

MCA-05

December - Examination 2015

MCA Ist Year Examination**Computer Organization and Architecture****Paper - MCA-05****Time : 3 Hours]****[Max. Marks :- 80**

Note: The question paper is divided into three sections A, B and C. Write answers as per given instructions.

Section - A

8 x 2 = 16

(Very Short Answer Questions)

Note: Answer all questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

- 1) (i) Define sequential circuit.
- (ii) What do you understand by decoder?
- (iii) What are different I/O techniques?
- (iv) What is the task of the DMA controller when there is a request for memory transfer?
- (v) Draw the diagram of memory hierarchy?
- (vi) Define the locality of reference.
- (vii) What do you understand by interrupt?
- (viii) Define the parallel processing.

Section - B

4 x 8 = 32

(Short Answer Questions)

Note: Answer any four questions. Each answer should not exceed 200 words. Each question carries 8 marks.

- 2) What are the differences types of addressing modes?
- 3) Discuss virtual memory with paging.
- 4) Explain magnitude comparator with suitable diagram.
- 5) What do you understand by register? Explain its types.
- 6) Explain the basic building blocks of a computer system.
- 7) Discuss data organization in magnetic disk.
- 8) What is the pipelining processing? Explain instruction pipelining.
- 9) Explain instruction format with suitable diagram.

Section - C

2 x 16 = 32

(Long Answer Questions)

Note: Answer any two questions. You have to delimit your each answer maximum upto 500 words. Each question carries 16 marks.

- 10) Explain differences between RISC and CISC.
- 11) Discuss the classification of parallel computation with suitable diagram.
- 12) What is role of cache memory in system? Explain various mapping of cache memories with suitable diagram.
- 13) Describe hardwired design of control unit.