

Code: R7220504

R07

B.Tech II Year II Semester (R07) Supplementary Examinations, April/May 2013

COMPUTER ORGANIZATION
(Common to CSE, IT, CSS & ECC)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the operation of a computer.
(b) Perform the subtraction with the following unsigned decimal numbers by taking 10's complement of the subtrahend.
 - (i) 5250 – 1321
 - (ii) 1753 – 8640
 - (iii) 20 – 100
 - (iv) 1200 – 250
- 2 (a) What is an instruction? With a neat flowchart explain instruction cycle.
(b) Write the characteristics of a RISC processor.
- 3 What are the approaches for designing the control unit? Explain each of them in detail.
- 4 With an example explain how division of two fixed point binary numbers when negative numbers are in signed-magnitude representation.
- 5 (a) Describe the various types of semiconductor memories.
(b) What is the need for cache memory? Explain direct mapped cache organization.
- 6 (a) What is the difference between isolated I/O and memory-mapped I/O? What are the advantages and disadvantages of each?
(b) Give a detailed note on CPU-IOP communication.
- 7 Explain RISC pipeline in detail.
- 8 What is the need for bus arbitration? Explain in detail the two static bus arbitration procedures.
