**Module 8 (30 points) – Chapter 9**

1. (Whitman & Mattord, 2016, p. 500) What are the roles of IT, security and general management with regard to physical security? Should the staff members working with cyber security be kept isolated from the physical security staff members?

General management oversees the facility and the policies and standards that are used to secure the operation. IT is responsible for the environment and access to the equipment and their locations. Security is responsible for accessing the risks and overseeing the physical security controls the other two implement. The staff working with cyber security should not be isolated from the physical security staff, this is because some factors that the cyber staff may have to work on would be cause by physical security problems. For example, if an employee downloads an application, it would be under the jurisdiction of the physical security while also opening risks to the cyber security that they would need to be made aware of so they can solve the problems.

1. (Whitman & Mattord, 2016, p. 500) How does physical access control differ from the logical access control described in earlier chapters? How is it similar?

Physical access control is used to control who can access the company resources. The logical access control is used to control the access to an organization’s assets. They are similar in the tools they use to provide access and clearance such as biometrics or smart cards.

1. (Whitman & Mattord, 2016, p. 501) List and describe the three fire detection technologies covered in the chapter. Which is currently the most commonly used?

The first fire detection is the air-aspirating detector which will rotate the air through to make sure it is clear and go off should there be smoke. The second is the fixed-temperature sensor which will detect the ambient temperatures of the area and alert when it reaches a temperature higher than the determined range. The third is a flame detector which will detect the ultraviolet light that is produced by an open flame. The smoke detection systems are the most used.

1. (Whitman & Mattord, 2016, p. 501) What is the relationship between HVAC and physical security? What four physical characteristics of the indoor environment are controlled by a properly designed HVAC system? What are the optimal temperature and humidity ranges for computing systems? Is it a good idea to cutoff HVAC systems to save money over long weekends?

HVAC is the heating, ventilation, and air-conditioning system which help protect the physical systems against environmental risks such as overheating and too much moisture. The four physical characteristics are temperature, filtration, humidity, and static electricity. It is not a good idea to cutoff the HVAC systems over long weekends because there would not be anyone there to monitor the physical equipment and ensure there are no environmental risks to them. Cutting off the system to save money would increase the risks that it prevents such as humidity and static electricity short-circuiting the system leading to more costs lost than saved.

1. (Whitman & Mattord, 2016, p. 501) List and describe the three fundamental ways that data can be intercepted. How does a physical security program protect against each of these data interception methods? Are there remote ways (e.g. laser) to intercept data from a distance?

The first way of data interception is direct observation which is when the person trying to obtain the data is close enough to the information. The second method is interception of data transmissions, this involves accessing the media that is used to send the data transmission. The third method is electromagnetic interception which is when the person eavesdrops on the signals and acquires the data through them. There are remote ways such as using spyware to remotely connect to the media sending the systems. This could be sent as a trojan horse which would just need a person to accept it into the system.

1. (Whitman & Mattord, 2016, p. 502) Define the required wattage for a UPS for the following systems:

a. Monitor: 2 amps; CPU: 3 amps; printer 3 amps

b. Monitor: 3 amps; CPU: 4 amps; printer 3 amps

c. Monitor: 3 amps; CPU: 4 amps; printer 4 amps

a. 960W

b.1200W

c.1320W

1. Search the Web for a UPS that provides the wattage necessary to run the systems listed above for at least 15 minutes during a power outage (provide the reference URL).

a. 120V

b. 120V

c. 120V

From my search I found an UPS that is set for 120V meeting the V for each W and has a 1980W which would cover the three systems:

https://www.amazon.com/APC-Smart-UPS-2200VA-Battery-SUA2200/dp/B00076OZRQ

**Bibliography**

Whitman, M. E., & Mattord, H. J. (2016). *Principles of Information Security*. Course Technology.