**AKGEC/IAP/FM/02**

**Ajay Kumar Garg Engineering College, Ghaziabad**

**Department of ECE**

**Sessional Test-2**

Course: B.Tech Semester: V

Session: 2017-18 Section: EC-1,2,3, EI-K

Subject: Microprocessors Sub. Code: NEC-503

Max Marks: 50 Time: 2 hour

***Note*** : Answer **all** the sections.

**Section-A**

1. Attempt **all** the parts. **(5x2 =10)**
2. Generate machine code for following instruction assuming the opcode for MOV as 100010- ***MOV AL, [SI+05]***
3. What is the function of 8086 instruction queue? How does it speed up the processing?
4. State the functions of control flags of 8086.
5. Define the Functions of the following Pins of 8086:
6. What are the functions of following Assembler directives? Explain with examples-
7. **EXTRN**
8. **DT**

**Section-B**

1. Attempt **all** the parts. **(5x5 = 25)**
2. What is the need of memory segmentation in 8086? How the 20 bit effective address is calculated? Explain with example.
3. Draw & explain the write cycle timing diagram of 8086 microprocessor in minimum mode.
4. Explain the difference among SHORT JUMP, NEAR JUMP and FAR JUMP.
5. Write a program in assembly language using 8086 to convert a BCD number into a binary number.
6. Differentiate between DOS & BIOS Interrupts. Describe any two function calls of INT 21H with usage of registers and returns.

**Section-C**

1. Attempt **all** the parts. **(2x7.5 = 15)**
2. What are the different ways of specifying Effective address (EA) in the instruction in 8086? Explain addressing modes (with proper examples) for each.
3. Draw the register organization of 8086 and explain typical application of each register. Also list out the signals of 8086 which have different meaning in minimum and maximum modes.