

Register Number :

Name of the Candidate :

**6 9 1 9**

**M.C.A. DEGREE EXAMINATION, 2009**

( SECOND SEMESTER )

( PAPER - XI )

**241. COMPUTER ARCHITECTURE AND  
MICROPROCESSORS**

( *New Regulations* )

December ]

[ Time : 3 Hours

Maximum : 100 Marks

**SECTION - A** (8 ×5 = 40)

*Answer any EIGHT questions.*

*All questions carry equal marks.*

1. Differentiate an interpreter from a compiler.
2. Explain 2's complement.
3. Write short notes on Registers.
4. Explain the use of decoder and multiplexer.

**Turn Over**

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5. Write a program to multiply two positive numbers.
6. Explain Program Loop.
7. Write notes on Binary Counters.
8. Explain Stack Operations.
9. Explain serial I/O communication.
10. Explain keyboard display 8279.

**SECTION - B** (3 × 20 = 60)

*Answer any THREE questions.  
All questions carry equal marks.*

11. Explain the following :
  - (a) Boolean algebra. (10)
  - (b) Logic circuits. (10)
12. Explain the following :
  - (a) Types of Buses. (10)
  - (b) Types of ROM. (10)

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13. Describe the following :
  - (a) Addressing Modes. (10)
  - (b) Instruction Format of a computer. (10)
14. Explain the following :
  - (a) Subroutine. (10)
  - (b) Digital clock. (10)
15. Discuss any two microprocessor applications in detail. (10+10)