LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

U.G.DEGREE EXAMINATION – **COMPUTER SCIENCE& COMP.APP.**

THIRDSEMESTER – APRIL 2018

PH 3210- MICROPROCESSOR

Date: 04-05-2018 Dept. No. Max. : 100 Marks
Time: 01:00-04:00

PART A

ANSWER ALL QUESTIONS (10×2=20)

1. How many address lines and data lines does 8086 have?
2. Define ASSUME directive.
3. Explain the function of $M/\overline{IO}$ in 8086.
4. Define MACRO.
5. Differentiate between software interrupts and hardware interrupts.
6. Give the difference between the instructions SUB BX, CX and CMP BX, CX?
7. What is a queue? How queue is implemented in 8086?
8. What is programmed I/O?
9. State the modes in which 8086 can operate?
10. List the features of PIC 8259.

PART B

ANSWER ANY FOUR QUESTIONS (4×7.5=30)

11. What are the different status flags in µP8086? When do they set or reset?
12. Write a program to subtract two 8 bit numbers named NUM 1 & NUM 2 using MASM.
13. Explain the function of the following pins of 8086
    (a)NMI (b)INTR (c)ALE (d)$\overline{BHE}$
14. Explain in detail, the creation and execution of a program with a block diagram.
15. Explain how priority may be assigned using Daisy chain with a diagram.
16. Identify the signal lines of 8086 that are different for minimum mode and maximum mode.

PART C

ANSWER ANY FOUR QUESTIONS (4×12.5=50)

17. Explain the internal architecture of µP8086 with a functional block diagram.
18. Describe the process states of iRMX 86 with a neat diagram.
19. Write an MASM Program to multiply two 8 bit numbers stored in memory locations NUM 1 and NUM 2.
20. (a) Explain the various addressing modes of µP8086, with examples.(8 marks)
    (b) State the reasons for breaking a program into small parts.(4.5 marks)

21. Explain the interrupt priority management hardware of giving priority to an interrupt system with a neat block diagram.

22. (a) Discuss the use of stack in 8086. (5 marks)

(b) Explain the following instructions with an example.

(i)STOSW (ii) SHR and (iii)ROR (7.5 marks)

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