



**LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034**

**B.SC.,B.C.A.,DEGREE EXAMINATION – COMPUTER SCI. & COMPUTER APP.**

THIRD SEMESTER – APRIL 2017

**PH 3210- MICROPROCESSOR**

Date: 04-05-2017  
09:00-12:00

Dept. No.

Max. : 100 Marks

**PART A**  
**ANSWER ALL QUESTIONS**

**10×2=20**

1. What are the functional units available in 8086 architecture?
2. List the segment registers of 8086?
3. Calculate the physical address for CS = 1E00<sub>H</sub> and IP = 4321<sub>H</sub>
4. What is ALE?
5. What is a Procedure?
6. Define DUP and PTR operators
7. What is modular programming?
8. State the difference between hardware and software interrupts.
9. Define semaphore and give the operators.
10. Give two differences between MIN and MAX modes of operation of 8086.

**PART B**

**ANSWER ANY FOUR QUESTIONS**

**4×7.5=30**

11. Discuss the different addressing modes of 8086 with an example.
12. Explain the common procedure sharing with a diagram
13. Give the function of the following pins  
(i) RD (ii) M/IO (iii) DT/R (iv) INTR.
14. Identify the signal lines of 8086 that are different for minimum mode and maximum mode.
15. With a neat diagram, explain how priority may be assigned using Daisy chain.
16. Write an MASM Program to add two 8 bit numbers named as NUM1 and NUM2.

**PART C**

**ANSWER ANY FOUR QUESTIONS**

**4×12.5=50**

17. Explain the internal architecture of  $\mu$ P 8086 with the block diagram.
18. Describe the process states of iRMX86 with a diagram.
19. Discuss the operation and function of the interrupt controller PIC 8259.

20. Write an MASM Program to multiply two 16 bit numbers stored in memory locations NUM1 and NUM2.
21. (a) What are the different status flags in 8086? When they are set or reset? (8 marks)  
(b) What is the role of instruction pointer in  $\mu$ P 8086? (4.5 marks)
22. (a) Explain the instructions STOSB and STOSW. (5.5 marks)  
(b) Distinguish between ROR and RCR. Give examples (7 marks)

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