LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.C.A. DEGREE EXAMINATION – **COMPUTER APPLICATIONS**

SECOND SEMESTER – **APRIL 2016**

CA 2806 – MICROPROCESSOR AND ITS APPLICATIONS

Date: 25-04-2016 Dept. No. Max. : 100 Marks

Time: 01:00-04:00

PART-A

Answer ALL Questions: **(10x2=20 marks)**

1. Mention the program development tools.
2. What are the modes of operation of microprocessor?
3. Define Macro.
4. What are the different flags of 8086?
5. State the sources of interrupt.
6. List the different modes of operation of programmable timer.
7. Define op amp. State its uses.
8. What is DMA?
9. What is a Coprocessor?
10. Define microcontroller. Mention few of its applications.

PART-B

Answer ALL Questions: **(5x8=40 marks)**

11. a) Explain the structure of microcomputer.

(or)

b) What are the different addressing modes of 8086? Explain with example.

12. a) Explain the flag and processor control instructions.

(or)

b) Illustrate the operations of shift and rotate instructions.

13. a) Explain the steps to trouble shoot a micro computer.

(or)

b) Illustrate the timing diagram of WRITE machine cycle.

14. a) With a suitable diagram explain the operation of Digital to Analog convertor.

(or)

b) Explain opamp as an integrator and differentiator.

15. a) Explain the features and addressing modes of microcontroller.

(or)

b) Explain the steps needed to design a microcomputer using design automation tools.

PART-C

Answer any TWO Questions: **(2x20=40 marks)**

16. Explain in detail the functional units of 8086.

17. a) Explain any ten assembler directives with examples.

    b) Illustrate the priority interrupt controller with a neat diagram.

18. a) Discuss the following

        i. Interfacing seven segment LED display.

        ii. Key board interfacing.

    b) Explain the Math Co – processor with a neat diagram.

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