Oct/Nov - 2025

Total No. of Questions : 5]

SEAT No. :

PE4217

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[6554]-3009
S.Y.M.C.A. (Management)
EH 617 MJ : ETHICAL HACKING
(2024 Pattern) (Semester - III)

Time : 2½ Hours] *[Max. Marks : 50*

Instructions to the candidates:

1) *All questions are compulsory.*
2) *Figures to the right indicate full marks.*

Q1) Solve any two. **[10]**

a) Explain different types of Hackers.

b) Explain different phases of ethical Hacking.

c) Describe how ethical hacking contributes in building customer trust.

Q2) Solve any one. **[10]**

a) As an ethical hacker you are requested to perform following tasks to ensure the security of your organizational network with the details below. Write appropriate Nmap commands.

i) Identify running service & versions : [web server 192.168.1.50]

ii) Determine os type : [Host 192.168.1.60]

iii) Inventory hosts & versions: [subnet 192.168.1.0/24]

iv) Gather detailed service info : [Host 192.168.1.70]

v) Detect quietly to avoid IDS : [Sensitive host 192.168.1.80]

b) With the exponential growth of internet of things (IoT) devices, understanding the exposure of connected systems has become in creasingly critical. Shodan enables organizations and security researchers to gain visibility into their digital footprint, identify publicly accessible systems and assess potential security weakness before they can be exploited by malicious acters. To exploit the vulnerabilities you are requested to access following.

i) Identify all web servers in country

ii) Map exposed IP cameras

iii) Map remote access points

iv) Find vulnerable system in a city

v) Identify cloud servers

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Q3) Solve any one. **[10]**

a) You are a penetration tester assigned to evaluate the security of a company's internal network. A report suggests that one of the machines on the network is running an outdated service known to have vulnerabilities. Your task is to gain access to the vulnerable machine using Metasploit. Make your own assumptions.

b) You are tasked with assessing the security of a windows XP virtual machine on the internal network. The machine is running an outdated SMB service vulnerable to the M508-067 netapi vulnerability. Your goal is to gain a Meterpreter session using Metasploit. Follow all necessary steps and write necessary commands.

Q4) Solve any two. **[10]**

a) Explain different types of web applications vulnerability.

b) Write in detail about encryption, hashing and salting.

c) Write down the steps to break ZIP files and PDF files with John the Ripper.

Q5) Solve any two. **[10]**

a) Explain the major security challenges faced in internet of things (IoT) environments.

b) Illustrate techniques used in vulnerability assessment and explain its importance in ethical hacking.

c) Discuss in detail about wireless network security and vulnerabilities associated to it.

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