**R09**

**Code No: C3809, C5505**

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**
**M.TECH I- SEMESTER EXAMINATIONS APRIL/MAY-2012**
**ADVANCED COMPUTER ARCHITECTURE**
**(COMMON TO DIGITAL ELECTRONICS AND COMMUNICATION SYSTEMS, EMBEDDED SYSTEMS)**

**Time: 3hours** **Max.Marks:60**

**Answer any five questions**
**All questions carry equal marks**

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1.a) Explain the elements of an instruction and the state diagram of instruction cycle.
b) Write about Pentium data types.

2.a) Discuss arithmetic and logical shift operations.
b) List the differences between CISC and RISC.

3.a) Briefly discuss the characteristics of cache memory.
b) Explain dynamic RAM structure and operation.

4.a) Write a detail note on Digital Versatile Disk technology.
b) Describe generic model of I / O module.

5.a) Give the architecture of I / O channel.
b) What is a data hazard? How to avoid it?

6.a) Discuss the basic compiler techniques for exposing instruction level parallelism.
b) Explain symmetric shared memory architectures.

7. What is RAID? Discuss various levels of RAID and its importance in system maintenance.

8. Write shorts notes on
a) Horizontal instruction format
b) SCSI bus
c) Multistage networks.

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