



GUG/W/14-3362

T.Y. B.Sc. Sem. – V B.Sc. 3516

Electronics Paper - I (Compulsory)

**(Microprocessor, Interfacing &
PPI Devices)**

P. Pages : 4

Time : Three Hours

Max. Marks : 50

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- Notes : 1. All questions are compulsory and carry equal marks.
2. Draw neat labelled diagrams wherever necessary.
3. Use of log table calculators are allowed.

1. Either :

- a) Draw block diagram of microprocessor 8085 and explain function of each block in it. **5**
- b) What is flag ? Explain flag register in 8085 μ p. **5**

OR

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- c) Define : **5**
i) Fetch cycle
ii) Machine cycle
iii) Instruction cycle
iv) T – States.
v) Opcode.
- d) What is bus ? Explain data, address and control bus. **5**

2. Either :

- a) What is addressing mode ? Explain any four addressing modes in 8085 microprocessor with example. **5**
- b) Explain the function of following instructions. **5**
i) ADD r ii) ADI, data
iii) DAD rp iv) SUBM
v) SBB r.

OR

- c) What is flowchart ? Explain various symbols used in flowchart. **5**
- d) Explain the meaning of following instructions. **5**
i) ORA r ii) XRI data
iii) RLC iv) CMC
v) STC.

- 3.** Either :
- a) What is interfacing ? Explain the needs of interfacing with its advantages. **5**
 - b) Explain : **5**
 - i) Memory mapped I/D scheme
 - ii) I/O mapped I/O scheme.

OR

- c) Explain programmed data transfer scheme in 8085 μ p. **5**
- d) Explain burst mode and cycle stealing in DMA data transfer scheme. **5**

4. Either :

- a) Draw the block diagram of 8255 PPI. Explain in brief. **5**
- b) Explain operating modes of 8255 PPI. **5**

OR

- c) Draw schematic diagram of interval timer intel 8253 and explain in brief. **5**

- d) What is DMA controller ? Explain schematic diagram of programmable DMA controller 8257. **5**
5. a) Explain the use of PC and SP register in 8085 microprocessor. **2½**
- b) Write a programme in ALP to perform addition of two 8-bit data. **2½**
- c) Explain interrupt driven data transfer scheme. **2½**
- d) Explain BSR mode in 8255 PPI. **2½**
