Computer Science & Engineering Department

I. I. T. Kharagpur

Compiler Lab(CS39003)

3nd Year CSE 5th Semester

**Assignment: 1**

**Submission Deadline: 31 July 2013, Midnight. Marks: 5**

Generate an object code for SIC machine **by hand** for the following assembly language program. Required information (machine op-codes for SIC, syntax information etc) are available in the study material uploaded on Intinno or on <http://cse.iitkgp.ac.in/~bivasm/teaching.html>.

Assume each memory address is of 2 bytes long. Memory addresses are expressed in Hexadecimal format.

|  |  |  |
| --- | --- | --- |
| **LABEL** | **Instruction** | **Operand** |
| TEST | START | 2050 |
| FIRST | LDA | ALPHA |
|  | ADD | INCR |
|  | SUB | ONE |
|  | STA | BETA |
| ONE | WORD | 1 |
| ALPHA | RESW | 1 |
| BETA | RESW | 1 |
| INCR | RESW | 1 |
|  | END | FIRST |

**Submission format**: As shown in the class (check slide# 10 of the study material)