

M 27789

Reg. No. :

Name :

II Semester M.C.A. Degree (Reg./Sup./Imp.) Examination, July 2015
(2014 Admn.)

MCA2C09 : COMPUTER ORGANIZATION

Time : 3 Hours

Max. Marks : 80

SECTION - A

Answer **any ten** questions, **each** question carries **three** marks.

1. What are the general characteristics of a CISC architecture ?
2. Mention the importance of reflected codes in binary number system.
3. What are the functions of Input/Output processor ?
4. How to handle multiple interrupts ?
5. What are the general characteristics of a RISC machine ?
6. Compare the features of horizontal and vertical microinstruction coding.
7. How to justify the increasing the number of processors may not speed up a program execution ?
8. What are the merits of virtual memory system ?
9. Compare and contrast micro programmed and hardwired control units.
10. What are the performance key factors of secondary storage devices ?
11. What are the uses of memory delays and branch delays ?
12. How shared memory processing is different from vector processing ? (10×3=30)

P.T.O.



SECTION – B

Answer **all** questions, **each** question carries **ten** marks.

13. a) With neat diagram, explain the functional units of CPU and memory.

OR

b) Draw the microinstruction sequencing organization and explain its operations.

14. a) Describe the various techniques for establishing the priority of simultaneous interrupts from different I/O devices.

OR

b) What is arbitration, why it is required, what are the different methods of arbitration ?

15. a) Explain briefly Booth's multiplication algorithm with suitable examples.

OR

b) Define mapping process, discuss any one mapping process used in any typical processor.

16. a) Described with suitable diagram structure of I/O program controlled transfer and DMA transfer.

OR

b) Define interleaving of memory, what are the significant features of interleaving memory and explain the various types of memory interleaving.

17. a) Explain with suitable examples superscalar pipeline unit, discuss the issues that cause the pipeline to stall.

OR

b) Discuss the basic structure and merits of vector processing and shared memory multiprocessors.

(5×10=50)