

USELT08 - Electronics Paper-II : Interfacing, PPI Devices and Microcontroller

P. Pages : 1

GUG/W/22/12007

Time : Three Hours



Max. Marks : 50

- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw neat and labelled diagram wherever necessary.

1. a) Explain the need of interfacing in microprocessor based system. **5+5**
b) Explain memory mapped I / O scheme.

OR

- c) Explain memory interfacing with microprocessor with suitable diagram. **5+5**
d) Explain the interrupt driven data transfer scheme.

2. a) Draw the block diagram of 8255 PPI and explain the function of each blocks. **5+5**
b) Explain the various operation modes of 8255 PPI

OR

- c) Explain the block diagram of 8253 programmable Counter/Interval time. **5+5**
d) What is DMA controller? Explain the block diagram of 8257.

3. a) Draw block diagram of 8051 microcontroller and explain the function of each blocks. **6+4**
b) Explain the function of program counter and DPTR register in 8051 microcontroller.

OR

- c) Explain memory organization of 8051 microcontroller. **5+5**
d) Explain program status word of 8051 microcontroller.

4. a) Explain the ports of 8051 microcontroller. **5+5**
b) Explain the function of ALE and PSEN.

OR

- c) Explain the various addressing modes of 8051 microcontroller. **5+5**
d) Write a program for addition of two 8-bit number and result should be at port 0.

5. Attempt **any ten** of the following. **10x1**

- What is interfacing?
- State disadvantages of program data transfer scheme.
- State advantages of synchronous data transfer scheme.
- State features of 8255 PPI.
- What is port.
- Draw control word format of 8255 PPI.
- What is microcontroller?
- State feature of 8051 microcontroller.
- What is directives?
- What is I/O port?
- What is addressing modes?
- State the meaning of following instruction.
 - ADDA, #20H
 - INC A
