Time: 3 hours   **Max. Marks: 80**

Note:
- **Question 1 is compulsory.**
- **Solve any three from Q2 to Q6.**
- **All questions carry equal marks.**

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Q1.	**Solve any four from question no.1**	**(20)**
A	Explain the features and Applications of Embedded system.	**5**
B	Explain Microprocessor vs. Microcontroller	**5**
C	Write short note on Real Time Operating System.	**5**
D	Write the difference between C and Embedded C.	**5**
E	Explain classification of Computer Architecture	**5**
Q2.		**(20)**
A	Explain the addressing modes of 8051 assembly language.	
B	Explain the architecture of 8051 with the help of block diagram.	10
Q3.		**(20)**
A	Explain the use of embedded system in designing home automation systems.	10
B	Explain the concept of function in Embedded C programming with an example.	10
Q4.		**(20)**
A	Explain Looping statements in Embedded C with example.	10
B	Explain Arithmetic and Logical operators.	10
Q5.		**(20)**
A	Explain the different types of registers used in 8051 Microcontroller.	10
B	How Seven Segment Display (SSD) interface with 8051 Microcontroller? Explain in details.	10
Q6.		**(20)**
A	Explain Design challenges and common design metrics of Embedded systems	10
B	What is Assembly Language Programming? List and explain logical operators in assembly language.	10

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