Roll No. .....

Total No. of Questions : 08] [Total No. of Pages : 02

M.Tech. (Sem. - 1st)

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) Write short notes on the following.

(a) Multiplexer.

(b) Encoder

(c) Flip Flops.

(d) AND logic Gate.

(e) Interrupts.

Q2) (a) How the instructions are executed. Explain the fetch-decode-execute cycle and also make the diagram to explain the process.

(b) What you mean by Virtual to real mapping. Explain with example.

Q3) (a) Make an abstract model of parallel computer architecture & explain the various components of this model.

(b) Differentiate between SIMD and MIMD.

Q4) (a) Write detail note on VLIW architecture.

(b) Where ILP processors processor are used. How these are different from other processors.

Q5) (a) Explain in detail a bout data parallel architecture. Make proper diagram.

(b) What you understand by vector architecture. What are various applications of vector processors.

Q6) Superscalar processor allows a faster CPU throughput due to instruction level parallelism. Explain the working of superscalar processors with the help of proper illustration.

Q7) (a) Explain different types of multithreading concepts.

(b) How processing of control transfer instruction is done.

Q8) Discuss and differentiate Distributed Memory MIMD architecture and Shared Memory MIMD architecture.