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S.E. (Information Technology) (First Semester)**EXAMINATION, 2014****COMPUTER ORGANIZATION****(2012 PATTERN)****Time : Two Hours****Maximum Marks : 50**

N.B. :- (i) Neat diagrams must be drawn wherever necessary.

(ii) Figures to the right side indicate full marks.

(iii) Use of calculator is allowed.

(iv) Assume suitable data if necessary.

1. (a) Draw block diagram for Harvard architecture and explain each block. What are its advantages and disadvantages ? [6]
- (b) Differentiate minimum and maximum mode operation of 8086. [6]

P.T.O.

Or

2. (a) Apply Booth's algorithm for signed multiplication and multiply the following decimal numbers.

Multiplicand = 14, Multiplier = -5, assume size of equivalent binary numbers as 5-bit and result as 10 bit. [6]

- (b) List and brief any *five* addressing modes of 8086. [6]

3. (a) Explain Hardwired control elaborately. [6]

- (b) Draw and brief Programmer's model of 8086. [6]

Or

4. (a) What is Micro-program sequencing ? Explain with example. [6]

- (b) What is segmentation ? With suitable example and diagram explain segmentation of memory in 8086. [6]

5. (a) Explain 2-way set associative cache organization. [8]

- (b) Write a detailed note on DVD. [5]

Or

6. (a) Explain paging with neat diagram. [8]
(b) Write a note on RAID. [5]
7. (a) Draw and explain the block diagram of 8251. [8]
(b) List the features of 8237. [5]

Or

8. (a) Draw and explain the block diagram of 8255. [8]
(b) Write a note on interrupt driven I/O. [5]