

Code: 06MC102

MCA - I Semester Supplementary Examinations, August/September 2012

COMPUTER ORGANIZATION

(For students admitted in 2006, 2007 & 2008 only)

Time: 3 hours

Max Marks: 60

Answer any FIVE questions
All questions carry equal marks

- 1 (a) What is meant by number system? Explain different types of number systems each with an example.
(b) Simplify the following Boolean function using three variable k-map.
$$F(x, y, z) = \sum (3, 5, 6, 7)$$
- 2 (a) Explain about the half-adder and state its limitations.
(b) Write a short note on D-flip-flop.
- 3 Write a short note on:
 - (a) Random access memory.
 - (b) Read only memory.
 - (c) Boot-strap loader.
 - (d) Computer startup.
- 4 (a) Discuss various key design of an instruction format.
(b) Describe briefly about the general register organization.
- 5 (a) With an example explain each of the following instructions?
(i). IN (ii). OUT
(b) Write a short notes on shift instructions in 8086.
- 6 (a) List and explain an unconditional branch instruction of 8086.
(b) Write a program for subtraction of two numbers.
- 7 (a) Explain briefly about the address sequencing.
(b) Discuss the functions of micro-sequences with example.
- 8 (a) What are input-output devices? Explain with examples.
(b) Explain the following terms with respect to DMA controller.
(i) Bus request (ii) Bus grant (iii) Burst transfer (iv) Cycle stealing
