

FACULTY OF ENGINEERING & TECHNOLOGY
TE (EC/ECE/E&C/IE) Examination - DEC - 2014
MICRO PROCESSOR & PERIPHERALS (Rev)

[Time: THREE Hours]

[Max. Marks: 80]

“Please check whether you have got the right question paper.”

- i. Q.1 and Q.6 are compulsory.
- ii. Solve any two from Q.2, Q.3, Q.4 and Q.5
- iii. Solve any two from Q.7, Q.8, Q.9 and Q.10
- iv. Assume suitable additional data if necessary.

SECTION A

- Q 1 Attempt any two
- i) Give the hardware evolution of intel's microprocessor family. (05)
 - ii) What are various status flags are provided in 8085? Discuss their role. (05)
 - iii) What are different data transfer schemes available, discuss. (05)
 - iv) Compare memory mapped I/O with I/O mapped I/O scheme. (05)
- Q2 a) With the help of neat diagram, Explain the concept of bus oriented structure in microprocessors. (07)
- b) How you will de multiplexed the multiplexed address-data bus in 8085. explain in detail. (08)
- Q3 a) How you will draw the timing diagram? Draw the timing diagram of MVI A, 8 bit data (07)
- b) Write 8085 based program to find maximum number from an array. Assume suitable count. (08)
- Q4 a) Write a routine to enable RST 5.5 and RST 7.5, disable RST 6.5 interrupt. (07)
- b) Design a partially decoded memory system that provides 2 KB of EPROM immediately followed by 8 KB of RAM. The EPROM starts at address 0000H. (08)
- Q5 a) Write a routine to generate a time delay of 1 second. Assume crystal frequency of 6 MHZ. (07)
- b) Explain the function of following pins. (08)
- i) X1, X2
 - ii) Reset
 - iii) IO/ \bar{M}
 - iv) CLK OUT

SECTION-B

- Q6 Attempt any two
- i) Enlist the salient features of an 8255 PPI. (05)
 - ii) Enlist the difference between synchronous and asynchronous data communication. (05)
 - iii) Give the scheme of voltage measurement with the help of processor. (05)
 - iv) What is logic analyzer? With the help of diagram explain it. (05)
- Q7 a) A stepper motor is having 200 steps/Rev. it is required to move the motor through 180° write a program to achieve this. Explain how you can control the direction of rotation of stepper motor. (07)
- b) A DAC 08 is to be interfaced with 8085 using 8255, draw interfacing diagram and write a program for generation of triangular waveform. (08)
- Q8 a) An 8251 USART is to be interfaced with 8085 using 8255, draw interfacing diagram and explain how you can transmit a data byte serially over TXD line using appropriate routine. (07)
- b) Explain how you can use an 8253. For the generation of time delay. (08)
- Q9 a) What are the different schemes available for speed control of DC motor. Explain speed control using processor. (07)
- b) Give hardware implementation of digital IC Tester, explain logic be find it. (08)
- Q10 a) It is required to implement a flashing LED's display. Give complete scheme for this. (07)
- b) Explain how you can use 8155 timer for the generation of square wave. (08)