Roll No. .....

67062

M.C.A. (Regular) 2nd Semester Examination–May, 2013

(for Re-appear Candidates w.e.f. May, 2013)

Computer Organization & Architecture

Paper-MCA-202

Time : 3 hours ***Max. Marks : 80***

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : Attempt **five** questions in all selecting at least **one** question from each unit. All questions carry equal marks.

Unit-I

1. (a) Explain in detail the Von-Neumann Concept with its advantages & Diagram. *4*

(b) "Operating System is Vital Software of Computer system". Comment. *6*

(c) What do you mean by Fetch & Decode step of Instruction cycle ? *6*

2. Differentiate between :

(a) Hardwired control unit & Micro programmed Control unit *4*

(b) Direct Address & Indirect Address *4*

(c) Temporary Register & Program Counter *4*

(d) Memory Reference & Register reference Instructions *4*

Unit-II

3. (a) Explain the structure of control unit with Diagram. *8*

(b) Detail the following instructions : STA, ISZ, HLT, and BSA *8*

4. Explain the Addition & Subtraction with Signed 2's Complement with Flowchart. *16*

Unit-III

5. Short notes on :

(a) Handshaking Signal *4*

(b) Memory Mapped I/O *4*

(c) Auxiliary memory *4*

(d) Polling (interrupt) *4*

6. (a) Define DMA. Explain in detail the working, need & advantages of using it. Also explain the concept of cycle stealing & Burst transfer. *10*

(a) Explain the Asynchronous serial transfer with the help of an example. *6*

Unit-IV

7. (a) What do you mean by Modular Memory approach ? Explain with diagram. *8*

(b) Write in detail about the pipeline conflicts. Also mention its solution. *8*

8. (a) Explain the Flynn's Classification of computers. *6*

(a) Describe the arithmetic pipeline for floating point addition & subtraction. *10*
