

456

October 2016

Time - Three hours
(Maximum Marks: 75)

[N.B: (1) Answer any fifteen questions in PART - A and division (A) or division (B) of each question in PART - B.

(2) Each question carries 1 (one) mark in PART - A and 12 (twelve) marks in PART - B.]

PART - A

1. State any two differences between microprocessor and microcontroller.
2. What is stack pointer?
3. List the flags available in 8051.
4. Where is stack memory placed in 8051?
5. List the addressing modes of 8051.
6. What is meant by assembler directives?
7. How can you perform multiplication using 8051 microcontroller?
8. What are the instructions used to access external RAM in 8051?
9. Mention the timers of 8051.
10. How will you set and reset bit P1.0 of 8051 microcontroller?
11. What is the alternate function of pin P3.1?
12. Mention the operating modes of 8051 timer.
13. How will you double the baud rate in 8051 microcontroller?
14. List the interrupts of 8051 micro controller.
15. List the modes of serial communication.
16. What is the purpose of RS232C serial interface?
17. List the different modes of operation of 8255.
18. What is the use of DAC?
19. Define PWM.
20. Define a stepper motor.

PART - B

21. (A) Draw the pin diagram of 8051 and explain each pin.
(Or)
(B) Draw the block diagram of 8051 and explain the operation of all the blocks.
22. (A) Explain in detail about various addressing modes of 8051.
(Or)
(B) Write an assembly language program to arrange the given set of 'n' numbers in ascending order.
23. (A) Explain the programming of 8051 timers in detail.
(Or)
(B) Explain the programming of I/O ports in 8051.
24. (A) Explain in detail about the programming to transmit and receive data serially using 8051.
(Or)
(B) Explain in detail about interrupt structure and its priority in 8051.
25. (A) Explain in detail about keyboard interfacing.
(Or)
(B) Explain in detail about stepper motor interfacing.