In the Hypothetical Machine the contents of memory was as shown. And PC contents is 300. Show the contents of memory and PC, AC, IR after execute three instructions (three fetch cycle and there execute cycle)

ANSWER:-

First Instruction:

• Fetching: AC: 0000 IR: 1940 PC: 300

940: 0003

941: 0002

• Execution: AC: 0003 IR: 1940 PC: 300

940: 0003

941: 0002

Second Instruction:

• Fetching: AC: 0003 IR: 5941 PC: 301

940: 0003

941: 0002

• Execution: AC: 0005 IR: 5941 PC: 301

940: 0003

941: 0002

Third Instruction:

• 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 and 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 of memory at 550 is 3 and at 551 is 4 Where.

ANSWER:-

First Instruction:

• Fetching:

AC: 0000 IR: 1550 PC: 300

550: 0003

551: 0004

600: 0000

• Execution: AC: 0003 IR: 1550 PC: 300

550: 0003

551: 0004

600: 0000

Second Instruction:

• Fetching: AC: 0003 IR: 5551 PC: 301

550: 0003

551: 0004

600: 0000

• Execution: AC: 0007 IR: 5551 PC: 301

550: 0003

551: 0004

600: 0000

Third Instruction:

• Fetching: AC: 0007 IR: 2600 PC: 302

550: 0003

551: 0004

600: 0000

• Execution: AC: 0000 IR: 2600 PC: 302

550: 0003

551: 0004

600: 0007

Third question:

ANSWER:

MEMORY

300 3005

301 5940

302 7006