CS169: Mobile Wireless Networks
Homework 1

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SUBMISSION GUIDELINES

• Submit your printed or handwritten answers before the start of the next Lab session (01/19/15)
• Staple multiple sheets of paper together
• Write your name on the top of the first sheet

PROBLEM 1

• What is a network protocol? Why do you think we need protocols to transfer data over the network?
• Name the layers in the Internet Protocol Stack, describe the main functions of each layer.

PROBLEM 2

• Compare connection oriented and connection less services
• If I’m going to write a video broadcasting application, which supports a large number of users watching a football game at the same time, which protocol (UDP or TCP) should I use? Explain your choice.

PROBLEM 3

What are the main differences between Ad-hoc and an Infrastructure mobile networks?
**Problem 4**

What are the main functions of a Mobile Switching Center?

**Problem 5**

True or False?

1. The terms mobile and wireless can be used interchangeably
2. LTE and 802.11 both use OFDMA for multiple access
3. The IEEE 802.11 standards use a part of the unlicensed spectrum