

Lecture 6 (continued)

Remarks on Logical operators:

Definition : A collection of logical operators is called functionally complete if every compound prepositions is logically equivalent to a compound preposition involving only these logical operators.

Example 1: $\{\neg, \wedge, \vee\}$ form a functionally complete collection of logical operators.

Example 2: $\{\neg, \wedge\}$ form a functionally complete collection of logical operators.

Example 3 : $\{\neg, \vee\}$ form a logically complete collection of logical operators.

Example 4 : $\{\uparrow\}$ form a logically complete collection of logical operators.

Example 5 : $\{\downarrow\}$ form a logically complete collection of logical operators.