ANSWER:-

First:-

• Fetching:-

AC: 0000 IR: 1940 PC: 300

940: 0003 941: 0002

• Execution:-

AC: 0003 IR: 1940 PC: 300

940: 0003 941: 0002

Second:-

• Fetching:-

AC: 0003 IR: 5941 PC: 301

940: 0003 941: 0002

• Execution:-

AC: 0005 IR: 5941 PC: 301

940: 0003 941: 0002

Third:-

• Fetching:

AC: 0005 IR: 2941 PC: 302

940: 0003 941: 0002

• Execution:

Ac: 0000 IR: 2941 PC: 302

940: 0003 941: 0005

Show the contents of PC , AC and IR and memory after the execution of each instruction of the following program on the Hypothetical Machine:

300 LOAD 550

301 ADD 551

302 STORE 600

the contents at 550 is 3 and at 551 is 4