

17/5/13.

T.E (Comp) V Microprocessor

P3-upq-Feb.-13KL-107 A4 E

Con. 6953-13.

GS-8871

(3 Hours)

[Total Marks : 100

N.B. :(i) Question No. 1 is **compulsory**.

(2) Solve any **four** questions out of the remaining **six** questions.

1. (a) Explain the memory segmentation in Intel 8086 processor with its advantages and disadvantages. **10**
- (b) Explain interrupts of Intel 8086 microprocessor. **10**
2. (a) Design an 8086 based system with following specification :— **10**
 - (i) 8086 working at 8MHz
 - (ii) 32 kbytes EPROM using 16kB devices
 - (iii) 64 kbytes RAM using 32kB devicesDraw the complete schematic of the design indicating address map.
- (b) Explain the following Intel 8086 assembly language instructions giving example. **10**
 - (1) TEST
 - (2) NOP
 - (3) STOS
 - (4) DAA
 - (5) SAR.
3. (a) Explain the operating modes of 8255 PPI including the handshaking operation. **10**
- (b) Explain the operating modes of 8254 PIT. **10**
4. (a) Explain the modes of operation of DMA controller. **10**
- (b) What do you understand by bus arbitration ? Explain the different bus arbitration techniques with diagram. **10**
5. (a) Explain the 8288 bus controller block diagram. Explain its use. **10**
- (b) Explain the operation of three 8259 PIC in cascaded mode. **10**
6. (a) Explain with neat diagram memory read and write machine cycle in maximum mode. **10**
- (b) Explain addressing modes of 8085 microprocessor with example. **10**
7. Write a short notes on (any **four**) :— **20**
 - (a) RS-232 Serial Interface Standard
 - (b) 8284 clock generator
 - (c) Fixed port and Variable port addressing
 - (d) Generation of Reset Signal in 8086 based system
 - (e) String Instructions.
