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**Assignment 2 (CSN-221)**

**ECE (O6)**

**Question ⑦ Write a simpleRISC Assembly program to find Ramanujan number ?**

**Code→**

```
mov r1,2
.loop1:
mov r4,0
mov r2,1
.loop2:
add r3,r2,1
mul r5,r2,r2
mul r5,r5,r2
.loop3:
mul r6,r3,r3
mul r6,r6,r3
add r7,r5,r6
cmp r7,r1
beq .foo2
.foo3:
add r3,r3,1
mul r6,r3,r3
mul r6,r6,r3
cmp r1,r6
bgt .loop3
add r2,r2,1
```

```
mul r5,r2,r2
mul r5,r5,r2
cmp r1,r5
bgt.loop2
cmp r4,2
beq .foo1
add r1,r1,1
b.loop1
.foo1:
exit
.foo2:
add r4,r4,1
b .foo3
```

**Result →**

**Final Answer is stored in register r1.**