M.Tech.
ADVANCED COMPUTER ARCHITECTURE
SUBJECT CODE : CS - 505
Paper ID : [E0685]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours   **Maximum Marks : 100**

Instruction to Candidates:

1) Attempt any **Five** questions.
2) **All** questions carry equal marks.

Q1) (a) What is the degree of parallelism? Explain the classification of computer systems based on Handlers Classification.

(b) Explain parallelism and pipelining. Describe a computer classification based on these concepts.

Q2) What is computer system architecture? Describe in detail the architecture classification schemes.

Q3) (a) Discuss different problems associated with multi cache and suggest suitable solutions.

(b) What is the concept of cache coherence? Describe the MESI protocol.

Q4) (a) Draw the structure of a parallel memory system with consecutive words in consecutive modules and describe its working. Also highlight its merits and demerits.

(b) Describe shared memory MIMD architecture?

Q5) Explain different vector processing methods with suitable illustrations?

Q6) Write about
  (a) Super pipelining
  (b) pipelining
  (c) pipeline throughput
  (d) Interleaved memory

Q7) Explain in detail the concept of code scheduling for ILP-processors?

Q8) (a) What is data parallel architecture? How it is important in uniprocessor and multiprocessor architecture?
  (b) Explain briefly the methodology for evaluating the performance of a parallel algorithm.?

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