**Step-1 Problem analysis**

The problem is to design a combinational circuit that turns the alarm on (LOW) only when the ignition is on (HIGH) and at least one seat is occupied while its corresponding seatbelt is not fastened. The inputs are: DRIV and PASS (HIGH when seats are occupied), IGN (HIGH when the car is started), and BELTD/BELTP (LOW when the belt is unfastened). The output is ALARM, which goes LOW when the condition is met. If the ignition is off, the alarm stays off. If a seat is empty, its belt status does not matter. The key logic condition is: Alarm ON = IGN HIGH AND (Driver ON with BELTD LOW OR Passenger ON with BELTP LOW).