

Duration: 3hrs

[Max Marks:80]

N.B.: (1) Question No 1 is Compulsory.

(2) Attempt any three questions out of the remaining five.

(3) All questions carry equal marks.

(4) Assume suitable data, if required and state it clearly.

- 1 Attempt any FOUR [20]
- a Explain IE and IP register use in 8051 microcontroller. 5
 - b Differentiate between Von-neumann and Harvard architecture. 5
 - c List the features of PIC16F886. 5
 - d List the features of ARM7. 5
 - e Differentiate between segmentation and paging in concern with the memory system. 5
- 2 a What is paging? Explain the paging mechanism in the memory system. [10]
- b Write a program to multiply F0H ,0BH data and store 16 bit result in memory location 10H and in 11H memory location. [10]
- 3 a Display Character “C” serially using mode1 with baud rate 9600, using 8051 microcontroller. [10]
- b What is exception handling? Explain exception handling using ARM7. [10]
- 4 a What is banking? Why is it needed? Explain banking with respect to 8051 microcontroller [10]
- b What is DMA? Explain DMA with a block diagram. [10]
- 5 a What is the size of registers in ARM7? Explain the register model of ARM7. [10]
- b Write a program to transfer 5 memory location contents from address (20H to 25H) to (50H to 55H) using 8051 microcontroller (use suitable data). [10]
- 6 a What are the factors to consider while selecting a microcontroller for a given application? [10]
- b Explain Timer structure of 8051 microcontroller. [10]
