**Assignment 1**

**CIS410** – Spring Term 2016

**Point Value**: 100 points

**Assignment Due Date**: **02/02/2017**

**Submission Instruction**

Please submit a hardcopy of your assignment solution to your instructor in class on the due date and also submit it (word or pdf document) on BB by 11:59pm on the due date.

**Description**

1. What is digital forensics? ***(5 points)*** What is mobile forensics? ***(5 points)***
2. Please list at least five types of information can be found on a smartphone that can be helpful to a crime investigation? ***(10 points)***
3. As a mobile forensics examiner, where can you find a backup of a smartphone? ***(10 points)***
4. Please list at least three mobile anti-forensics methods or techniques? ***(10 points)***
5. Consider the diagram is the GSM cellular network, please write down the name of each component in the diagram. ***(20 points)***

BTS

MS

1. Please explain what is multiple access problem in your own words? ***(5 points)***
2. Please explain what is FDMA in your own words? ***(5 points)***
3. Please explain what is TDMA in your own words? ***(5 points)***
4. Please explain what is CDMA in your own words? ***(5 points)***
5. Read the online article ***CDMA VS GSM: What is the difference,*** <http://www.pcmag.com/article2/0,2817,2407896,00.asp>, and then answer the following three questions.
   1. Which carriers are using GSM? **(2 points)**
   2. Which carriers are using CDMA? **(2 points)**
   3. Why so many US carriers go for CDMA, instead of GSM? **(6 points)**
6. Does a smartphone periodically communicate its nearest base transceiver station even when it is in sleep mode? **(5 points)**. If yes, does the smartphone initiate the communication or the base transceiver station initiate the communication? **(5 points)**