

MCA-126	MCA-01/ PGDCA-01
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M.C.A. DEGREE/P.G.D.C.A EXAMINATION –
JANUARY 2009.

First Semester/First Year

COMPUTER FUNDAMENTALS

Time : 3 hours

Maximum marks : 75

Answer for 5 marks questions should not exceed
2 pages.

Answer for 10 marks questions should not exceed
5 pages.

PART A — (5 × 5 = 25 marks)

Answer any FIVE questions.

1. Write a note on 'Excess-3 code'
2. Discuss Demorgan's theorem.
3. Explain about RS-flip flop.
4. Write a note on Encoders.

5. With a logic diagram explain a Half Subtractor.
6. What is meant by Data flow? Explain with an example.
7. Explain the term Reduced Instruction set computing.

PART B — (5 × 10 = 50 marks)

Answer any FIVE questions.

8. Convert the following :
 - (a) $(119)_{10} = (?)_8$
 - (b) $(1471)_8 = (?)_{10}$.
9. Explain with logic circuits and truth tables of any four gates.
10. Describe about counters and shift registers.
11. Explain different types of Read only memory.
12. Write about Multiplexers and Demultiplexers.
13. Discuss how vector pipelining is implemented.
14. Bring out the significance of RISC architecture.