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**COLLEGE OF MANAGEMENT &  
INFORMATION TECHNOLOGY**  
**BACHELOR IN INFORMATION TECHNOLOGY**

**ASSIGNMENT**

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1. Suppose you are appointed as an IT head of XYA Bank of Nepal. Every day you are encountered with different cyber threats. Prepare a case report about different possible threats you encounter during your day to day official work and solutions to minimize their effects.

❖ If I were appointed as an IT head of XYA Bank of Nepal. The cyber threats that I would have encountered are:

**Phishing:**

A tool that accessing sensitive data such as passwords, credit-cards, usernames etc. Sometimes the hacker hacks the instant emails or messages. The email reception is being fooled by opening the unauthorized link or images or by login the site, leading to malware being installed on the device of receiver's.

**Rootkit:**

Rootkit is a software tools which allows to control and access at administrative level over a network. Rootkits are installed by hiding the software. Rootkits can perform different types of activities which are fitted with key.

**Man-in-middle attack:**

Man-in-middle attack means cyber security attacks which allows the attackers to communicate between two targets. The communication of two normal people can be listen by the attackers. For e.g. when the attackers wanted to know the conversation between Person A and Person B, a man-in-middle attack happens. Person A sends all the data to Person B which is also seen by the third person. Then the attacker sends messages to Person A and reply to Person B but that Person A didn't send. By this activity we became the victims. Here are the types of Man-In-Middle attacks:

- Wi-Fi hacking
- IP spoofing
- HTTPS spoofing
- DNS spoofing

**Computer worm:**

Computer worms are the small parts of malware that spreads one from another easily. Worm easily transformed from infected computer to the fresh one. Worms are malware which are created only to spread to the different computer by attacking their contact.

**Trojan horse:**

Trojan horse refers to the somebody being fooled. Trojan horse is a malicious bit of attacking code which makes the user trust and make compulsion to open that sites. Email is the main sources to attack the customer or anyone. Malware are automatically downloaded into our devices or system.

Some of the preventive measures of Cyber Attack are:

❖ Install antivirus and used the latest antivirus and antispyware on every computer used in different purpose. So that there will be less chance of being attack.

- ❖ Firewall must be used for internet connection which control the malware and other unauthorized sites.
- ❖ Trained the employee in cyber security sectors. And hired only professional employee. If this done, attack can be minimized.
- ❖ Download and install software updates for your devices if needed which helps to fight against malware and attacks.
- ❖ Back up files must keep in different devices so that we can use again and again if we need.
- ❖ Protect your Wi-Fi and must be hidden, through which viruses cannot enter easily to our system
- ❖ Username and password must be changed regularly and password must keep strong and effective.

There are numerous types of cyber-attacks that criminals are using to achieve their goals. These types of attacks range include everything from hacking and phishing to distributed denial of service, SIM-swapping, and ransom ware attacks. Regardless of their chosen method of attack, though, it's essential for your business to implement cyber security awareness training as part of your prevention and risk mitigation methods. So, what are some of the top cybercrime statistics relating to attack methods. Regardless of their chosen method of attack, though, it's essential for your business to implement cyber security awareness training as part of your prevention and risk mitigation methods. So, what are some of the top cybercrime statistics relating to attack methods.

We can minimize some attacks but we cannot fully control the attacks. To minimize is a great work. Machine cannot give 100 percent efficiency; we are the human beings.

2. "Internet has revolutionized Banking services and has made payment and fund transfer easy via online payment gateways." Critically analyze the statement and give example in support to your answer.

➡ Simply, Internet referred as a network of network. In this network each system is recognized by a globally unique address known as IP address. Internet is accessible to every user all over the world. Internet provided a medium to publish and access information over the web. Internet covers almost every aspect of life, one can think of. Internet provides concept of electronic commerce, that allows the business deals to be conducted on electronic systems. Here, we will discuss some of the advantages of Internet. Internet allows us to use many services like:

- ❖ Internet Banking
- ❖ Matrimonial Services
- ❖ Online Shopping

- ❖ Online Ticket Booking
- ❖ Online Bill Payment
- ❖ Data Sharing
- ❖ E-mail

By the effects of 21<sup>st</sup> century, Internet has revolutionized the banking services and made payment and fund transfer easy through online payment system. Generations are transferred due to the internet services and facilities. Whole community is under the impacts of internet and services. We can easily transfer money from one account to another account through internet. E-sewa, QR code scanner, khalti digital wallet and other means of payment. These applications made the customer effective and they save time of both customer and businessman. It saves our money as well as time also. While paying, we feel more safe and secured. There will be less chance of robbery and attack. Because of this benefit, everyone uses online payment system. E.g. me and my classmate went to the restaurant. We order food snack items and cold drinks. We collect money to pay to the owner. unfortunately, we did not have enough money. One of my friend have online payment system and we pay through this. It will take more time to us to go to the bank. After this situation, I always preferred online payment system. Because of this benefit, everyone uses online payment system. E.g. me and my classmate went to the restaurant. We order food snack items and cold drinks. We collect money to pay to the owner. unfortunately, we did not have enough money. One of my friend have online payment system and we pay through this.

Some of the factors that helps to make online payment system. They are:

**Khalti Digital Wallet:** It is one of the online app which is directly associated with bank, theater, shopping mall, internet services and other network. We can pay money through it. E.g. we can pay bill of electricity, bill of television, bill of internet etc. khalti digital wallet helps for mobile top up and fund transfer easily in effective way.

**E-sewa:** E-sewa and Khalti Digital Wallet are of same platform. Features of e-sewa and khalti are same.

Some of the advantages of online banking are:

**Speed and efficiency:** we need not to stand in line to pay the money or bills. We can perform official activities through the bank. We can open our bank account and can apply for credit card as well as loan also. Before the invention of these online payment platform, we typically stand in line to pay bill, tax, transfer fund.

**24/7 services:** online platform remains always open at any hour. They did not have fix ending time. Online bank services provide 24 hours in a day and 7 days in a week.

**Online Bill payment:** Online bill payment is one of the banking's advantages to pay the bills. Rather than having to write checks, once you setup your online bank account all you need is simple click.

**Low overhead can mean high interest rates on deposit account:** Online bank has the best interest rates. While the rates fluctuate, if you look at the current list of best CD rates or the best free online checking accounts rates, you will usually find the banks paying rates.

Some of the disadvantages of online banking are:

There may be many difficulties to run the online banking platform. Like,

**Security issue:** Security is one of the major issue of online banking system. We know, many online banking is well reputed and have best qualities, it can often be difficulties to feel comfortable with a bank which has no physical presence, particularly when large amount of money is involved.

**No relationship with personal banker:** when we started the online banking system, we cannot make a strong relationship with bankers and employee. Before the invention of online banking system, we meet the staffs of bank and make a relation. But now we cannot even see a single person.

**Technology issues:** An online banking system has many issues and problems. Sometimes it fails to load the money, sometimes it fails to login and logout. While some banks provide a telephone number for customer support, if online access is down, it may be overwhelmed.

In this 21<sup>st</sup> century, online banking has the better services and facilities. As a time saving and money saving, the demands of people towards online banking is high.