

Roll No.

23257

**M.Tech 1st Semester
(Electrical Engg.) Specialization :
Electrical Power Systems
Examination-May, 2014**

**MICRO PROCESSOR AND MICRO
CONTROLLER**

Paper MTEPS-101

Time : 3 hours

Max. Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard will be entertained after the examination.

Note : Attempt any **five** questions out of eight questions. Each question carries equal marks.

1. Explain resister organisation and segmentation used 8086 micro processor with diagram ? 20

2. Explain instruction set and describe in detail about data transfer instructions, arithmetic instructions and Bit manipulation instruction used in 8086/8088 Microprocessor. 20
3. Draw and explain memory structure of 8086 ? Describe how pipelined architecture is implemented in 8086 ? 20
4. Explain the need of DMA controller ? Also describe about overheads associated interrupt driven input-output controlled via DMA. 20
5. Explain interrupts used in 8086, their priority and routine. 20
6. Interface stepper motor with 8086 and write a program to control any device with motor using above hardware 20

7. (a) Explain 8251 and its mode of operation
with diagram ? 10

(b) Explain need of Intel 8259-A
programmable interrupt controller. 10

8. Draw and compare the block diagram of
8031/510 micro controllers. 20
