



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

**B.Sc. DEGREE EXAMINATION – COMPUTER SCIENCE**

SECOND SEMESTER – NOVEMBER 2016

**PH 2107 - MICROPROCESSOR**

Date: 16-11-2016  
Time: 01:00-04:00

Dept. No.

Max. : 100 Marks

PART A

ANSWER ALL QUESTIONS

10×2=20

1. What are the modes in which 8086 can operate?
2. Explain the function of  $\bar{M}/IO$  in 8086.
3. Name the different status flags of 8086.
4. Calculate the physical address for CS = 1E00<sub>H</sub> and IP = 4321<sub>H</sub>
5. What is an assembler?
6. Differentiate between Macro and Procedure.
7. What is an interrupt?
8. What is the role of an interrupt service routine?
9. Give two differences between MIN and MAX modes of operation of 8086.
10. Define Modular programming.

PART B

ANSWER ANY FOUR QUESTIONS

4×7.5=30

11. State the reasons for breaking a program into small parts.
12. Define the directives (i) DD (ii) DUP (iii) ASSUME (iv) PROC
13. At the end of the sequence of instruction indicate the condition of ZF, SF and CF.  
MOV AL, 3C<sub>H</sub>  
MOV BL, 4F<sub>H</sub>  
CMP AL, BL
14. Explain with a neat diagram the three states of a multi programming system.
15. Write an MASM Program to add two 8 bit numbers stored in memory locations as NUM 1 and NUM 2.
16. (a) What is PIC8259? (b) Give the features of PIC 8259.

PART C

ANSWER ANY FOUR QUESTIONS

4×12.5=50

17. Describe the internal architecture of  $\mu$ P8086 with block diagram.
18. Write an MASM Program to divide a 16 bit number by 8 bit number stored in memory locations NUM 1 and NUM 2.
19. (a) Describe the programmed input with the help of a flow chart. **(8 marks)**  
(b) Explain the instructions STOSB and STOSW. **(4.5marks)**
20. Explain the interrupt priority management hardware of giving priority to an interrupt system with a neat block diagram.
21. (a) Identify the signal lines of 8086 that are different for minimum mode and maximum mode. **(8 marks)**  
(b) Give the function of the following pins(4.5 marks)  
(i) RD (ii) DT/R (iii) INTR.
22. (a) Briefly explain the PUSH and POP instruction(4.5 marks)  
(b) Name the different addressing modes of  $\mu$ P8086 with an example.(8 marks)

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