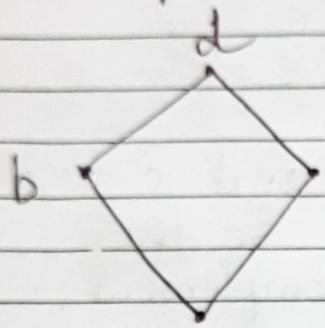
Semester : _____ Subject : _____ Academic Year: 20 - 20

ex. on Complemented Lattice -

(1) Determine whether the given lattice is complemented lattice or not.



UB = d, LB = a

i) for a and d,

$a \vee d = d$, $a \wedge d = a$

hence, $a^c = d$, $d^c = a$.

ii) for b and c,

$b \vee c = d$, $b \wedge c = a$

hence. $b^c = c$, $c^c = b$

Here, every element is having complement hence this lattice L1 is complemented lattice.

(2)

LB = a, UB = d

$a^c = d$, $d^c = a$

for e and b,

$e \vee b = d$ $\quad e^c = b$

$e \wedge b = a$ $\quad b^c = e$

for e and c,

$e \vee c = d$ $\quad$ ~~$e^c = d$~~

$e \wedge c = a$ $\quad e^c = c$

$c^c = e$

so this is complemented lattice.