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
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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.

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