

MCA-05 (Old / New)
June - Examination 2016
MCA 1st Year Examination
Computer Organization and Architecture
Paper - MCA-05 (Old / New)

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 × 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 flip-flops.
- (ii) List different I/O techniques.
- (iii) Define virtual memory.
- (iv) What is RAID?
- (v) What is RISC?
- (vi) What is interrupt?
- (vii) Define Multiprocessor.
- (viii) What is pipelining?

Section - B**4 × 8 = 32**

(Short Answer Questions)

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

- 2) Explain the working of Full adder with truth table and logic diagram.
- 3) Describe the working of direct memory access technique.
- 4) What is memory hierarchy? Discuss.
- 5) What is the function of cache memory? Explain the term cache hit and cache miss.
- 6) Write the differences between Hardwired and Micro Programmed implementation of Control unit.
- 7) Explain the Instruction Execution Cycle without interrupt.
- 8) State and explain Flynn's classification of Multiprocessor architecture.
- 9) What is pipeline hazard? What are the types of hazard? Explain.

Section - C**2 × 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) What do you mean by multiplexer? Explain the working of a 8-to-1 multiplexer with truth table and logic diagram.
 - 11) What is the difference between Programmed I/O and Interrupt Driven I/O? What are their advantages and disadvantages?
 - 12) What do you mean by paging? What is page table and where is it located? Explain.
 - 13) What are the building blocks of Central Processing Unit? Briefly discuss the functions of each unit.
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