



Reg. No. :

Name :

I Semester M.C.A. (Reg./Sup./Imp.) Degree Examination, February 2015
(2013 and Earlier Admn.)

MCAC1.1 : COMPUTER ORGANISATION

Time : 3 Hours

Max. Marks : 80

Instructions : Answer **any five** questions.
Each question carries equal marks.

- | | | |
|-------|---|---|
| 1. a) | Explain the various data types complements for representing fixed point and floating point data with suitable examples. | 8 |
| b) | Discuss the micro operations of logic and shift techniques. | 8 |
| 2. a) | Explain the different addressing modes, with suitable examples. | 8 |
| b) | What are the subroutines and interrupts the micro computers organization ? | 8 |
| 3. a) | Explain the memory organisation of RAM. | 8 |
| b) | What are the differences between a software interrupt and a subroutine call ? | 8 |
| 4. a) | Explain with suitable examples various branch instructions and program interrupt. | 8 |
| b) | Explain briefly instruction formats of RISC. | 8 |
| 5. a) | Compare and contrast vector processing and array processing techniques. | 8 |
| b) | Draw a space-time diagram for a six segment pipeline showing the time it takes to process eight tasks. | 8 |
| 6. a) | Explain briefly decimal multiplication with suitable flowchart. | 8 |
| b) | Derive an algorithm for evaluating the square root of a binary fixed point number. | 8 |

P.T.O.



- 7. a) Explain various properties of serial communication.
- b) What are the main differences between typical RAM chip and ROM chip, explain briefly ?

8

8. Write short notes on :

(4x4=16)

- a) Cache memory
- b) I/O processor
- c) Stack operation
- d) Register transfer language.

Don Bosco College
Angadikadavu, Kannur
Mob: +91-9961200147
Land: +91-490-2426212