

2205

B.E. 5th Semester (ECE) Examination,

December-2012

**COMPUTER ARCHITECTURE AND
ORGANISATION**

Paper-CSE-210-E

Time allowed : 3 hours] [Maximum marks : 100

Note : Attempt any five questions.

1. (a) Simplify the following expressions using Boolean Algebra :

(i) $A'B + ABC' + ABC$

(ii) $(BC' + A'D)(AB' + CD')$ 5

(b) Differentiate between following :

(i) F/F and latches

(ii) Multiplexer and Demultiplexer

(iii) Encoder and Decoder. 15

2. (a) Explain stored program organization of computers. 10

(b) What is operating system ? Explain its functions. 10

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3. Explain various addressing modes with suitable examples. 20
4. (a) Explain microinstruction sequencing in detail. 10
- (b) What are different CPU architecture types ? Explain. 10
5. (a) An 8 bit computer has a 16 bit address bus. The first 15 lines of address are used to select a bank of 32 k bytes of memory. The high order bit of address is used to select a register which receives the contents of data bus. Explain how this configuration can be used to extend the memory capacity to 8 banks of 32 k bytes each, for a total of 256 k bytes of memory. 10
- (b) Explain Associative Cache memory organization. 10
6. (a) What are the basic features of Super Scaling ? Explain. 10
- (b) Differentiate between Arithmetic and instruction Pipeline. 10

7. (a) Explain different types of interrupts used in 8086. 10
- (b) Explain micro-instruction formats in detail. 10
8. Write short notes on any two :
- (a) Multiprocessor system
- (b) Instruction cycle
- (c) Memory Parameters. 10×2