Code: 9F00203

MCA II Semester Supplementary Examinations June/July 2018

COMPUTER ORGANIZATION

(For students admitted in 2011 (LC), 2012, 2013, 2014, 2015 & 2016 only)

Time: 3 hours Max. Marks: 60

Answer any FIVE questions
All questions carry equal marks
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1 (a) Form the binary sum 10111 011 + 01101011.
(b) Differentiate between:
(i) Half adder and full adder.
(ii) Encoder and multiplexer.
(iii) Combinational and sequential circuits.

2 What is meant by associative memory? Explain its working in detail.

3 (a) List the advantages and disadvantages of hardwired control over micro-programmed control.
(b) Define the following terms:
(i) Microinstruction.
(ii) Micro operation.
(iii) Micro routine.
(iv) Control word.

4 (a) Draw and explain 8086 CPU architecture.
(b) How is direct addressing different from indirect addressing?

5 Illustrate the position of the DMA controller among the other components in a computer system and explain DMA transfer.

6 (a) Give a note on process control instructions of 8086.
(b) Write an assembly language program to check whether a given number is even or odd.

7 (a) Draw the space-time diagram of a four-segment pipeline.
(b) Explain the two types of array processors.

8 (a) With the help of a neat diagram, explain the operation of a 2 x 2 interchange switch.
(b) Explain various schemes to solve the problem in shared memory multiprocesses.

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