

Code: R7310201

R7

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

COMPUTER SYSTEM ORGANIZATION

(Electrical and Electronics Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

- 1 Repeat decimal number 8620 in:
 - (a) BCD.
 - (b) Excess-3 code.
 - (c) 2421 code.
 - (d) As a binary number.
- 2 (a) Design a 4-bit combinational circuit for decrementer using four full-adder circuits.
(b) What is the difference between a direct and an indirect address instruction?
- 3 Define the following reference instructions with a example:
 - (a) ADD to AC.
 - (b) STA: Store AC.
 - (c) ISZ: Increment and skip if zero.
 - (d) AND to ac.
 - (e) LDA: Load to AC.
- 4 (a) Design the block diagram of micro programmed control organization and explain its components.
(b) Define microinstruction format.
- 5 (a) Differentiate between address space and memory space.
(b) Explain address mapping using pages.
- 6 (a) Explain the process of data transfer from I/O device to CPU.
(b) Explain the following:
 - (i) Priority interrupt.
 - (ii) Interrupt cycle.
- 7 Explain the concept of instruction pipeline with example.
- 8 (a) Explain system bus structure for multiprocessors with a neat sketch.
(b) Explain the functioning of binary tree network with 2 x 2 switches. Show a neat sketch.
