

B.Sc. - II (CBCS Pattern) Semester-IV  
**USELT08 - Electronics Paper-II - Interfacing, PPI Devices and Microcontroller**

P. Pages : 2

Time : Three Hours



**GUG/S/25/12007**

Max. Marks : 50

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

**Either:**

1. a) Explain the necessity of interfacing. Differentiate between Memory Mapped I/O Scheme and I/O Mapped I/O Scheme. **10**

**OR**

- b) Explain the interfacing of memory with suitable diagram. Explain the asynchronous data transfer scheme. **10**

**Either:**

2. a) Explain the control word format for I/O mode of 8255PPI. Explain the BSR (BitSet/Reset) Mode of 8255PPI. **10**

**OR**

- b) Explain the block diagram of 8253. Explain any two mode of 8253. **10**

**Either:**

3. a) Explain the overview of 8051 family. Explain function of program counter in 8051 $\mu$ C. **10**

**OR**

- b) Explain the program status word register of 8051 $\mu$ C. Explain the structure of register bank in 8051 $\mu$ C. **10**

**Either:**

4. a) Draw the pin out diagram of 8051 $\mu$ C and explain I/O ports of 8051 microcontroller. **10**

**OR**

- b) Explain the addressing mode of microcontroller 8051 $\mu$ C. **10**

5. Attempt **any ten** of the following. **1x10 =10**

- a) What is interfacing?  
b) State the advantage of synchronous data transfer scheme?

- c) What is stealing mode in DMA?
- d) What is the function of the 8253?
- e) State the feature of 8255PPI.
- f) State the advantages of DMA controller.
- g) What is microcontroller?
- h) State the features of the 8051 microcontroller.
- i) State the application of microcontroller?
- j) What is input and output port?
- k) What is the addressing mode?
- l) What is bit manipulation?

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