15898

Name: .....

Reg. No. .....

EIGHTH SEMESTER B.TECH. DEGREE EXAMINATION, JUNE 2011

CS.04.802 – Computer Architecture and Parallel Processing

Time: Three hours **Maximum: 100 marks**

(Answer all questions)

PART – A

1. a. Draw and explain the graph that depicts the growth in microprocessor performance and effect of this growth.
   b. Explain the four different types of control flow change.
   c. What are Data hazards? How are they classified?
   d. Write notes on vector length and stride.
   e. Distinguish between caches and virtual memory.
   f. What is meant by vector processing? Explain.
   g. Describe the two forms of fibre optic cables.
   h. Explain Flynn's classification of computers.

(8x5=40 marks)

PART – B

2. a. i). Explain the different classification of instruction set architectures.
      ii). Explain the addressing modes for control flow instructions.

   OR

   b. i). Explain the role of compilers in instruction architectures.
      ii). Explain the process involved in extending the DLX pipeline to handle multicyle operations.

3. a. Explain dynamic scheduling using Tomasulo's approach.

   OR

   b. Explain the advanced compiler support for exposing and exploiting ILP.

4. a. Explain different missrate reduction technique.

   OR

   b. i). Explain virtual memory protection mechanisms.
      ii). Explain the term reliability and availability.

5. a. Describe a simple network with respect to -
      i). sending, receiving and acknowledging messages.
      ii). Discuss shared verus switched media of interconnection.

   OR

   b. Explain the characteristics of Application domains.

(4x15=60 marks)

.....