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Bengaluru

Mid Term Examinations - October 2026

Date: 05/10/2026 **Time:** 09:30 AM - 11:00 AM

Course Code: ECE3111 **Course Name:** Microprocessor and Microcontroller

Semester: Fourth Semester **Max. Marks:** 50 **Weightage:** 50%

CO - Levels	CO1	CO2
Marks	46	44

PART A: Answer Following Questions. 10 M

Q.N.	Questions	M	CO	BT
1	Distinguish between minimum mode and maximum mode of 8086.	2	CO1	BT2
2	State the purpose of the 6-byte instruction queue in 8086.	2	CO1	BT2
3	State the significance of the clock signal in 8086.	2	CO1	BT2
4	Differentiate between MOV and XCHG instructions.	2	CO2	BT2
5	State is the purpose of the INC and DEC instructions in 8086?	2	CO2	BT2

PART B : Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
6	Explain the architecture of 8086 microprocessor with neat diagram.	10	CO1	BT2
7	Explain the pin diagram of 8086 microprocessor with neat diagram.	10	CO1	BT2

PART C: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
8	Draw and explain the timing diagram of an 8086 maximum mode memory read operation.	10	CO1	BT2
9	Describe the following 8086 addressing modes with suitable instruction examples. Provide a minimum of four examples for each addressing mode and describe how the operand is accessed. • i) Register Addressing • ii) Immediate Addressing • iii) Register Indirect Addressing	10	CO1	BT2

PART D: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
10	Describe the Data transfer instruction in detail with examples.	10	CO2	BT2
11	Discuss in detail about the Assembler Directives and Operators in 8086.	10	CO2	BT2

PART E: Answer Any 1 Following Questions. 10 M

Q.N.	Questions	M	CO	BT
12	Explain in detail about the arithmetic instructions of 8086 with examples.	10	CO2	BT2

13	Describe the following instruction sets of 8086 in detail: i) Program Control Instructions ii) Logical Instructions	10	CO2	BT2