

**Reg. No:**

--	--	--	--	--	--	--	--	--	--

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

**M.Tech I Year II Semester Regular Examinations October-2020**

**HARDWARE SOFTWARE CO-DESIGN**

(Embedded Systems)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 a With block diagram explains a generic co-design methodology. **6M**  
b Explain Vulcan methodology in hardware-software partitioning. **6M**

**OR**

- 2 a What are the different types of co-design models & architectures? **6M**  
b Explain about hardware – software partitioning. **6M**

**UNIT-II**

- 3 a Explain in detail about prototyping and emulation techniques. **6M**  
b Write about Quickturn emulation system. **6M**

**OR**

- 4 a Explain about mentor SimExpress emulation system. **6M**  
b Write a short note on system communication infrastructure. **6M**

**UNIT-III**

- 5 a Describe the architecture for ADSP21060 data dominated system. **6M**  
b Discuss about memory architectures. **6M**

**OR**

- 6 a Explain the following: (i) Target architecture. (ii) Application system classes. **6M**  
b Explain about mixed systems. **6M**

**UNIT-IV**

- 7 a What is a compiler development environment? Explain it with a suitable circuit. **6M**  
b What are the tools required for embedded processor architecture? **6M**

**OR**

- 8 a What is meant by co-design? Explain the co-design computational model? **6M**  
b Write a short note on compilation techniques. **6M**

**UNIT-V**

- 9 a What are the difficulties with the design of heterogeneous hardware/software systems? **6M**  
b What are the system level specifications? **6M**

**OR**

- 10 a Discuss the multi-language co-simulation LYCOS system. **6M**  
b Explain about ESMD representation. **6M**

\*\*\* END \*\*\*