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
- - -

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]

---ooOoo---