

B.Sc. (with Credits)-Regular-Semester 2012 Sem VI  
**B.Sc.4517 - Electronics : Paper-I (Compulsory)**  
**(Microprocessor, Interfacing and Microcontrollers)**

P. Pages : 1

Time : Three Hours



GUG/S/16/5634

Max. Marks : 50

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

**1. Either**

- a) Draw block diagram and explain: **10**
- i) Interfacing of LED display.
  - ii) Interfacing of 7 segment display with microprocessor.

**OR**

- b) Explain interfacing of keyboard with microprocessor. Draw necessary diagram. Explain hardware debouncing with suitable diagram. **10**

**2. Either**

- a) Explain the measurement of frequency and phase using microprocessor. **10**

**OR**

- b) Explain the applications of microprocessor for measurement of voltage. Draw necessary diagram. **10**

**3. Either**

- a) Draw a block diagram of 8086 microprocessor and explain the use of queue in it. Explain the use of any four registers in it. **10**

**OR**

- b) What is Assembler directives? State and explain any four assembler directives. Write a program in ALP using 8086 for addition of two 8-bit numbers. **10**

**4. Either**

- a) State the meaning of following instructions in 8051 microcontroller: **10**
- |                 |                 |
|-----------------|-----------------|
| i) ADD A, # 80H | ii) MOV @ RO, A |
| iii) DEC A      | iv) XRL A, Rn   |
| v) ANL A, # 20H |                 |

**OR**

- b) What is stack and stack pointer? Explain the use of PSW in 8051. Write a program in 8051 $\mu$ c for subtraction of two 8-bit numbers. **10**

- 5.**
- a) Draw a schematic diagram of multidigit display using microprocessor. **2½**
  - b) Explain delay subroutine using one register. **2½**
  - c) State any five data transfer instruction in 8086 $\mu$ p. **2½**
  - d) State the features of 8051 microcontroller. **2½**

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