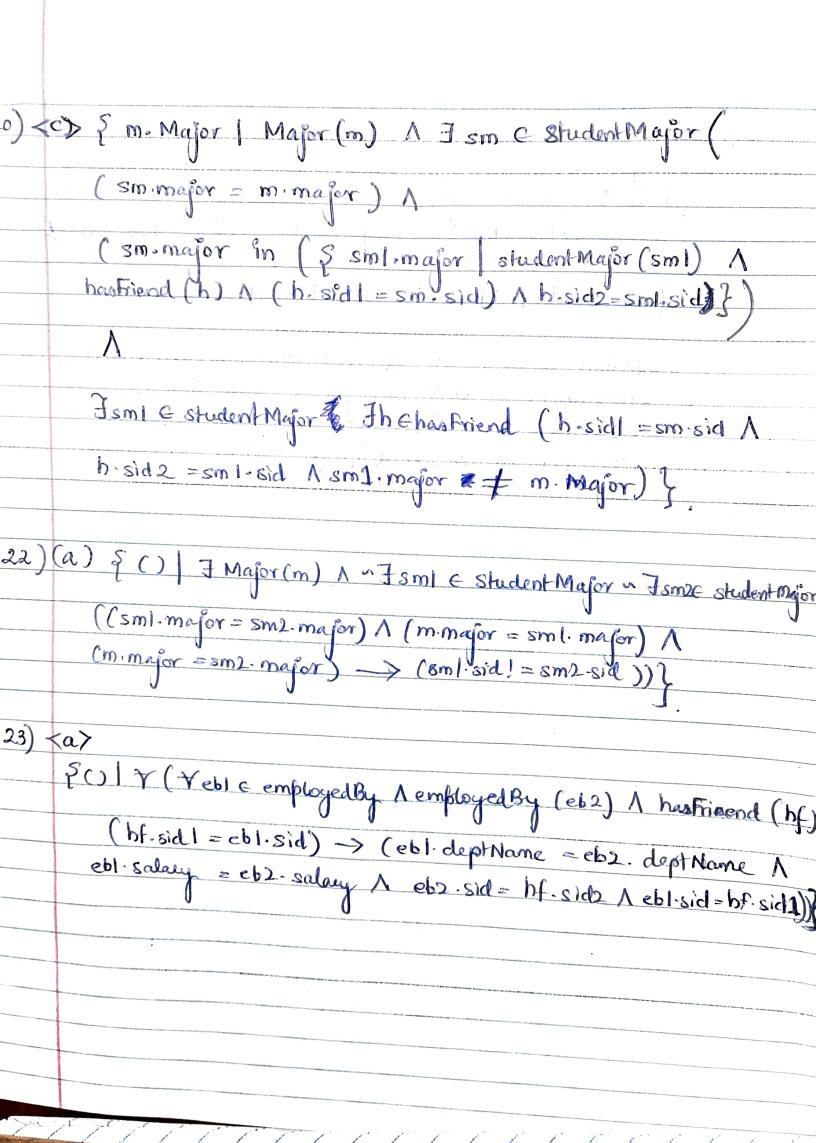
20)(a) & e-dept Name; sm. major | Ye & employed By Vsm & student Major |

(e. sid = sm. sid -> e-salary > = 2000) }

V [Union operation]

Perdept Name, sm. major | Ye & employed By Vsm & student Major (e. sid = sm. sid -> e. salary > = 12000) }

```
20) <b > $ si. sid, sz. sid | Student (sl) A student (s2) A
             Slosid # 52 sid
          ( w ]h e has Friend on ] ec employed By ( sl. sid = h-sid )
            hosid2 = eosid 1 eo deptrame = (Cs)
                [difference operation]
          (n The hastriend " Fe c'employed By (32. sid = h-sid )
h-sid2 = e. sid 1 e-depthorne = 'Cs')
                                                      [ intersection operation
        ( ) The hastmend " Fee employed By ( s2. sid = h. sid1 )
h. sid2 = e. sid A codept Name = (Cs)
       (n The hastriend n Te & employed By & sl. sid = h. sid 1 1
           b. sid2 = e.sid A e.deptName = (cs)
```



24) (a)

S() Y (student major (sml) A student major (sm2) A

employed By (eb1) A employed By (eb2) from A

(ebt sid + eb2 sid A ebt dept Name = eb2 dept Name A

ebt salary = eb2 salary A sml sid = ebt sid A

sml sid = (eb2 sid A sml major = sml major A

sml sid + sm