T.Y.B.Sc.(With Credits)-Regular-Semester 2012 Sem V

B.Sc. 3516 - Electronics : Paper-I (Compulsory Paper : Microprocessor, Interfacing & PPI Devices)

P. Pages : 2 **GUG/S/17/3362**

Time : Three Hours * 0 6 5 3 * Max. Marks : 50

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

1. Either

a) Draw the block diagram of 8085 μp and explain each block. **5+**
Explain the importance of flag register with example. **5**

OR

b) Explain the address and data line multiplexing of 8085 μp. State its advantages. **5+**
Draw and explain the memory read machine cycle in detail. **5**

2. Either

a) What is addressing mode ? Explain any four addressing modes in 8085 microprocessor with example. **5+**
Explain the function of following instructions : **5**

i) ADDr ii) ADI, data

iii) DADrp iv) SUBM

v) SBBr

OR

b) What is flowchart ? Explain various symbols used in flowchart. **5+**
Explain the meaning of following instructions. **5**

i) ORAr ii) XRI data

iii) RLC iv) CMC

v) STC

3. a) What is meant by interfacing ? State and explain the need of interfacing ? **5+**
Explain the memory mapped I/O scheme and I/O mapped I/O scheme. **5**

OR

b) Explain the synchronous and asynchronous data transfer schemes in microprocessor. **5+**
Explain the burst mode and cycle stealing in DMA data transfer scheme. **5**

4. **Either**

a) State various operating modes of 8255 PPI and explain any one. **5+**
Write the control word for 8255 PPI, **5**
Port A - Input Port
Port B - Output Port
Port C_U - Input port
Port C_L - output port

OR

b) Explain the control word format of 8253 interval timer. **5+**
Explain the operation of Intel 8253 in mode 0 and mode 1. **5**

5. a) Explain data, address and control bus. **2½**

b) Write a programme in ALP to perform addition of two 8 bit binary numbers. **2½**

c) Explain the interrupt driven data transfer scheme. **2½**

d) Draw a schematic diagram of Intel 8257 DMA controller. **2½**

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