

S-E (IT) Sem IV Rev 30/11/13
Microprocessor & Microcontroller

VT-S.H.Exam. Oct(I).-13- 72

Con. 6311-13.

LJ-10509

(3 Hours)

[Total Marks : 100

- N.B. :** (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions out **remaining** questions.
(3) **Figures** to the **right** indicate **full** marks.

1. Design an 8086 based system to interface following – **20**
 - (a) 128 KB RAM using 62256 chips
 - (b) 64KB EPROM using 27256 chips
 - (c) Two 16 bit input and output ports.

2. (a) Explain the addressing modes of 8051 microcontroller. **10**
(b) Explain the register file structure of PIC microcontroller. **10**

3. (a) What is the concept of mixed language programming ? Explain with example. **10**
(b) Draw and explain minimum mode operation of 8086. **10**

4. (a) Explain the hardware and software interrupts of 8051 microcontroller. **10**
(b) What are the various assemble directives of 8086. **10**

5. (a) Interface DAC with 8051 and write a program in assembly to generate triangular waveform. **10**
(b) Explain Harvard Architecture and Pipelining. **10**

6. (a) Explain following SFR's of 8051 – **10**
 SCON, TCON, TMOD, PCON.
(b) Explain following instructions of 8086 – **10**
 INT, CMP, STOS, MOV, ADC.

7. Write shor notes on :- **20**
 - (a) Serial communication of 8051
 - (b) Clock generator 8284
 - (c) Inter and Intra segment call.
