



**PRESIDENCY UNIVERSITY, BENGALURU**  
**SCHOOL OF ENGINEERING**

Max Marks: 30

Max Time: 50 Mins

Weightage: 15 %

**Set A**

**TEST 3**

II Semester 2016-2017

Course: COE A 204/ECE A204/EEE A204  
Microprocessor Programming & Interfacing

18 APRIL 2017

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**Instructions:**

- i. Write legibly.
  - ii. Draw necessary diagram and assume suitable data.
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**Part A**

(4 Q x 3 M= 12 Marks)

1. Write modes of operation of 8255 IC.
2. Define interrupt service routine, interrupt handler, interrupt vector table (IVT) in detail.
3. Explain with proper sketch control word format of 8253.
4. Explain dedicated interrupts.

**Part B**

(2 Q x 5 M= 10 Marks)

6. Write ALP to rotate stepper motor in the clockwise direction using the full step drive scheme.
7. Write ALP to generate square wave of 1.5 KHz with input frequency of 1.5MHz using timer

**Part C**

(1 Q x 8 M= 8 Marks)

8. Draw and Explain block diagram of Peripheral interrupt Controller IC (8259).



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**TEST 2**

II Semester 2016-2017

Course: COE A 204/ECE A204/EEE A204  
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**21 MARCH 2017**

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**Instructions:**

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**Part A**

(5 Q x 2 M= 10 Marks)

1. What is addressing in 8086. Explain with an example?
2. What is address decoding? Why it is required and which are the different methods used for address decoding?
3. Explain concept of memory bank?
4. What is a T-State in timing diagram?
5. Explain the difference between minimum and maximum mode of operation of 8086?

**Part B**

(2 Q x 5 M= 10 Marks)

6. Differentiate between "memory mapped I/O" and "I/O mapped I/O".
7. Find the address range of Memory 16 K\*8 using decoder addressing.

**Part C**

(1 Q x 10 M= 10 Marks)

8. Draw timing diagram and explain the "Write Machine Cycle" in 8086 minimum mode.



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Set A

TEST I

II Semester 2016-2017

Course: COE A 204/ECE A204/EEE A204  
Microprocessor Programming & Interfacing

21 FEB 2017

Instructions:

- i. Write legibly.
- ii. Draw necessary diagram and assume suitable data.

Part A

(5 Q x 2 M= 10 Marks)

1. What are the four primary operations of the Microprocessor?
2. Explain the bus in processor. Why is the data bus bi-directional?
3. Why are the program counter and the stack pointer 16-bit registers in 8085?
4. What are the flags in 8086?
5. Which interrupts are generally used for critical events?

Part B

(2 Q x 5 M= 10 Marks)

6. Arrange a given list of 10 numbers in ascending order. Write the Algorithm and show the result.
7. Find the square of given number. Write the Algorithm and show the result.

Part C

(1 Q x 10 M= 10 Marks)

8. Explain the steps involved in the execution of an instruction internally.