RFID INFOSEC Homework #1
Solutions

47 pts.

1. (10 pts.)
   No transmitter, no battery, simple circuit, being heard in the noise
   Antenna, power circuit, receiver, logic, backscattering circuit

2. (2 pts.)
   Fast, convenience, digital data, automates identification, possibly more secure, possibly harder to counterfeit, contactless/wireless, less paper, easier to track people

3. (10 pts.)
   Verify format of citation, grammar, capture the idea

4. (8 pts.)
   Item management: Gen2 tags on computers at retail store
   Physical access control: LF passive tag at parking garage
   Travel documents: E-passport
   Finance & banking: MasterCard PayPass
   Sensors: KSW RFID temperature sensor tag
   Animal tracking: used in dogs
   Human identification: Verichip
   Anti-counterfeiting: trials with pharmaceutical companies

5. (12 pts.)
   tag, media interface, reader, network, middleware, and application

6. (5 pts.)
   An active tag has power source for receiving and transmitting. Passive tags do not have power source but harvest power from the reader and backscatter information from the reader. Semipassive tags have a batter but only use it to power logic and circuits. They still use backscattering to communicate and require that a reader be present.
Citation examples in IEEE style

Example journal

Example magazine

Example conference