**A Synopsis**

**on**

**“ Vulnerability Assessment and Penetration Testing ”**

# BACHELOR OF ENGINEERING

**IN**

**DEPARTMENT OF COMPUTER ENGINEERING**

**OF**

**SAVITRIBAI PHULE PUNE UNIVERSITY**

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**SYNOPSIS**

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**Title of topic :**

**Vulnerability assesment and Penetration Testing**

**Area of topic :**

**CyberSecurity**

Cybersecurity is the practice of protecting systems, networks, and programs from digital attacks. These [cyberattacks](https://www.cisco.com/c/en/us/products/security/common-cyberattacks.html) are usually aimed at accessing, changing, or destroying sensitive information; extorting money from users; or interrupting normal business processes. It is a set of techniques used to protect the integrity of networks , programs and data from attack , damage or unauthorized access .

Implementing effective cybersecurity measures is particularly challenging today because there are more devices than people, and attackers are being forced to become more creative .

**Abstract :**

**Vulnerability assessment**

Someone who provides as well as violates digital security is known as an ethical hacker and his/her activity is called ethical hacking . It is not just done like that . It involves many stages . After prelimnary stages of Information gathering , scanning comes vulnerability assessment . Here data gathered from previous stages is analysed and an attack strategy created . Hacking is performed in various ways , using either botnets , malwares , ransomware , phishing attack , spyware , Distributed Denial of Service attack or a Root-kit . The method of attack depends on the purpose . Always the effort is to reward ratio should be satisfied .

**Contents :**

1) Introduction

2) What are vulnerabilities ?

3) Why do vulnerabilities exist ?

4) Tools used to find vulnerabilities

5) What is penetration testing ?

6) Why to perform penetration testing ?

7) Sample Penetration Test

8) Conclusion

9) References

**Application Areas :**

1) CybeCrime

2) Botnet

3) Malware

4) Phishing Attack

5) Spyware

6) DDos

7) Root-kits

**References / Bibliography :**

1)<https://www.krackattacks.com/>

2) https://papers.mathyvanhoef.com/ccs2017.pdf

3)<https://www.paloaltonetworks.com/cyberpedia/what-is-cyber-security>