

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech. III Year I Semester Regular Examinations December-2023

SOFTWARE ENGINEERING

(Common to CCC & CIC)

Time: 3 Hours

Max. Marks: 70

PART-A

(Answer all the Questions 10 x 2 = 20 Marks)

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|-----|---|-----|----|----|
| 1 a | What is Exploratory style of software development. | CO1 | L1 | 2M |
| b | What is software crisis. | CO1 | L1 | 2M |
| c | Identify skills necessary for Managing Software Projects. | CO2 | L1 | 2M |
| d | What is a Formal Technique? | CO2 | L1 | 2M |
| e | Write the difference between Coupling and Cohesion. | CO3 | L3 | 2M |
| f | Define Design Review. | CO3 | L3 | 2M |
| g | Give two advantages about Integration testing. | CO4 | L2 | 2M |
| h | What is statistical testing? | CO4 | L2 | 2M |
| i | List out the Types of Software Maintenance. | CO5 | L1 | 2M |
| j | Mention any two Benefits of CASE. | CO5 | L1 | 2M |

PART-B

(Answer all Five Units 5 x 10 = 50 Marks)

UNIT-I

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|-----|--|-----|----|----|
| 2 a | Evaluate the exploratory S style of software development. Graphically depict the activities that a programmer typically carries out while developing a programming solution using the exploratory style. | CO1 | L1 | 5M |
| b | Explain in detail the following Waterfall Model and its Extensions.
i) Classical Waterfall Model ii) Incremental Development Model | CO1 | L1 | 5M |

OR

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|-----|---|-----|----|----|
| 3 a | Express what do you understand by terms of software development life cycle? Why it is important to while developing as of software product? | CO1 | L2 | 5M |
| b | Explain the spiral model of software development. What are the Limitations of such model? | CO1 | L2 | 5M |

UNIT-II

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|-----|--|-----|----|----|
| 4 a | List the important shortcomings of LOC metric when used as a software size metric for carrying out project estimations. | CO2 | L2 | 5M |
| b | What is a Formal Technique? Identify important concepts in formal methods, and examine the merits and demerits of using formal techniques. | CO3 | L3 | 5M |

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| 5 a | Evaluate the analytical technique 'Halstead's Software Science' with example. | CO2 | L5 | 5M |
| b | Illustrate basic classes of software development projects with examples. | CO2 | L2 | 5M |

UNIT-III

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| 6 a | Compose and Explain briefly about Design Processes. | CO3 | L6 | 5M |
| b | Discuss about fundamentals of Component based GUI development. | CO3 | L2 | 5M |

OR

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| 7 a | Explain briefly about the concept of the following.
i) Structured Analysis ii) Structured Design | CO3 | L1 | 6M |
| b | Explain Developing the DFD model of a system. | CO3 | L3 | 4M |

UNIT-IV

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|-----|---|-----|----|----|
| 8 a | What do you understand by the term integration testing? Briefly explain the important strategies used for integration testing of procedural programs. | CO4 | L3 | 6M |
| b | Explain the concept of a Reliability Growth Model in software engineering. | CO4 | L2 | 4M |

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| 9 a | Classify the different types of program analysis tools used during program development. | CO4 | L3 | 5M |
| b | Define the term total quality management (TQM). What are the advantages of TQM? | CO4 | L3 | 5M |

UNIT-V

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|------|--|-----|----|----|
| 10 a | Describe about software reverse engineering with examples. | CO5 | L2 | 5M |
| b | Explain in detail about case support in software life cycle. | CO5 | L2 | 5M |

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| 11 a | Describe about architecture of a case environment with neat sketch. | CO5 | L2 | 5M |
| b | Discuss about Characteristics of Software Evolution. | CO5 | L2 | 5M |

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