

**JAYA ENGINEERING COLLEGE**  
**DEPARTMENT OF INFORMATION TECHNOLOGY**  
**EC 6504 – MICROPROCESSOR AND MICROCONTROLLER**  
**II YEAR / IV SEMESTER**  
**POSSIBLE 16 MARKS QUESTIONS**

**UNIT – I**

- 1.Explain the architecture of 8086 microprocessor.
- 2.Explain different types of addressing modes of 8086.
- 3.Explain briefly the instruction sets of 8086.
- 4.Explain the assembler directives with examples.
- 5.Write ALP for addition, subtraction, multiplication, division.
- 6.Write ALP for ascending and descending using 8086.
- 7.Explain the procedures and macros in detail.
- 8.Explain interrupt and interrupt service routine.

**UNIT – II**

- 9.Draw and explain the signals of 8086.
- 10.What are the basic configurations of 8086?Explain in detail.
- 11.Draw and explain the timing diagram of read and write cycle.
- 12.Explain multiprogramming in detail.
- 13.Write brief note on system bus structure.
- 14.Explain coprocessor and closely coupled configuration.
- 15.Explain loosely coupled configuration in detail.
- 16.Explain the 8086 system design.

### **UNIT – III**

- 17.Explain memory interfacing and IO interfacing with 8086.
- 18.Explain parallel communication interface in detail.
- 19.Explain serial communication in detail.
- 20.Draw the block diagram of 8257 and explain its functions in detail.
- 21.Explain programmable interrupt controller,8259 with neat diagram.
- 22.Draw the block diagram of keyboard/display controller in detail.
- 23.Explain the architecture of 8253 timer.
- 25.Explain A/D and D/A interface with 8086.

### **UNIT – IV**

- 26.Explain the architecture of 8051.
- 27.Explain IO pins and ports in detail.
- 28.Explain the addressing modes of 8051.
- 29.Explain the instruction set of 8051.
- 30.Explain SFR in detail.
- 31.Write ALP for addition , subtraction, 2's complement, logical AND operation using 8051.

### **UNIT – V**

- 32.Explain the timer programming of 8051.
- 33.Explain serial port programming with data formats.
- 34.Write the interrupt structure of 8051 and explain with program.
- 35.Explain keyboard and LCD interface with 8051.
- 36.Explain A/D and D/A interface with 8051.
- 37.Explain Stepper motor programming using 8051.
- 38.Write ALP for sine and sawtooth waveform generation.
- 39.Explain in detail about memory interfacing of 8051.
- 40.Explain sensor interfacing of 8051.