Roll No. | | | | | | | | | | | | Total No. of Pages : 2

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BCA (Sem.–3rd) (2007 to 2010 Batch)

COMPUTER SYSTEM ARCHITECTURE

Subject Code : BC-403

Paper ID : [B0226]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students has to attempt any FOUR questions.**

SECTION-A

1. Write briefly :

a) What are the salient features of combinational circuits?

b) Differentiate between timing and control signals.

c) What is the need of performance measure in computer hardware design?

d) How is register different from memory?

e) Who controls the buses in DMA data transfer and how?

f) List some properties of RISC organization.

g) Differentiate between CPU and I/O processors.

h) What do you understand by symbolic micro instructions?

i) What is the role of I/O ports?

j) What is need of cache memory?

SECTION-B

2. (a) Discuss the importance of registers and instructions in computers with examples. 05

   (b) What are the advantages and disadvantages of auxiliary memory? Also explain its working. 05

3. What do you understand by accumulator based CPU? Also explain the design of accumulator. 10

4. Explain and show diagrammatically how address sequencing is done in micro programmed control unit. 10

5. Discuss the general register organization. Also compare it with stack organization. 10

6. What do you understand by cache memory? Explain the direct mapping concept used in cache memory with examples. 10

7. Show how data transfer from disk to memory is conducted under each of the following I/O schemes: programmed I/O, and interrupt-driven I/O? Also show the steps taken in each case. 10