

Code No: 155AK

R18

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

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