

S.B. Roll No.....

**PROGRAMMABLE LOGIC CONTROLLERS AND MICROCONTROLLERS**  
**6<sup>TH</sup> EXAM/ELECT/EEE/5228/4452/Nov' 2016**

**Duration: 3hrs**

**Max.Marks:75**

**SECTION-A**

**Q1. Fill in the blanks**

**15x1=15**

- a. IL stands for \_\_\_\_\_.
- b. PLC stands for \_\_\_\_\_.
- c. Sinking is common \_\_\_\_\_ line.
- d. There are \_\_\_\_\_ types of timers.
- e. PLC \_\_\_\_\_ consists of a commonly used set of symbols that represent instructions.
- f. PLC controller can be reprogrammed through a computer but through \_\_\_\_\_.
- g. \_\_\_\_\_ instruction copies from one list to another.
- h. \_\_\_\_\_ instruction will allow a line to true for only one scan.
- i. 8051 microcontroller has \_\_\_\_\_ bytes of ROM.
- j. Register SP stands for \_\_\_\_\_.
- k. The maximum size of program memory in 8051 can be \_\_\_\_\_.
- l. A program that consists of 0s and 1s is called \_\_\_\_\_.
- m. LED \_\_\_\_\_ segment displays are very commonly used numeric display.
- n. Keyboards are most widely used \_\_\_\_\_ device.
- o. LCD stands for \_\_\_\_\_.

**SECTION-B**

**Q2. Attempt any six questions**

**6x5=30**

- a. What are limitations of relays?
- b. Name different parts of PLC.
- c. Name different comparison instructions.
- d. What do you mean by Timers? Explain different types of timers.
- e. How micro-controller differs from a microprocessor?
- f. Write short note on application of PLC in car parking system.
- g. Write the steps to execute an Assembly Language Program.
- h. Explain with circuit diagram how analog signal can be read by 8051 with help of ADC.

**SECTION-C**

**Q3. Attempt any three questions**

**3x10=30**

- I. What do you mean by Input /Output modules? Explain different types of I/O modules.
- II. What do you mean by sequencers? Explain different types of sequencers.
- III. Draw the pin diagram of 8051 and explain function of each pin.
- IV. Explain LCD interfacing with 8051.
- V. Write short note on any two :
  - a. Counter.
  - b. Memory organisation.
  - c. Ladder diagram.