

Total No. of Printed Pages:02

SUBJECT CODE NO:- H-531
FACULTY OF SCIENCE AND TECHNOLOGY
T.E.(EEP/EE/EEE)
Microprocessors And Interfacing
(REVISED)

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B
- 1) Q. No. 1 & Q. No. 6 are compulsory.
 - 2) Attempt any two questions from the remaining questions in each section.
 - 3) Assume suitable data & address if necessary.

Section A

- Q.1 Solve any five questions:- 10
- a) What is an ALU?
 - b) What is need of ALE signal in 8085?
 - c) What is opcode and operand?
 - d) What is difference in SUB and CMPB instruction?
 - e) What is CALL instruction?
 - f) What is function of \overline{RD} & \overline{WR} control signal.
 - g) Write classification of registers in 8085.
 - h) Give functional categories of 8085 instructions.
- Q.2 a) With a neat diagram explain the architecture of general microprocessor. 07
- b) Explain the terminologies used in microprocessor and define fetch, decode and execute. 08
- Q.3 a) Draw internal architecture of 8085 microprocessor and explain function of each block in brief. 10
- b) Explain addressing modes of 8085 microprocessor. 05
- Q.4 a) Write a ALP to sort given 10 numbers from memory location 2200 H in the descending order. 07
- b) Draw and explain brief the flag register of 8085. 08
- Q.5 Write a short note on:- 15
- a) Features of intel 8085
 - b) Concept of looping
 - c) Stack and sub routines

Section B

- Q.6 Solve any five questions:- 10
- Define A to D & D to A converter.
 - Features of 8255.
 - What are the signals used by the DMA controller?
 - What is USART?
 - What are the functions performed by 8251?
 - Mention the purpose of SID & SOD.
 - Enlist different I/O modes of 8255.
 - What are the output control signals used in 8259?
- Q.7 a) Explain the Block diagram of 8251 USART in detail with neat diagram. 07
- b) Write a program to generate a time delay 10msec using 8253. Assume clock frequency 2MHz. 08
- Q.8 a) Draw the interfacing diagram of stepper motor and write ALP to rotate through 180° Clockwise direction. 07
- b) Explain the block diagram of 8279 keyboard/display interface & it's operation. 08
- Q.9 a) Explain the pin diagram of 8259 with neat diagram and write function of each pin. 07
- b) Draw the interfacing diagram to interface LED to 8085 through port A & port B of 8255. Write ALP such that when port A LED's ON , port B LED's are OFF and vice versa. 08
- Q.10 Write a short notes on:- 15
- 8257 working
 - Block diagram of 8253.
 - ADC 0809 & DAC 0808 interface.