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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY: PUTTUR**  
**(AUTONOMOUS)**  
**B.Tech II Year II Semester Supplementary Examinations February-2022**  
**COMPUTER ORGANIZATION**  
 (Common to CSE & CSIT)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 Explain about the Structure of Bus and types of Bus with neat diagram. 12M

OR

- 2 a Explain detail about Instruction Cycle with neat sketch. 6M  
 b Write about Memory-Reference-Instruction. 6M

**UNIT-II**

- 3 Explain the logic behind carry - look ahead addition with its circuit diagram and High level generate and propagate function circuit diagram. 12M

OR

- 4 Illustrate Bit-Pair recoding of multipliers derived from Booth recoding with example. 12M

**UNIT-III**

- 5 Explain about the overall arithmetic circuit that performs all kinds of AMO with a neat diagram. 12M

OR

- 6 a Write about Bus transfer with neat diagram. 6M  
 b Write out Register Representations and way it is used. 6M

**UNIT-IV**

- 7 What is Main Memory and what are the types in it, Explain in detail. 12M

OR

- 8 a List out some differences between RAM & ROM. 6M  
 b List out some differences between SRAM & DRAM. 6M

**UNIT-V**

- 9 Explain briefly about Arithmetic pipeline with neat diagram and examples. 12M

OR

- 10 a List out the conflicts in pipelining and explain about it 6M  
 b Explain about 4-segment Instruction Pipeline with neat diagram 6M

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