** If a module has logical cohesion, what kind of coupling is this module likely to have **5**M with others?

OR

- Discuss the objectives of software design. How do we transform an informal design 7 a **5M** to a detailed design?
 - **b** Describe the various strategies of design. Which design strategy is most popular and **5M** practical?



5M

10M

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UNIT-IV

- 8 a Differentiate between Functional & structural testing
 - b Consider a program for the determination of the nature of roots of a quadratic 5M equation. Its input is a triple of positive integers (say a,b,c) and values may be from interval [0,100]. The program output may have one of the following words. [Not a quadratic equation; Real roots; Imaginary roots; Equal roots] Identify the equivalence class test cases for output and input domains.

OR

9	a	Explain the boundary value analysis testing techniques with the help of an example.	5M
	b	Summarize an effect graphing testing technique.	5M

UNIT-V

10 List out system documentation and explain their purpose.

OR

a What are the appropriate reverse engineering tools? Discuss any two tools in detail.
b What is reverse engineering? Discuss levels of reverse engineering
5M

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