AU–322

M.Sc. (Part—I) Semester—II (C.B.C.S. Scheme) Examination

ELECTRONICS

Paper—2-ELE-2

(Microprocessor and Microcontroller)

Time : Three Hours] [Maximum Marks : 80

N.B. :— (1) All questions are compulsory.

(2) Draw neat sketches wherever necessary.

EITHER

1. (a) Explain various addressing modes used in 8086 µp. 8

(b) Explain MOV instructions of 8086 µp. 8

OR

(p) Explain arithmetic instructions of 8086 µp. 8

(q) Explain the architectural block diagram of 8086 µp. 8

EITHER

2. (a) Explain memory read and I/O read cycles of 8086 µp. 8

(b) Draw and explain pin diagram of IC 8086. 8

OR

(p) State and explain minimum mode configuration of 8086 µp and explain it. 8

(q) Differentiate between memory mapped I/O and I/O mapped I/O schemes of data transfer. 8

EITHER

3. (a) Draw and explain the block diagram of 8051 µc. 10

(b) Differentiate between microprocessor and microcontroller. 6

OR

(p) State various directives used in 8051 µc, with suitable example. 6+2

(q) Explain the Register Banks of 8051 µc. 8

EITHER

4. (a) Draw and explain the pin diagram of 8051 μc. 8

(b) State and explain addressing modes used in 8051 μc. 8

OR

(p) State and explain with suitable examples various Instructions of 8051 μc which are used to access the memory. 10

(q) Write the complete procedure for developing debugging and assembling of 8051 μc programs. 6

EITHER

5. (a) Explain arithmetic instructions of 8051 μc. 8

(b) Explain short and long jump instructions of 8051 μc. 8

OR

(p) Explain various logical instructions of 8051 μc. 8

(q) Give the procedure to generate time delays in 8051 μc and explain the role of Quartz crystal frequency in calculation of time delay. 8