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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**

(AUTONOMOUS)

**M.Tech I Year I Semester Regular Examinations July-2021****EMBEDDED SYSTEM DESIGN**

(VLSI)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- |   |   |    |    |
|---|---|----|----|
| 1 | a What do you mean by system-on-chip (SOC)?   | L1 | 4M |
|   | b Explain briefly about the need for software in embedded systems.                    | L2 | 4M |
|   | c Discuss the factors to be considered for selection of processor in embedded system. | L6 | 4M |

**OR**

- |   |   |    |    |
|---|---|----|----|
| 2 | a Explain about the details of other hardware units available in embedded system. | L2 | 6M |
|   | b Illustrate with example the techniques used for memory devices.                 | L2 | 6M |

**UNIT-II**

- |   |  |    |    |
|---|--|----|----|
| 3 | a Explain the concept of IO addresses of ports and devices in real time world interfacing. | L2 | 6M |
|   | b Explain selection of processor in embedded systems.                                      | L2 | 6M |

**OR**

- |   |   |    |    |
|---|---|----|----|
| 4 | a Explain ARM processor.                    | L2 | 4M |
|   | b Explain about networked embedded systems. | L2 | 8M |

**UNIT-III**

- |   |  |    |    |
|---|--|----|----|
| 5 | a Explain loader, interpreter and Cross compiler.                                      | L1 | 6M |
|   | b Define kernel. What are the different functions handled by a general purpose kernel? | L1 | 6M |

**OR**

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|---|--|----|----|
| 6 | a Explain development process and hardware and software. | L2 | 6M |
|   | b Explain about source code engineering tool.            | L2 | 6M |

**UNIT-IV**

- |   |   |    |    |
|---|---|----|----|
| 7 | a Discuss about the special features of SHARC processor as compared with ARM processor. | L6 | 6M |
|   | b Write a short note on processor and memory organization.                              | L1 | 6M |

**OR**

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|---|--|----|----|
| 8 | a Explain the operation of BL instruction. Also mention the state of ARM registers before and after its operation. | L2 | 6M |
|   | b Explain the instruction set simulator.   | L2 | 6M |

**UNIT-V**

- |   |                                       |    |    |
|---|---------------------------------------|----|----|
| 9 | a Write in detail about telephone PBX | L2 | 6M |
|   | b Explain ink jet printer.            | L2 | 6M |

**OR**

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|----|--|----|----|
| 10 | a Explain advantages & disadvantages of GPRS .                       | L2 | 6M |
|    | b Explain how personal digital assistants is making our life easier. | L2 | 6M |

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