

Code: R7220504

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B.Tech II Year II Semester (R07) Supplementary Examinations December/January 2015/2016

## COMPUTER ORGANIZATION

(Common to CSE, IT, CSS & ECC)

(For 2008 Regular admitted batch only)

Time: 3 hours

Max. Marks: 80

## Answer any FIVE questions All questions carry equal marks

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- 1 (a) What is hardware, software and computer?
  - (b) Differentiate between single bus and two-bus structures.
  - (c) Explain in brief about floating point representation.
- 2 (a) Explain various addressing modes with example.
  - (b) What are standard logic gates? Describe the functionality of each logic gate along with its symbol.
  - (c) Explain the synthesis of NAND and NOR gates.
- 3 (a) Explain control transfer in hardwired control unit with suitable diagram.
  - (b) Explain vectored interrupts.
  - (c) Explain control memory.
- 4 (a) Describe Booth's multiplication algorithm.
  - (b) Explain the signed-operand multiplication and integer division.
- 5 (a) Explain memory hierarchy.
  - (b) Define different types of ROM.
  - (c) Explain the concept of virtual memory and its implementation.
- 6 (a) Explain the design issues and data transfer in D.M.A with suitable diagram.
  - (b) What is interrupt? Explain the all types of interrupts in the complete execution of instruction.
- 7 (a) With a neat diagram, explain the instruction pipeline processing in RISC architecture.
  - (b) What are data path considerations? Explain.
  - (c) What is the use of fast multipliers? Write array multipliers.
- 8 (a) What do you mean by cache coherence? Mention the conditions for cache-coherence. Explain how cache coherence problem can be resolved by a snoopy.
  - (b) Describe the architecture of a shared memory multiprocessor.

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