

**JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT**  
**TEST -2 EXAMINATION- Oct 2017**  
**B.Tech(ECE) V Semester**

**COURSE CODE: 10B11CI401**

**MAX. MARKS: 25**

**COURSE NAME: Microprocessors and Controllers**

**COURSE CREDITS: 4**

**MAX. TIME: 90Min**

*Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means.*

**Q.1. [5 Marks. Each question is half mark]**

- a) How do you overcome the constraint of fanout specification?
- b) What is aligned access?
- c) Describe the machine level data representation for TTL 8086.
- d) Describe the pinout of 8051 microcontroller.
- e) How is DRAM different from SRAM?
- f) Describe role of SI and DI registers in MOVSB.
- g) Explain REP, REPZ.
- h) Discuss stack addressing for PUSH and POP instructions.
- i) Why use 2's complement form for data representation.
- j) Explain MI/O and RESET.

**Q.2. [5 marks] What is a robust memory? Design a error detectible memory interface for 8086 for 512Kbyte memory using 32 Kbyte memory chips and bank selection applied on the chip select.**

**Q.3. [5 marks] Describe Issues in IO Interfacing. Explain interfacing of eight bit switch as input device, and eight LEDS to show state of the switch.**

**Q.4. [5 marks] Draw the internal architecture of 8284 and describe its functions.**

**Q.5. [5 marks] List five major differences between a microcontroller and microprocessor. Explain the register architecture of 8051 microcontroller.**