4.Consider S and T as variables and the following relation representing the

relationships:

(i) a: ¬(SVT)

(ii) b: (S&amp;T)

(iii) c: TV¬T

(iv) d: ¬(SS)

(v) e: ¬S ¬T

Analyze the following for PL-TT entailment and show whether

(i). ‘a’ entails ‘b’,

(ii). ‘a’ entails ’c’,

(iii). ‘a’ entails ’d’ and

(iv). ‘a’ entails ’e’

**PROGRAM**

## change s and t accordingly

s=True

t=True

a = not(s or t)

print(a)

b = s and t

print(b)

c = t or(not t)

print(c)

d = not((not s or s) and (not s or s))

print(d)

e = not(not s) and (not t)

print(e)

if a==b:

print("a entails b")

if a==c:

print("a entails c")

if a==d:

print("a entails d")

if a==e:

print("a entails e")

else:

print("no entailment")