NETTUR TECHNICAL TRAINING FOUNDATION

DIPLOMA IN ELECTRICAL & ELECTRONICS – CP23

IV SEMESTER REGULAR & SUPPLEMENTARY EXAMINATION-JULY 2023

Subject: Microcontroller &Applications **Total Time: 2 Hr.**

Subject Code: CP23404T **Total Marks: 50**

PART B

1.0 ANSWER ANY EIGHT OF THE FOLLOWING **2*8=16**

1.1 Draw the block representation of a microcontroller

1.2 Explain about the basic storage element of memory.

1.3 What are the register banks available in 8051 and how the banks can be selected?

1.4 Draw ROM memory model

1.5 What is assembler?

1.6 State the function of accumulator in 8051.

1.7 What is the difference between half duplex and full duplex communication

1.8 List out the Bit-wise Operators in C

1.9 List out the data types of 8051 in C.

1.10 State the functions of program counter.

2.0 ANSWER ANY SIX OF THE FOLLOWING **3*6=18**

2.1 Compare Microprocessor and Microcontroller

2.2 List the features of 8051

2.3 Write the function of the following pin in 8051: a)RST b)XTAL1 & XTAL2

2.4 Explain the data transfer instructions in 8051 with examples.

2.5 List out the interrupts available in 8051 and mention their vector location.

2.6 Write an 8051 C program to convert packed BCD to ASCII .

2.7 Write the alternate functions of PORT3 in 8051.

2.8 What are the criteria for selecting the microcontroller?

3.0 ANSWER ANY FOUR OF THE FOLLOWING **4*4=16**

3.1 Draw and explain about the 4X8 bit register

3.2 Explain the different modes of operation of timers in 8051.

3.3 Draw and explain the interfacing of temperature control system with 8051 microcontroller.

3.4 Draw and explain the internal ROM organization in 8051.

3.5 Explain the addressing modes of 8051 with examples.

3.6 Draw and explain the interfacing diagram of stepper motor with 8051.