Code: R7310402



## B.Tech III Year I Semester (R07) Supplementary Examinations, May 2013 COMPUTER ORGANIZATION

(Common to ECE, EIE and E.Con.E)

Time: 3 hours

Max Marks: 80

## Answer any FIVE questions All questions carry equal marks \*\*\*\*\*

- 1 What are functional units? Discuss in detail about basic functional units of a computer?
- Explain the three-state bus buffer with a suitable example. 2 (a)
  - Explain about memory transfer with an example. (b)
- 3 (a) Draw flow chart of instruction cycle.
  - Draw flow chart of single bus organization processor. (b)
- 4 Draw and explain flow-chart for addition and subtraction operation.
- What is a bootstrap loader? Where is it stored and why? 5 (a)
  - An address space is specified by 24 bits and the corresponding memory space by 16 bits. (b) (i) How many words are there in the address space?
    - (ii) How many words are there in the memory space?
    - (ii) If a page consists of 2K words, how many pages and blocks are there in the system?
- Draw the block diagram of an asynchronous communication interface and explain its 6 (a) operation.
  - Why does DMA have priority over the CPU when both request a memory transfer? (b)
- 7 Discuss about the two areas of computer design where the pipeline organization is applicable.
- What is multiprocessing? Explain its benefits. 8 (a)
  - Explain serial arbitration and parallel arbitration procedures in detail. (b)

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