2008 COCHIN UNIVERSITY OF SCIENCE & TECHNOLOGY

B.TECH ELECTRICAL AND ELECTRONICS ENGINEERING

MICROPROCESSOR SYSTEM DESIGN

JUNE 2008

TIME: 3 HOUR
MARK: 90

ANSWER ANY SIX QUESTION
ALL QUESTIONS CARRY EQUAL MARKS

MARK [6*15]

1 a. Explain with a neat block diagram, the working of Intel 8255 programmable peripheral interface

b. What are the advantages of 8253 over 8254 programmable interval timer?

2 a. Explain the interfacing of a 12 bit ADC with 8085 microprocessor, with a neat diagram

b. Explain about serial and parallel bus standards with examples

3 a. With a neat block diagram, explain the internal architecture of Intel 8086 microprocessor

b. Compare the minimum and maximum mode configuration of 8086

4 a. Explain about the various registers available in 8086

b. What are the various addressing modes of 8086? Explain with examples

5 a. Explain the various procedure calls used in 8086 with examples

b. What are assembler directives? Explain with examples

6 a. Write an assembly language program to reverse a string stored in a memory location

b. Explain the following instructions: AAS, SCASB, LEA

7 a. Explain the internal architecture of 80386 microprocessor with a neat diagram

b. With examples, explain about RISC and CISC architectures

8 a. Explain the paging mechanisms of 80386 with suitable diagrams

b. What do you mean by pipelining? What are the advantages of pipelining?

9 a. Differentiate between microprocessors and microcontrollers

b. Explain the various applications of microcontrollers

10 a.Explain the architecture of 8051 microcontroller

b. Explain the various addressing modes of 8051 microcontroller