Reg. No. : | | | | | | | | | | | | |

Question Paper Code: 2054461

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV / DEC 2024
Fourth Semester
Information Technology
U20EC406 – MICROPROCESSORS AND MICROCONTROLLERS
(Regulation 2020)

Time: Three Hours | Maximum: 100 Marks

Answer ALL questions

PART – A (10 x 2 = 20 Marks)

1. What is Microprocessor?

2. List the flags of 8086.

3. Name the features of 8051 microcontroller.

4. State the function of RS1 and RS0 bits in the flag register of Intel 8051 microcontroller.

5. Differentiate between timer and counter.

6. List the Interrupt sources of 8051.

7. Show the principle of Pipelining.

8. Define Thumb Instruction.

9. What is Exception Handling?

10. Define Firmware.

PART – B (5 x 16 = 80 Marks)

11. (a) Explain the Architecture of 8086 microprocessor with neat diagram. (16)

(OR)

(b) Discuss about the different Addressing Modes of 8086. Give example for each type addressing modes and explain in detail. (16)

12. (a) With the functional block diagram, explain the architecture of 8051 microcontroller. (16)

(OR)

(b) Explain about various types of Instruction set of 8051. Give example for each type. (16)

13. (a) What are the Interrupts available in 8051? Explain the Interrupt types, and its Structure. (16)

(OR)

(b) Explain about the Serial data communication of 8051 with its registers. Also explain about the modes of operation of the same. (16)

14. (a) Explain the ARM Architectures and its Operating Modes. (16)

(OR)

(b) Explain the ARM Instruction set with examples. (16)

15. (a) Outline the types of Interrupts and explain the Interrupt handling schemes. (16)

(OR)

(b) Explain the embedded system Operating System layers and the Functional block Diagram. (16)

----------xxxxx----------