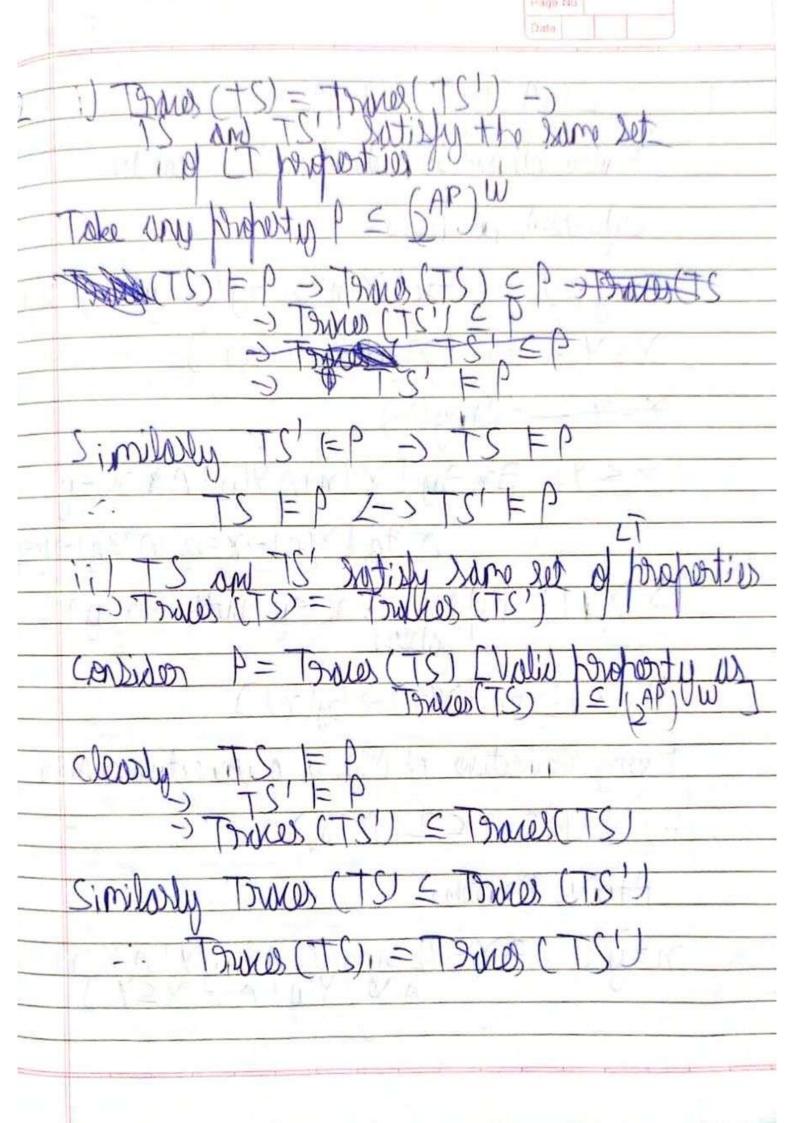
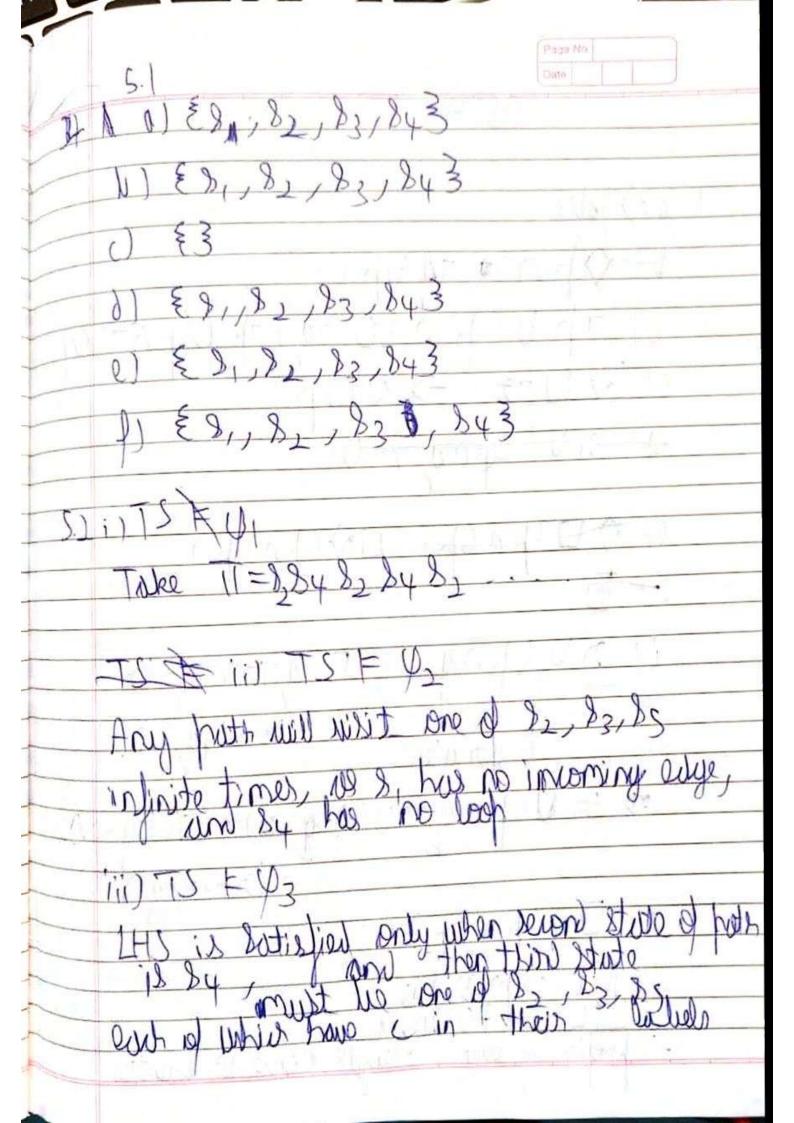
all between oil mer

