1.A.	Mention the structure of the IE (Interrupt Enable) register in the 8051 microcontroller?			2Marks	CO3	4	2
1.B.	Name two serial communication modes supported by the 8051 micro controller?			2Marks	CO3	4	2
1.C.	How can you send commands to the LCD using the 8051 microcontroller?			2Marks	CO3	4	2
1.D.	Mention any four key features of ARM microcontrollers?			2Marks	CO4	3	2
1.E.	Mention the ARM and RISC design philosophy?			2Marks	CO4	3	2
1.F.	How does a PIC microcontroller differ from other microcontrollers?			2Marks	CO4	3	2
2.	Answer all the questions			16Marks	CO4	3	2
2.A.	Develop an 8051 sequence to Rotate the Stepper Motor using a Normal 4-step Sequence in a Clockwise direction?			4Marks	CO3	4	3
2.B.	Mention the differences between synchronous and asynchronous modes of communication and discuss the asynchronous framing concept with one example?			4Marks	CO3	4	3
2.C.	List the difference between Von-Neumann and Harvard Architecture in detail with a suitable diagram?			4Marks	CO4	3	2
2.D.	Describe the features of the PIC 18 microcontroller?			4Marks	CO4	3	2
3.	Answer all the questions	choice Q-4		11Marks	CO3	4	4
3.A.	Classify the various pin descriptions and address ranges of LCD with the help of Symbols in detail?			5Marks	CO3	4	3
3.B.	Develop an 8051 ALP to display your subject code in the second line center position using 2x16 LCD interfacing?			6Marks	CO3	4	4

2.D.	Describe the features of the PIC 18 microcontroller?			4Marks	CO4	3	2
3.	Answer all the questions	choice Q-4		11Marks	CO3	4	4
3.A.	Classify the various pin descriptions and address ranges of LCD with the help of Symbols in detail?			5Marks	CO3	4	3
3.B.	Develop an 8051 ALP to display your subject code in the second line center position using 2x16 LCD interfacing?			6Marks	CO3	4	4
4.	Answer all the questions			11Marks	CO3	4	4
4.A.	A Digital-Analog Converter DAC0808 is interfaced with an 8051 Controller. Write a program to generate a triangular wave and Sketch the interfacing Diagram neatly?			5Marks	CO3	4	3
4.B.	Develop an 8051 ALP to display the numbers 5 to 9 using 7 segment display?			6Marks	CO3	4	4
5.	Answer all the questions	choice Q-6		11Marks	CO4	3	3
5.A.	Describe the purpose of the Current Program Status Register (CPSR) in ARM 7 processors?			5Marks	CO4	3	2
5.B.	Demonstrate how to use the banked registers available in different modes of ARM 7?			6Marks	CO4	3	3
6.	Answer all the questions			11Marks	CO4	3	3
6.A.	Explain the various ARM 7 processor modes and how to switch between different processor modes in ARM 7 in detail?			5Marks	CO4	3	2
6.B.	Explain the concept of pipelining in ARM processors. Write a sequence of instructions and demonstrate how pipelining improves the execution speed compared to sequential execution?			6Marks	CO4	3	3