Paper ID [CS505]

(Please fill this Paper ID in OMR Sheet)

M.Tech.

ADVANCED COMPUTER ARCHITECTURE (CS - 505)

Time : 03 Hours   Maximum Marks : 100

Instruction to Candidates:

1) Attempt any **Five** questions.

2) **All** questions carry equal marks.

Q1) Compare and contrast various computational models.

Q2) (a) Discuss the interpretation of the concept of computer architecture at different levels of abstraction.

(b) Explain the following concepts with respect to parallel processing:-
    (i) Process   (ii) Process and Threads in languages

Q3) Describe in detail dependencies between instructions.

Q4) (a) Discuss performance issues and applications of pipelines.

(b) Discuss design space of shelving.

Q5) (a) Explain the issue policies for a superscalar instruction.

(b) What are the major types of branches? How does architecture check the result of operations? Discuss.

Q6) (a) Discuss levels of parallelism in computing.

(b) Compare scalar performance with vector performance in terms of speeding up of computation.

Q7) Discuss in detail any two multi-threaded models.

Q8) Write short notes on:-
    (a) MIMID architecture
    (b) VLIW architecture