

S.E (COMPUTER INFORMATION TECHNOLOGY) (SEM-IV) (REV)
EXAMINATION; may; 2007

Con/2621-07.

(REVISED COURSE)

ND-650

(3 Hours)

[Total Marks : 100

26th may 2007

- N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt **any four** questions out of the remaining.

- Q.1 (a) Distinguish between computer architecture and computer organization with the help of appropriate examples. 05
(b) Explain the structure of the von Neumann machine. 05
(c) Explain the basic instruction cycle with the help of an example. 05
(d) Explain the five elements of bus design. 05
- Q.2 (a) Explain the key characteristics of computer memory systems in detail. 08
(b) List and explain in detail the three techniques for performing I/O. Also give their advantages and disadvantages. 12
- Q.3 (a) Compare and contrast the different RAID levels. 08
(b) What is virtual memory? Describe how a virtual address generated by the CPU is translated into a physical main memory address. 12
- Q.4 (a) Explain with an example an algorithm for twos complement multiplication. 12
(b) Explain the basic addressing modes with the help of examples. 08
- Q.5 (a) Explain in detail six-stage CPU instruction pipeline. 10
(b) Explain the characteristics of RISC and CISC with examples. 10
- Q.6 (a) Explain Wilke's microprogrammed control unit design. 10
(b) Explain Flynn's classification for parallel processor systems. Give examples. 10
- Q.7 Write short notes on **any four** of the following : 20
(i) PCI bus
(ii) Locality of reference
(iii) Interleaved memory
(iv) Co-processor
(v) Horizontal and vertical microinstructions
(vi) Demand Paging