

SUBJECT CODE NO: E-296
FACULTY OF ENGINEERING AND TECHNOLOGY
T.E.(EEP/EE/EEE) Examination Nov/Dec 2017
Microprocessor & Interfacing
(REVISED)

[Time: Three Hours]

[Max.Marks:80]

- N.B
- Please check whether you have got the right question paper.
1. Q.No.1 from section A and Q.No.6 from section B are compulsory.
 2. Solve any two from Q.2, Q.3, Q.4 and Q.5.
 3. Solve any two from Q.7, Q.8, Q.9 and Q.10.
 4. Assume suitable additional data if necessary.
 5. Figure to the right indicates full Marks.

Section A

- Q.1 Solve any Five 10
- a. What is the function of accumulator?
 - b. Why multiplexing is done in 8085.
 - c. What is flag register.
 - d. What happen when SHLD instruction executed.
 - e. Define machine cycle.
 - f. Give the difference between JZ and JNZ.
 - g. Define
 - (a) ROM
 - (b) Assembler.
 - h. Give functional categories of 8085 instructions.
- Q.2 a) List out different registers in 8085. What different temporary register in 8085? Explain Each register in detail with example. 08
- b) Enlist data transfer instruction of 8085 & Explain any four in detail. 07
- Q.3 a) Explain different control signal of 8085. 08
- b) Write a delay subroutine to generate a delay 50 msec if operating frequency of 8085 microprocessor is 3MHZ. 07

Q.4 a) Write a ALP to multiply two 8 bit numbers stored in memory location C200H and C201H. Store the result in memory location D200H and D201H. 08

b) Explain stack in detail. 07

Q.5 a) Explain direct addressing and Indirect addressing modes of 8085. 08

b) Draw and Explain the timing diagram of memory read cycle. 07

Section- B

Q.6 Solve any five 10

- Mention the purpose of SID and SOD.
- What is use of 8251 USART?
- Enlist different modes of 8255.
- What are two modes of DMA execution?
- Write control format in BSR mode.
- What is I/O map I/O mode?
- Write output control signals used in 8259 A.
- Write an instruction that enables all the interrupts in an 8085 system.

Q.7 a) Explain in detail block diagram of 8259. 08

b) Explain in detail block diagram and function of each block of 8251 USART. 07

Q.8 a) Discuss the architecture and working of 8253 timer 08

Q.8 b) Draw interfacing diagram of stepper motor using 8255 with 8085 & write ALP to rotate in anticlockwise direction. Assume delay subroutine available at "DELAY". 07

- Q.9 a) Explain the block diagram of 8257. 08
- b) Draw the interfacing diagram to interface LED's to 8085 through port A & B of 8255 & Write ALP such that when P_A LED's are ON P_B LED'S are OFF vice versa. 07

Q.10 Write short notes(any three) 15

- a) ADC 0809 and DAC 0808 interface to 8085.
- b) 8253 Modes.
- c) DC Motor speed control
- d) Measurements of power factor using 8085