

739**April 2024**

Time – Three hours
(Maximum Marks: 100)

- [N.B.]**
1. Answer all questions under Part-A. Each question carries 3 marks.
 2. Answer all the questions either (A) or (B) in Part-B. Each question carries 14 marks.]

PART – A

1. Mention the characteristics of embedded system.
2. What is machine cycle?
3. List the branching instructions.
4. Mention the types of assembler directives.
5. Write notes on I/O programming.
6. Mention the different operating modes of counter.
7. Define serial communication.
8. Define baud rate.
9. Write notes on control logic in 8255.
10. Draw the block diagram of DAC interfacing with 8051.

PART – B

11. (a) Write the characteristics and applications of embedded system.

(Or)

(b) Explain the block diagram of 8051.

12. (a) (i) Explain data transfer instructions with an example.

(ii) Explain arithmetic instructions with an example.

(Or)

(b) Explain the different types of addressing modes of 8051.

13. (a) Discuss about 8051 I/O bit manipulation programming.

(Or)

(b) Explain different operating modes of timer with neat diagram.

14. (a) Discuss about the RS232 standards with pin details.

(Or)

(b) Explain interrupt priority level structure with its vector address.

15. (a) Explain the various modes of 8255.

(Or)

(b) Explain the interfacing of stepper motor with 8051.
