

MALLA REDDY ENGINEERING COLLEGE (AUTONOMOUS)

(Affiliated to JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD)

Gundlapochampally (H), Maisammaguda (V), Medchal (M), Medchal-Malkajgiri (Dist), Hyderabad.

III B.Tech II Semester Supplementary Examinations, NOVEMBER-2017

SUBJECT: MICROPROCESSORS AND MICROCONTROLLERS

Branch: Common to EEE & ECE

Time: 3 hours

Max. Marks: 75 Mark

Answer Any 5 Questions

5x15 Marks= 75 Marks

- 1) (a) Discuss briefly the instruction formats of 8086. [7]
(b) What do you mean by addressing modes? What are the different addressing modes supported by 8086? [8]
- 2) Write an ALP to find whether a given number is even or odd. Explain the logic used in this ALP. [15]
3. (a) Explain the steps for interfacing the I/O with 8086. [5]
(b) Explain 8255 with neat architecture. [10]
4. (a) Explain the need for DMA in Microprocessor based systems. [5]
(b) Explain the interfacing of 8257 DMA Controller with 8086. [10]
- 5) (a) Discuss the serial data transmission standards and their specifications? [5]
(b) Draw and explain the block diagram of 8251. [10]
- 6) (a) Give the features of 8051 microcontroller. [7+8]
(b) Explain the following pins of 8051: AD₀ to AD₇; T₀ and T₁; INT0 and INT1; TxD and RxD.
- 7) (a) What is meant by interrupt? What are the different interrupts of 8051? [7]
(b) Draw and discuss the formats and bit definitions of TCON register in 8051. [8]
- 8) (a) Discuss on selecting an Analog-to-digital converter? [7]
(b) Draw the circuit diagram for ADC AD571 and DAC Interfacing with microcontroller 8051. [8]