7.21 Let Double-SAT = $\{\langle\phi\rangle \mid \phi$ has at least 2 satisfying assignments. Show NP Complete

Double SAT can be easily certified, since the truth assignment is the certificate, and clauses can be checked in poly time.

We can reduce 3sat to double sat. Given a 3cnf function ψ, create anew CNF ψ'
$\psi' = \psi \wedge (x_n \vee \bar{x}_n)$ (x_n is not used in ψ.
This reduction is clearly poly time
we now see
ψ' has a satisfying assignment iff has two satisfying assignments.

If ψ' has satisfying assignment it has two satisfying assignments.
in ψ', if ψ has any solution, then the clause clause $(x_n \vee \bar{x}_n)$ will always provide atleast two satisfying assignments x_n = true and x_n = false

Now the other direction
If there are two satisfying assignments ψ has a satisfying assignment.
this is trivial.
In either case Double SAT and 3SAT are validated.