

## CSE 103

Student ID: 1705019

Chapter: 1

Section: 2

Problem No. : 05

5. You are eligible to be President of the U.S.A. only if you are at least 35 years old, were born in the U.S.A, or at the time of your birth both of your parents were citizens, and you have lived at least 14 years in the country. Express your answer in terms of  $e$ : “You are eligible to be President of the U.S.A.,”  $a$ : “You are at least 35 years old,”  $b$ : “You were born in the U.S.A,”  $p$ : “At the time of your birth, both of your parents were citizens,” and  $r$ : “You have lived at least 14 years in the U.S.A.”

Ans:

If I am eligible to be President, then I must satisfy the requirements:  $e \rightarrow (a \wedge (b \vee p) \wedge r)$ . Here only the requirement of being native-born that can be overridden by having parents who were citizens, so  $(b \vee p)$  is grouped as one of the three conditions.