TED (15/19) 4214
(Revision-2015/19)

N22-02980

Reg.No.....
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DIPLOMA EXAMINATION IN ENGINEERING/TECHNOLOGY/MANAGEMENT/ COMMERCIAL PRACTICE, NOVEMBER - 2022

MICROCONTROLLER AND INTERFACING

[Maximum marks: 100] (Time: 3 Hours)

PART – A
Maximum marks : 10

I (Answer ***all*** the questions in one or two sentences. Each question carries 2 marks)

1. List any 4 features of 8051.
2. List the timer modes of operation in 8051.
3. Define framing in serial transmission.
4. Define cascading in 8259.
5. List the types of seven segment displays. (5 x 2 = 10)

PART – B
Maximum marks : 30

II (Answer any ***five*** of the following questions. Each question carries 6 marks)

1. Draw and explain 8051 port with pull-up resistors.
2. Describe the power saving modes of 8051.
3. Write an ALP to add two 8-bit numbers.
4. Explain the delay subroutine with an example.
5. Explain the different I/O mode of 8255.
6. Draw the pin diagram of 8259.
7. Explain the pins of an LCD display. (5 x 6= 30)

PART – C
Maximum marks : 60

(Answer one full question from each unit. Each full question carries 15 marks)

UNIT –I

III.(a) Explain the internal structure of RAM in 8051 with neat sketches. (12)

(b) List the functions of an accumulator. (3)

OR

IV.(a) Draw and explain the pin details of 8051. (12)

(b) List the general purpose registers of 8085. (3)

UNIT-II

V. Explain about the different addressing modes of 8051. (15)

OR

VI. Explain instruction set of 8051 with examples. (15)

UNIT-III

VII.(a) Explain the architecture of 8251 with neat sketches. (12)

(b) Explain the function of Chip Select pin in 8255. (3)

OR

VIII.(a) Draw and explain the pin diagram of 8279 in detail. (12)

(b) Explain the process of handshaking in 8255. (3)

UNIT-IV

IX. (a) Explain the interfacing of 4 x 4matrix keyboard with 8051 with neat sketches. (7)

(b) Explain the interfacing of 7 segment display with 8051 port. (8)

OR

X. (a) Explain the interfacing of DC motor with 8051 with neat sketches. (8)

(b) Explain the interfacing of DAC with 8051 with neat sketches. (7)

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