EEM53 Microcontroller Interfacing

773

REG. NO

OCTOBER 2021

Time: Three hours Maximum Marks: 75

Note:
1. Answer ALL the questions in PART-A (1 mark each)
2. Answer any ONE question from each unit in PART-B (3 marks each)
3. Answer any ONE question from each unit in PART-C (10 marks each)
4. The question paper contains TWO Pages

PART-A (1x10=10)

1. Define Accumulator.
2. How is the memory of 8051 classified?
3. What is the content of Stack pointer after RESET?
4. Mention the bit and byte addresses of port 0 and port 1.
5. What are the functions of Gate and C/T bits of 8051?
6. Define timers and mention the timers used in 8051.
7. Define ADC and DAC.
8. Define stepper motor and mention its uses.
9. List any two general purpose register.
10. Define watch dog timer.

PART-B (3x5=15)

UNIT-I

11. What is the use of oscillator circuit in 8051?
12. Explain the alternate functions of port 3 pins.

UNIT-II

13. Write a delay subroutine to generate 10 msec delay.
14. Explain SJMP rel instructions.

UNIT-III

15. Explain the importance of TI flag.
16. Explain IE register.

UNIT-IV

17. Draw the interfacing diagram of ADC.
18. Write short notes on interfacing using I^2C.

UNIT-V

19. What is brown out reset in PIC microcontroller?
20. Explain the stack pointer in PIC microcontroller.

PART-C (10x5=50)

UNIT-I

21. Draw and explain the architecture of 8051 microcontroller.
22. Draw and explain the 8051 interfacing with external ROM.

UNIT-II

23. Write an ALP to convert a ASCII to BCD.
24. Explain the following instruction with example (i) ACALL (ii) LCALL (iii) SJMP

UNIT-III

25. Explain in detail about the programming to transfer and receive data serially in 8051.
26. Explain about the serial port programming.

UNIT-IV

27. Explain interfacing circuit of LCD with 8081.
28. Explain interfacing circuit of DC motor with 8051.

UNIT-V

29. Explain the role played by data EEPROM and Flash program EEPROM in PIC microcontroller.
30. Explain watch dog timer.

****