

Code No: 155AK**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****B. Tech III Year I Semester Examinations, February - 2022****COMPUTER ARCHITECTURE****(Electrical and Electronics Engineering)****Time: 3 hours****Max. Marks: 75****Answer any five questions
All questions carry equal marks**

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- 1.a) Differentiate between CISC and RISC architectures. Discuss their characteristics.
b) Explain the operation of Control Unit. [8+7]
- 2.a) Explain any five arithmetic micro operations.
b) Describe the multi-bus organization with a neat sketch. [7+8]
- 3.a) What is Virtual memory? Discuss the issues involved in implementing virtual memory.
b) Explain the functions of DMA controller. [7+8]
- 4.a) Define Cache memory and describe about features of self-associative and direct mapping.
b) What are the features of PCI Express Bus? Explain. [7+8]
- 5.a) Differentiate between IA-32 and IA-64.
b) What is segmentation? How it is done in 8086? Explain. [7+8]
- 6.a) Explain about Concurrent operation of EU and BIU.
b) Discuss about the instruction set of 8086 in brief. [8+7]
- 7.a) What is Pipelining? Explain about Instruction level pipelining (ILP).
b) Discuss about the compiler techniques for ILP. [8+7]
- 8.a) With a neat sketch, explain the DSP architecture.
b) Discuss in brief about MIPS processor and its programming. [7+8]

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