

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Microcontrollers (23EC501)

UNIT-I

8086 Architecture and Assembly Language Programming

1. The 8086 microprocessor is a _____ processor.

- a) 4-bit
- b) 8-bit
- c) 16-bit
- d) 32-bit

Answer: c) 16-bit

2. The BIU in 8086 stands for

- a) Basic Interface Unit
- b) Bus Interface Unit
- c) Binary Interface Unit
- d) Buffer Interface Unit

Answer: b) Bus Interface Unit

3. The size of the address bus in 8086 is

- a) 16 bits
- b) 20 bits
- c) 8 bits
- d) 32 bits

Answer: b) 20 bits

4. The maximum memory that can be addressed by 8086 is

- a) 64 KB
- b) 128 KB
- c) 512 KB
- d) 1 MB

Answer: d) 1 MB

5. Which register stores the offset address of the next instruction?

- a) AX
- b) BX

- c) IP
- d) SP

Answer: c) IP

6. Which instruction is used for unconditional branching?

- a) CALL
- b) JMP
- c) LOOP
- d) RET

Answer: b) JMP

7. The stack segment register is

- a) DS
- b) ES
- c) SS
- d) CS

Answer: c) SS

8. Which instruction is used for string manipulation?

- a) MOVS
- b) ADD
- c) MUL
- d) DIV

Answer: a) MOVS

Fill in the Blanks

1. The 8086 has a 20-bit address bus.
2. The maximum memory space of 8086 is 1 MB.
3. Physical address = Segment Address × 16 + Offset.
4. The instruction pointer register is abbreviated as IP.
5. The execution unit of 8086 is called EU.
6. The stack is addressed using the SS register.
7. The JMP instruction performs unconditional branching.
8. MOVS is used for string transfer operations.