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

Question Paper Code: 55405

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

Fifth Semester

Electronics and Communication Engineering

01UEC505 – MICROPROCESSORS, MICROCONTROLLERS AND APPLICATIONS

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. List the 16-bit registers of 8085 microprocessor.
2. Mention the advantages of using the Direct memory access.
3. What is an assembler directive? Give two examples.
4. What are the different types of interrupts supported in 8086?
5. Give the various modes and applications of 8254 timer.
6. List the operation modes of 8255.
7. What is need for bitwise instructions in microcontroller and how many ports are bit addressable in 8051μC?
8. What is the significance of EA pin.
9. Draw the interface of DAC with microcontroller.
10. Give the applications of stepper motor.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain in detail the addressing modes of 8085 with suitable examples. (16)

Or

(b) Draw the architecture of 8085 Processor and explain the various blocks. (16)

12. (a) Enumerate about the architecture of 8086 microprocessor with a block diagram and also explain its functions in detail. (16)

Or

(b) Discuss the maximum mode configuration of 8086 by a neat diagram. Mention the functions of various signals. (16)

13. (a) Explain the 8279 Keyboard and Display controller with a neat sketch. (16)

Or

(b) (i) Write short notes on programmable interval timers 8253 and 8254. (8)

(ii) Explain the function of Programmable Peripheral Interface–Intel 8255. (8)

14. (a) Describe in detail about 8051 microcontroller memory. (16)

Or

(b) Illustrate the following status word and control word registers formats i) program status word ii) timer mode control iii) timer control register and iv) serial ports control register. (16)

15. (a) Explain about interfacing of washing machine with 8051 controller and implement software instruction for controlling the various process of washing machine. (16)

Or

(b) With neat sketch, explain the microprocessor base Traffic light control system. (16)

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