



C14-EC-405

4459

BOARD DIPLOMA EXAMINATION, (C-14)
OCT / NOV-2017
DECE-FOURTH SEMESTER EXAMINATION
MICROPROCESSOR AND MICROCONTROLLER PROGRAMMING

Time : 3 Hours]

[Total Marks : 80

PART - A

3 × 10 = 30

Instructions : (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List the status and control the signals of 8085.
2. List the features of microprocessors.
3. Give the instruction frame format of PCON register of 8051.
4. Give the instruction frame format of PSW of 8051.
5. Define the terms machine level programming and assembly level programming.
6. List the addressing modes of 8051.
7. Draw the flowchart for addition of two numbers.
8. Define terms subroutine and debugging.
9. List RS232 pins of DB.9 connecto.
10. Explain how to use an 8051 time as an event counter.

PART - B

10 × 5 = 50

- Instructions :** (1) Answer any **five** questions.
(2) Each question carries **ten** marks.
(3) Answers should be comprehensive and the criteria for valuation is the content but not the length of the answer.

11. a) Explain the register structure of 8085 microprocessor.
b) Explain multiplexing and demultiplexing address and data bus of 8085 microprocessor.
12. a) Draw the internal block diagram of 8051.
b) Explain the interrupts in 8051.
13. a) Explain the counters and timers of 8051.
b) Explain internal memory of Microcontroller 8051.
14. a) Give any five logical operations with examples.
b) Explain an two data manipulation and two data transfer instructions of 8051 with examples.
15. a) List unconditional and conditional jump instructions.
b) Explain the timing diagram of Memory read and Memory write operations of 8051.
16. a) Explain the execution of STA instruction of 8085 with timing diagrams.
b) Write a program to perform single byte addition.
17. a) Explain the use of PUSH, POP instructions with 8051 microcontroller.
b) Explain the concept of nesting and multiple ending of subroutines.
18. Write programs to generate a square wave of 2KHZ frequency and 50% duty cycle using timer.

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