SECOND SEMESTER DIPLOMA EXAMINATION IN ENGINEERING
AND TECHNOLOGY

MICROCONTROLLER AND APPLICATIONS

MODEL QUESTION PAPER – SET-1

Time: 3 hours   Maximum Marks: 75

PART A

I.   Answer all the following questions in one word or sentence.

(9 x 1 = 9 Marks)

		Module Outcome	Cognitive level
1	State the purpose of ALU?	M 1.03	R
2	Memorizethe data bus size of 8051 microcontroller?	M1.02	R
3	Define addressing mode.	M2.01	R
4	List any two logical instructions in 8051	M2.02	R
5	Define Baud rate.	M3.04	R
6	Identify the function of C/T bit in TMOD register.	M3.02	U
7	All the interrupts are enabled using a special function register called ------------------in 8051 microcontroller.	M3.01	R
8	What do you mean by interfacing?	M4.01	R
9	List any two advantages of LCD.	M4.03	R

PART B

II.   Answer any Eight questions from the following

(8 x 3= 24 Marks)

		Module Outcome	Cognitive level
1	List any three important features of 8051	M 1.02	Remember
2	Describe stack memory.	M1.04	Understand
3	Differentiate between program memory and data memory.	M1.03	Understand
4	State the difference between MOV and MOVX instructions.	M2.02	Understand
5	Name any three single bit level instructions.	M2.03	Remember
6	List any three interrupts in 8051.	M3.01	Remember
7	List different operation modes of timers in 8051.	M3.02	Remember

8	Distinguish between synchronous and asynchronous communication.	M3.04	Understand
9	What are the uses of Timer/Counter register in 8051?	M3.02	Remember
10	Name the three control lines of LCD.	M4.03	Remember

PART C

III. **Answer all questions from the following** (6x 7 = 42 Marks)

Module Outcome   Cognitive level

1	Draw and explain PSW register in 8051.	M1.04	Understand
	OR		
2	Draw and explain simple block diagram of 8051 microcontroller.	M1.03	Understand
3	Explain different types of addressing modes in 8051.	M2.02	Understand
	OR		
4	Describe jump instructions in 8051.	M2.03	Understand
5	Develop an assembly language program to convert ASCII number to packed BCD number.	M2.04	Apply
	OR		
6	Develop an assembly language program to read Port1 and store the data in external memory location 4600H.	M2.04	Apply
7	Illustrate IE special function register in 8051.	M3.01	Understand
	OR		
8	Drawand explain TMOD special function register in 8051.	M3.03	Understand
9	Illustrate interfacing of stepper motor with 8051.	M4.01	Understand
	OR		
10	Draw and explain the interfacing of 4x4 matrix keyboard with 8051.	M4.03	Understand
11	Illustrate the interfacing of ADC with 8051.	M4.04	Understand
	OR		
12	Illustrate interfacing of dc motor with 8051.	M4.02	Understand