TE (Biomed) SEM-V (CBGS) MP 26/11/2016

QP Code :14864

(3 Hours) [Total Marks : 80

N.B. : (1) Question no. 1 is **compulsory.**
(2) Attempt any **three** question out of remaining **five.**
(3) **Figures** to the **right** indicate **full** marks.
(4) **Assume** suitable data wherever **necessary.**

1. (a) Explain 8086 flag register. **20**
(b) Explain the features of 8255.
(c) Explain 8086 interaction with DMA controller (8237).
(d) Explain the address transfer instructions of 8086.
(e) Explain in brief control register and status register of 8087.

2. (a) Design an 8086 based maximum mode system working at 6 MHz having following specification. **20**
→ 64 KB EPROM using 16 KB chips
→ 128 KB SRAM using 64 KB chips
→ Two 16 bit C/P ports
→ Two 16 bit O/P ports

3. (a) Draw and explain architecture of 8086. **10**
(b) Explain the memory organization 8086. **5**
(c) Explain generation of 20 bit physical address with suitable example. **5**

4. (a) Explain Harward Architecture of a general computer system. **5**
(b) Justify how queing and pipelining fails in case of branch instructions. **5**
(c) Write an assembly language program to calculate an area of circle using 8087. **10**

5. (a) Explain string instructions of 8086 microprocessors. **10**
(b) Explain the process of normalization with an example. **10**

6. (a) What are maskable and non-maskable interrupts. Explain IVT. **10**
(b) Explain PUSH and POP instructions of 8086. **5**
(c) Explain BSR mode of 8255. **5**
