S.No. 2792 P 16 EL 21

(For candidates admitted from 2016–17 onwards)

M.Sc DEGREE EXAMINATION, NOVEMBER 2022

Electronics

MICRO CONTROLLER 8051 AND IDE

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20)

Answer ALL questions.

1. How many I/O ports are in 8051?
2. List all the 16-bit registers in 8051.
3. Which interrupt has highest priority in 8051?
4. What is the function of TMOD register?
5. What is the use of DAA instruction?
6. Give any two three byte instructions in 8051.
7. What is the range of signed character data type?
8. What is meant by embedded C?

9. Expand IDE.

10. Define assembler.

PART B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

11. (a) Write short notes on PSW.

Or

(b) Discuss about the program counter and data pointer.

12. (a) Explain TCON register.

Or

(b) Give a brief note on software generated interrupts.

13. (a) Write short notes on direct addressing mode with necessary example.

Or

(b) Explain the function of call instruction.

14. (a) Explain the concept of function with an example.

Or

(b) How to program the I/O ports using C? Explain.



15. (a) Explain about the concept of compiler.

Or

(b) What is linker? Explain.

PART C — (3 × 10 = 30)

Answer any THREE questions.

16. With a neat diagram, explain the architecture of 8051.

17. Describe about various modes of operations of timers in 8051 microcontroller.

18. Explain about conditional and unconditional jump instructions in 8051.

19. Explain the function of arithmetic and logical operators.

20. Describe the assembly program development and debugging process.

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