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**INDIVIDUAL PROJECT**

**MARCH SEMESTER 2021**

BACHELOR OF COMPUTER SCIENCE (HONS.)

(IN COLLABORATION WITH IUKL)

**INFORMATION SYSTEM SECURITY**

**CSC2734**

**LECTURER’S NAME : MANOJ GAUTAM**

**GENERAL INSTRUCTIONS**

1. This question booklet consists of 3 pages including this page.
2. There is one **SECTION** in this question booklet.
3. Please submit assignment solution in **SOFT COPY FORMAT in A4 size paper.**

**Pearl Innovation** is a data warehousing and information processing having headquarter office in Kathmandu PI services are used by large organizations to conduct surveys and data analysis. In most instances, the data collected is highly confidential. Data collected is usually through an online website, but in some instances via paper. PI operates under a four-business day turn-around time meaning they cannot afford downtime, in order to maintain their current business reputation. PI currently employs twelve people, each using a company issued Windows 10 laptop. A year ago, an employee’s laptop hard drive crashed, and the data was lost – this incident resulted in the company losing a valuable customer. In recent months, one employee’s laptop was targeted with ransomware, and the company paid the ransom as they couldn’t afford the downtime. In another breach of security, an office assistant was caught accessing and viewing a confidential data set on another employee’s laptop. Last week, one employee left their laptop unattended in their vehicle. The vehicle was broken into, and the laptop was stolen. The manager has provided you with the following additional information pertaining to the organization’s IT equipment.

* Each laptop is using Windows 10, with automatic updates enabled.
* None of the laptops contains any security software beyond the Windows 10 defaults
* Each laptop accesses the Internet via a wireless connection to a broadband router.
* There are currently no policies or rules guiding employees on how to best utilize resources and conform to ideal cyber security conscious behaviors.
* Confidential data is emailed/stored without using any cryptographic techniques.
* On January 20th, 2021 week an employee found a USB flash drive in the car park and plugged it into their computer. Since then, the employee has claimed that the computer appears to have “a mind of its own”.

Data collection instruments used online are secure and hosted by a third party provider.  
**Instructions**  
You have been hired to devise a security solution. The employees are comfortable, and reluctant to change their current cyber security behavior. Many of the employees believe that the company is functioning correctly and does not need a new cyber security operational model. The PI manager is committed to addressing the cyber security issues and improving the culture of the workplace, and has allocated 10 Lakh to this project. The PI manager is predominantly concerned with the confidentiality and availability of data, but also the recent malware incidents. The manager has requested that you compile a small, succinct report addressing five critical cyber security issues.

In producing your solution, you should address the following requirements:

1. Why the chosen cyber security issue should be addressed immediately. [5 mark]

2. A detailed explanation/demonstration of how you propose to address the issue. [5 mark]

3. Why is your chosen solution better than alternative approaches (i.e. clearly = compare/contrast your solution to alternatives)? [5 mark]

4. A detailed breakdown of the cost in addressing the selected issue. [5 mark]