

CS 201: DISCRETE STRUCTURES

Quiz 1

Translate the following English sentences into propositional logic using the following propositions:

T: Today is Thursday

R: It is raining

B: The birds sing

F: Flowers bloom

C: It is Cloudy

Operators you are allowed to use: $\{\wedge, \vee, \neg, \rightarrow, \leftrightarrow\}$. **No other operators or propositional symbols are allowed.**

PROBLEM 1

Today is Thursday and it is raining.

PROBLEM 2

The birds do not sing unless it rains.

PROBLEM 3

The flowers always bloom only on a Thursday.

PROBLEM 4

It is either raining or it is cloudy but not both.

PROBLEM 5

It rains only if it is cloudy and a Thursday.