

Reg. No:

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

B.Tech II Year I Semester Regular & Supplementary Examinations March-2023
OPERATING SYSTEMS

(Common to CSE, CAD, CSM, CIC & CCC)

Time: 3 hours

Max. Marks: 60M

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

UNIT-I

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|---|---|------|----|----|
| 1 | a List and discuss the different functions of an operating system | CO 1 | L1 | 6M |
| | b Explain different operations performed by the operating system. | CO 1 | L2 | 6M |

OR

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|---|---|------|----|----|
| 2 | a Define System call, List different types of system calls. | CO 1 | L1 | 6M |
| | b Evaluate different types of system calls in operating system. | CO 1 | L5 | 6M |

UNIT-II

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|---|--|------|----|----|
| 3 | a Show the usage of process synchronization. | CO 2 | L2 | 6M |
| | b Define scheduling .Explain SJF scheduling algorithm. | CO 2 | L1 | 6M |

OR

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|---|---|------|----|----|
| 4 | a Explain the Structure of user level thread and kernel level thread. | CO 2 | L4 | 6M |
| | b List the Advantages of ULT and KLT. | CO 2 | L1 | 6M |

UNIT-III

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|---|--|------|----|----|
| 5 | a What is Monitor? Explain with syntax. | CO 3 | L2 | 6M |
| | b Write Short notes on Classical Problem of Synchronization. | CO 3 | L1 | 6M |

OR

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|---|--|------|----|----|
| 6 | a Construct Dining Philosophers Problem. | CO 4 | L6 | 6M |
| | b Develop Readers Writer Problem. | CO 4 | L2 | 6M |

UNIT-IV

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|---|-----------------------------------|------|----|-----|
| 7 | Discuss in detail virtual memory. | CO 5 | L2 | 12M |
|---|-----------------------------------|------|----|-----|

OR

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|---|--|------|----|----|
| 8 | a Classify Thrashing. | CO 5 | L4 | 6M |
| | b Given page reference string:1,2,3,2,1,5,2,1,6,2,5,6,3,1,3,6,1,2,4,3. Compare the number of page faults for LRU, FIFO and Optimal page replacement algorithm. | CO 5 | L5 | 6M |

UNIT-V

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|---|--|------|----|----|
| 9 | a Demonstrate goals of protection in the OS. | CO 6 | L2 | 6M |
| | b Explain about Principles of Protection. | CO 6 | L2 | 6M |

OR

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| 10 | Justify digital signature in detail. | CO 6 | L6 | 12M |
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