

Section-D

8. (a) Explain the data communication process of microprocessor.
- (b) Explain the Regulatory Compliance Testing of microprocessor based products. 10,10
9. (a) Explain the design tool for microprocessor development.
- (b) Explain the series and parallel communication in microprocessor devices. 10,10

Roll No. :

Total No. of Questions : 9] [Total No. of Pages : 4

22660

**M.Tech. (ECE) 1st Semester
Examination, March-2021
(CBCS Scheme)**

**ADVANCED MICROPROCESSOR AND
MICROCONTROLLERS
Paper-MT ECE 21C1**

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note :- Attempt *five* questions in all, selecting *one* question from each Section. Question No. 1 is compulsory.

1. Write short notes on the following :

- (a) Memory addressing architecture
- (b) Internal RAM of 8051

- (c) Flag register of 8086 microprocessor
(d) Special I/O devices 4×5=20

Section-A

2. (a) Explain the design of basic microprocessor architectural with block diagram.
(b) Explain the following :
(i) Addressable Memory
(ii) Word length
(iii) ALU 10,10
3. (a) Discuss the major architectural features which separate one microprocessor to another.
(b) What are interrupt services routines (ISRs) and how ISRs handle a interrupt ? 10,10

Section-B

4. (a) Explain Timer modes of 8051.
(b) Draw and explain in detail block diagram of 8051. 10,10
5. (a) For 8051 microcontroller, explain the following :
(i) Special Function Registers
(ii) Interrupt system

- (b) Explain the following instruction of 8051 with suitable example :
(i) SUBB A,@Ri
(ii) DIV AB
(iii) SWAP A
(iv) MOVX A,@DPTR
(v) CJNE A,direct,rel 10,10

Section-C

6. (a) Explain the physical memory organisation in an 8086 system.
(b) What is the maximum memory addressing and I/O addressing capabilities of 8086 ? 10,10
7. (a) Draw and explain the functional block diagram of 8085.
(b) Explain the Addressing modes of Motorola 68XXX family of microprocessor. 10,10