Problem 1)

**Protected mode:**

• In protected addressing mode segments can be of variable size(below or above 64 KB).

• Some system control instructions are only valid in the protected mode.

• The offset part of the memory address is still the same as in real addressing mode. However, when in the protected mode, the processor can work either with 16-bit offsets or with 32-bit offsets.

**Real mode:**

• This mode allows the microprocessor to address only the first 1M byte of memory space.

• Is called conventional memory, or DOS memory system

• The DOS operating system requires that the microprocessor operates in the real mode. Windows does not use the real mode.

Q7 ) Subtracting two numbers :

.data

a db 4

b db 7

.code

Mov ax, data

Mov ds, ax

Mov dl, b

Sub dl,bl

Add dl, 48

Mov ah, 2

Int 21h

Mov ah, 4ch

Int 21h

Main endp

End main

Q 6)

Compiler will jump to L3