Paper / Subject Code: 39303 / MICROPROCESSOR AND PERIPHERALS

Q. P. Code: 36260

(3 Hours) Total Marks: 80

Note: 1. Question No. 1 is compulsory.

2. Solve any three from the remaining five questions.

3. All questions carry equal marks.

1.a. Explain the Clock, Ready and Reset signals generated by the 8284 Clock (05)
Generator.

b. Explain the register set of the 8086 along with their functions. (05)

c. What are the advantages of Memory Segmentation in the 8086? (05)

d. Explain with examples the instances when the pipeline stalls in the 8086. (05)

2.a. Write a 8086 assembly language program to check whether a string is (10)
Palindrome or not.

b. Interface 8KB of ROM and 8KB of RAM to the 8086. Show the memory map (10)
and address decoding.

3. a. Explain the ASCII instructions (AAA, AAS, AAM and AAD) of the 8086 with (10)
examples.

b. Explain the 8086-8087 interface with a neat diagram. Describe the function of (10)
each signal.

4. a. Write a program to read a byte of data from Port A of the 8255 using Mode 1 (10)
operation (with handshaking). Explain the control word used and draw a neat
interfacing diagram.

b. Explain the cascaded mode of operation for the 8259 PIC with a neat diagram (10)

5.a. What is Direct Memory Access (DMA)? Explain the modes of transfers in the (10)
8237 DMAC.

b. Explain in detail the role of the bus arbiter like 8289 in a loosely coupled (10)
multiprocessor system.

6. Write short notes on: (Any two) (20)
a. Display interfacing to 8086

b. 8288 Bus Controller

c. Assembler Directives in the 8086