

M.C.A. Examination, June - 2015

Computer Organization and Architecture

Paper : MCA-05*Time : Three Hours**[Max. Marks : 80*

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

Section-A**(Very Short Answer Question)****[Marks: 8x2=16]**

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

- (i) Define combinational circuit.
- (ii) What do you mean by multiplexer?
- (iii) Draw the truth table of Full Subtractor.
- (iv) Define Cycle Stealing.
- (v) List the type of optical storage.

- (vi) What is RAID?
- (vii) Define OP CODE.
- (viii) What is speed-up factor?

Section-B

(Short Answer Questions)

[Marks: 4x8=32]

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

- Q.2 Draw and describe the encoder.
- Q.3 Describe the paging mechanism.
- Q.4 What is the function of cache memory? Explain the term cache hit and cache miss.
- Q.5 Describe the different parts of the Windows Explorer.
- Q.6 Discuss the Instruction Execution Cycle without interrupt and with interrupt.
- Q.7 Explain Wormhole routing for message-passing technique.
- Q.8 What is register? Explain the different types of register available in CPU.
- Q.9 Compare SRAM and DRAM.

(2)

Section-C

(Long Answer Question)

[Marks: 2x16=32]

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

- Q.10 What do you mean by magnitude comparator? Draw a block diagram and the function table of the magnitude comparator SN 7485.
- Q.11 What is the difference between Programmed I/O and Interrupt Driven I/O? What are their advantages and disadvantages?
- Q.12 What is significance of pipelining? Discuss control hazard giving appropriate example.
- Q.13 Discuss Optical Memory with explain in detail.

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