**CIS 481 – Intro to Information Security**

**IN-CLASS EXERCISE # 9**

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Logistics

A. Get into your regular team

B. Discuss and complete the assignment together. Don’t just assign different problems to each teammate! That defeats the purpose of team-based learning.

C. Choose a recorder to prepare the final copy to submit to instructor in Blackboard.

**Problem 1**

Name and describe the four categories of locks based on triggering process (discussed in your text on pp. 508-509). In what situations is each type of lock preferred? (8 pts.)

***Manual****: These locks are often preset by the manufacturer and therefore are unchangeable. Once installed they can only be changed by a trained locksmith. Manual locks include padlocks and combination locks and are commonplace throughout buildings and homes.*

***Programmable****: These locks have their combination, key, or even their access method changed after they are put in service without the need of a locksmith. This type would be used to secure computer rooms and wiring closets because they have a code that can be reset and they don’t require electricity to operate.*

***Electronic****: These locks can be integrated into alarm systems combine themselves with a building's management system. They are generally used in situations where they can be activated or deactivated by a switch controlled by a secretary guard.*

***Biometric****: These locks can use fingers, iris, or voice to unlock and are much more sophisticated when compared to other locks. These types of lock needs to have power supplied to it through a battery or some other power source. They also allows for two set authentication through the use of a finger and a pin or other combinations. You would want to use this type of lock where power can easily be supplied and the assets it is protecting are worth the additional cost.*

**Problem 2**

What three elements must be present for a fire to ignite and continue to burn? How do fire suppression systems manipulate the three elements to quell fires? (9 pts.)

*The three elements that must be present to ignite and burn are temperature, oxygen, and fuel. Fire suppression systems normally eliminate one of the three elements from the environment. For example, Water suppression systems aim to lower the temperature of the environment to put out the fire, as well as keeping other types of fuel such as wood or paper from also catching on fire.*

**Problem 3**

Name and describe the five classes of fire described in the text. Does the class of a fire dictate how to control the fire? How so? (8 pts.)

***Class A****: Your everyday ordinary fires utilizing combustible fuels like wood, paper, cloths, trash, and more. They are extinguished by removing an element that removes an element needed for it to burn. Extinguishers include water & dry-chemical extinguishers.*

***Class B****: Fires that are made by combustible liquids or gases. These can include: gasoline, oils & lacquers. These fires need oxygen to be removed from the air to be extinguished. A good way to do this is with carbon dioxide, dry chemical extinguishers, or a halon fire suppression system.*

***Class C****: These are fires that are caused from electrical items such as fridges, power strips, etc. These must be extinguished with non-conducting agents. These can be extinguished with carbon dioxide, dry chemical extinguishers, and a halon fire suppression systems. These cannot be put out using water based extinguishers.*

***Class D****: The fires in this category are made with combustible metals like lithium and magnesium. Fires of this class require special extinguishing agents in order to be put out effectively and successfully.*

***Class K*** *(F if in Europe or Australia): This class of fire is found in commercial kitchens with cooking fats and oils. These fires are put out using water mist systems, dry powder extinguishers, or a carbon dioxide type suppressor.*