

### Question (1)

1) Compare zero, one, and two address machines by writing program to compute

$$X = (A + B * C) / (D - E * F)$$

0 Address

PUSH M

POP M

ADD

SUB

MUL

DIV

1 Address

LOAD M

STORE M

ADD M

SUB M

MUL M

DIV M

2 Address

MOVE X

ADD X

SUB X

MUL X

DIV X

## Question (2)

1) Write the advantages and disadvantages of using different addressing modes?

- **Advantage** of immediate addressing mode: No memory reference other than the instruction fetch is required to obtain the operand.
- **The disadvantage** of immediate addressing mode: The size of the number is restricted to the size of the address field.

2) Define the meaning of “Memory Performance Hog”?

- a computer program that uses a lot of memory
- someone who uses computer programs that use a lot of the power available, so that other people on the network have trouble using their programs