

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. - SEMESTER – III • EXAMINATION – WINTER • 2013****Subject code: 730406****Date: 28-11-2013****Subject Name: Peripheral System Design and Interfacing****Time: 10.30 am – 01.00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain GPIB bus configurations with their advantage and disadvantage. **07**
(b) List various schemes for memory contention control of a CRT display system. **07**
Explain CRT display system with transparent addressing.
- Q.2** (a) Explain serial communication using null modem and loop back plug. **07**
(b) Give the classification of GPIB bus signal. Explain each signal in brief. **07**
- OR**
- (b) Explain in detail different GPIB polling methods. **07**
- Q.3** (a) Why address contention circuits are required in CRT controller? Explain MPU priority and $\Phi 1$ / $\Phi 2$ interleaving scheme. **07**
(b) What do you mean by bus? Explain bus structure and bus design in detail. **07**
- OR**
- Q.3** (a) Explain frame synchronism using RES signal in CRT controller. **07**
(b) Explain in detail EISA, MCA, PCI and VESA VL bus. **07**
- Q.4** (a) Write short notes on “programmable logic controllers” **07**
(b) State different serial port’s registers of PCs. Explain any three of them in detail. **07**
- OR**
- Q.4** (a) What is data acquisition system? Draw and explain block diagram of it in detail. **07**
(b) Explain in detail ECR with bit assignments w.r.to. parallel port **07**
- Q.5** (a) Explain different program development tools used in μp based system with models. **07**
(b) Draw functional block diagram of DMA controller & explain DMA operation. **07**
- OR**
- Q.5** (a) Explain in detail different modes of parallel port in BIOS. **07**
(b) Explain program development process in detail with flow chart used in μp based system. **07**
