

Code: R7420305

R7**B.Tech IV Year II Semester (R07) Advanced Supplementary Examinations June 2012****COMPUTER ORGANIZATION AND ARCHITECTURE****(Mechanical Engineering)**

Time: 3 hours

Max Marks: 80

Answer any FIVE questions

All questions carry equal marks

- 1 (a) Make out differences between multiprocessors and multicomputers.
(b) Explain the functional unit of a computer system.
- 2 Describe the instruction cycle with the help of a neat diagram. Also draw the flow chart for the same.
- 3 (a) Explain the characteristics of RISC.
(b) Explain any four addressing modes in detail.
- 4 Describe the design of control unit in detail.
- 5 (a) Explain about the direct mapping in cache memory.
(b) Explain about the following:
(i) RAM (ii) ROM.
- 6 (a) Differential Isolated I/O and memory mapped I/O.
(b) Explain about the DMA transfer in a computer system with neat diagram.
- 7 Explain the pipe line processing with an example. Also draw the space time diagram for pipe line and derive the equation for speed up ratio.
- 8 (a) Describe the time shared common bar interconnection structure.
(b) What is multi processor? Explain its characteristics.
