Bachelor of Science (B.Sc.) (I.T.) Semester–III Examination
MICROPROCESSOR AND ALP
Paper—I

Time : Three Hours] [Maximum Marks : 50

Note :— (1) All questions are compulsory and carry equal marks.
(2) Draw a suitable diagram wherever it is necessary.

EITHER

1. (A) Draw a block diagram of internal architecture of 8086 µp and explain the function of program counter register. 5

(B) What are the different addressing modes available in 8086 µp ? Explain any one with suitable example. 5

OR

(C) Explain any three string manipulation instructions used in 8086 µp with example. 5

(D) Write an ALP using instruction of 8086 µp to mask the upper nibble of 8 bit data. 5

EITHER

2. (A) Draw and explain the operation of interfacing of static RAM with 8086 µp. 5

(B) What is DMA ? Explain the operation of DMA controller in burst mode with flow chart. 5

OR

(C) What is PDI ? Explain control word format of 8255 PPI. 5

(D) What are the problems associated with keyboard interfacing ? How they can be avoided ? Explain. 5

EITHER

3. (A) Explain interrupt structure of 8086 µp in brief. 5

(B) Differentiate between Asynchronous and Synchronous data transfer schemes. 5

OR

(C) Draw and explain the block diagram of 8251 USART in brief. 5

(D) What is RS 232 C ? Explain. 5

EITHER

4. (A) What are the main features of 80286 µp ? Draw the block diagram of internal architecture of 80286 µp. 5

(B) Explain the concept of segmentation in 80386 µp. 5

OR

(C) Write a short note on RISC processors. 5

(D) Explain any five features of Pentium processors. 5

5. (A) Give the format of flag registers used in 8086 µp and explain any one flag. 2½

(B) Why do digital systems need A/D and D/A converters ? 2½

(C) What is BIOS interrupt ? Explain. 2½

(D) Explain real mode of operation of 80286 µp in brief. 2½