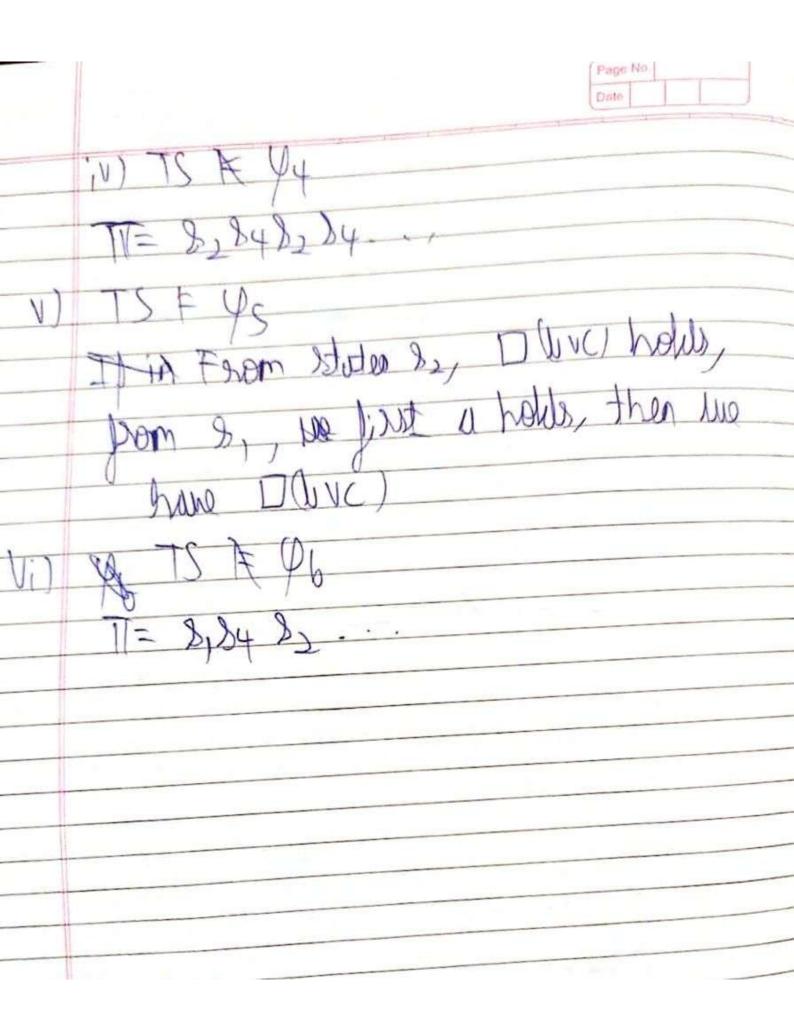


• LTL can express  $\mathcal{X}$ :  $\phi \Delta \psi \equiv \bigcirc (\phi \cup \psi)$ 

•  $\mathcal{X}$  can express LTL:

$$\phi \cup \psi \equiv \phi \land (\bigcirc (\phi \cup \psi)) \equiv \phi \land (\phi \Delta \psi)$$
$$\bigcirc \phi = \bigcirc (\bot \cup \phi) \equiv (\bot \Delta \phi) \text{ (and } \bot \text{ can be written as } p \land \neg p)$$





5.5 Elevator has stopped at floori: xi

Door is open at floor i: zi

Elevator has been called at floor i: yi a) D(zil > ni) for every i b) D(yi -> O(xi) n zi)) for every i c) 1 1 20 20 99 99 99 99 d)  $\square(y_3 \rightarrow O(x_3 \land z_3))$ [5.7 a) (¬ DY) v [¬ 4 U(4 ~ q)] b) 9 V 7 4