

## JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

## MAKEUP EXAMINATION- 2016

## B.Tech (CSE) IV Semester

COURSE CODE: 10B11CI401

MAX. MARKS: 25

COURSE NAME: Microprocessors and Controllers

COURSE CREDITS: 4

MAX. TIME: 1Hr 30 Min

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

- Q1. [1 x 5 Marks]
- Explain command word for programming 82C55?
  - What is direct addressing mode in 8051?
  - What is the difference between NVRAM and EEPROM?
  - Explain the functioning of 74LS138 (3 to 8) decoder?
  - Explain PLA, PAL, and GAL for memory address decoding?
- Q2. Design hardware and timing diagram for interfacing of the printer in Port A and Port B Strobe output mode? [5 Marks]
- Q3. Design hardware and software interfacing of 4 X4 keyboard matrix interface using 82C55 microcontroller? [5 Marks]
- Q4. Design memory interface for 8086 for 512 K bytes memory using 64K memory chip with separate decoders? [5 Marks]
- Q5. Explain special function registers in 8051 Microcontroller? [5 Marks]