CS 3516 (A18) – Quiz 6 – September 18, Tue, 2018

Student Name: _____

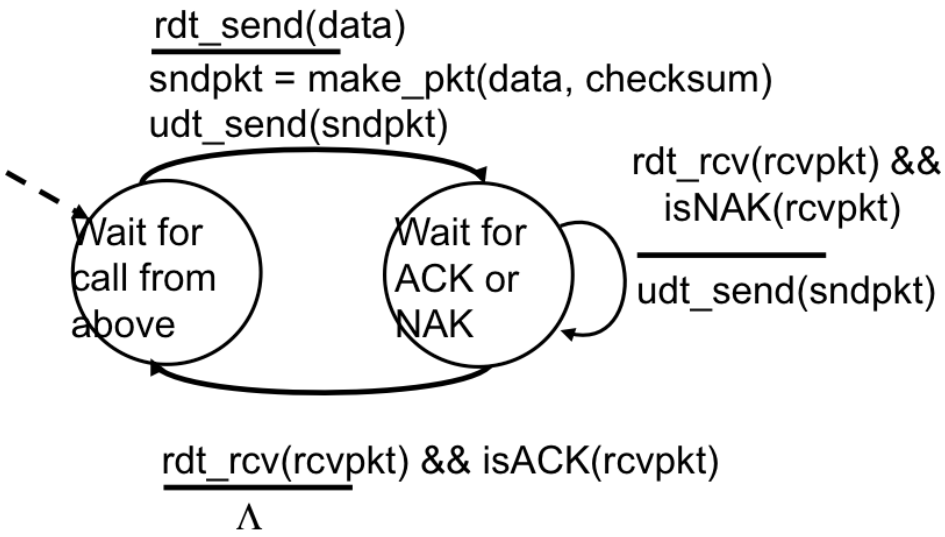
WPI Username: _____

Please answer the following questions using only the front side of this sheet of paper. **This quiz is closed book/notes/cheat-sheet**. *We will not grade the backside or any additional sheets of paper.* We will scan the quiz and return it electronically. To ensure it is properly scanned, please avoid wrinkling, folding, or otherwise distorting the paper. *You can use the back of the paper for any calculations you might have to perform.* Please mark exactly which question/sub-question you are answering. (**In total 7 points.**)

1. Is it possible for an application to have reliable data transfer when using UDP? How? (2 point)

Yes (1point), reliable data transfer when using UDP can be done. This can be done if **reliability is built into the application itself (1 point).**

2. Draw the Finite State Machine (FSM) for RDT 2.0 on sender side (2 points)



(2 points)

3. What is the checksum computed by UDP for the following three 8-bit bytes: 01010011, 01100110, 01110100? Show all the work and not just the final answer. Use 8-bit checksum, rather than 16-bit checksum for this question (3 points)

8-bit version of the solution

Add first two bytes (0.5 point)

```
  01010011
+ 01100110
----------
  10111001
```

(0.5 point)

→

Add the next byte (0.5 point)

```
  10111001
+ 01110100
----------
  00101101
+         1  (wraparound) (0.5 point)
----------
  00101110
```

(0.5 point)

→

Take one's compliment

11010001 (0.5 point)