Total No. of Questions—**8**] [Total No. of Printed Pages—**3**

Seat No.	

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]