MAHATMA GANDHI UNIVERSITY

M.C.A DEGREE EXAMINATION

MODEL QUESTION PAPER

(2011 Revised Syllabi)

Second Semester

MCA203 Microprocessors and Embedded Systems

Time : Three hours **Maximum : 75 Marks**

Part A

Answer any ten questions.

Each question carries 3 marks.

- Differentiate minimum mode and maximum mode
- With sample data calculate the physical address for relative based indexed addressing mode?
- What is the use of XLAT instruction?
- Write short note on segment overwrite prefix.
- Differentiate instruction and assembly directives using appropriate examples.
- Write any three uses of 8251.
- What is a clock cycle?
- Write any 6 features of 80286.
- Compare Pentium and 80486 processors.
- What is an embedded system? Write any two uses.
- Write short notes on classification of embedded system with examples.
- What is IVT?

(10 x 3 = 30 marks)

Part B

All questions carry equal marks.

- (a) Explain the architecture of 8086 with neat diagram.

OR

(b) What is an addressing mode? Explain any 7 addressing modes of 8086.

14. (a) Explain any five flag manipulation instructions. (5 marks)

(b) Explain ROL and ROR. (4 marks)

OR

(c) Write the reference of stack in subroutines. (4 marks)

(d) Explain interrupts. (5 marks)

15. (a) Which data transfer scheme is more useful? (2 marks)

(b) Explain DMM. (7 marks)

OR

(c) Write short notes on the mocks of 8253. (9 marks)

16. (a) With an architecture diagram explain 80386.

OR

(b) Compare the features of 80386 and 80486.

17. (a) Explain the block of embedded system using a block diagram.

OR

(b) Explain the architecture of 8051 microcontroller.

(5 X 9 = 45 marks)