



Sardar Patel Institute of Technology

Bhavan's Campus, Munshi Nagar, Andheri (West), Mumbai-400058-India
(Autonomous College Affiliated to University of Mumbai)

End Semester Examination

May 2022

Max. Marks : 60

Class : TE Computer/ TE IT

Course Code : IT 321

Name of the Course: Ethical Hacking

Duration: 120 Minutes

Semester: VI

Branch : CS/IT

Date-17th May 2022

Instructions:

- (1) All Questions are Compulsory
- (2) Draw neat diagrams
- (3) Assume suitable data, if necessary

Question No.		Max. Marks	BL	CO
1	a) Identify the vulnerability ,threats and attack for the online Library management system which provides the following facility to students- i) check the available books and request to block the book. ii) students can see the allocated books, pending books, and late fees (if any).	10	4	1
	b) Specify and justify the use of different phases of ethical hacking OR b) Specify and justify the use of technology triangle in the security and also differentiate between the ethical hacker and unethical hacker	10	3	1
2	a) With the help of examples, list and define the different types of Virus and Trojan and also specify the life cycle for Virus and Trojan.	10	3	2
	b) ,Specify the different ways to attack the system using session hijacking and justify the avoidance mechanism for the same	10	2	2
3	a) How are legitimate websites compromised with SQL injections and Malicious Advertisements? Give proper justification along with the avoidance of such attacks.	7	2	4
	b) Suppose that Alice's system employs the NX bit method of protecting against buffer overflow attacks. If Alice's system uses software that is known to harbor multiple buffer overflows, would it be possible for Trudy to conduct a denial of service attack against Alice by exploiting one of these buffer overflows? Explain.	8	5	3



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a. From the information given in the Wireshark pcap file, what operating system is the source connecting to a web server?

The screenshot shows a Wireshark capture of network traffic on the 'Wi-Fi: en1 (port 80)' interface. The packet list shows several TCP and HTTP packets. The selected packet (Frame 6) is an HTTP GET request from source IP 192.168.1.118 to destination IP 192.168.1.139 on port 80. The packet details pane shows the following information:

- Frame 6: 363 bytes on wire (2904 bits), 363 bytes captured (2904 bits) on interface 0
- Ethernet II, Src: Apple_21:1d:0a (08:0d:12:11:14:0a), Dst: Raspberr_8d:2b:7f (b8:27:eb:8d:2b:7f)
- Internet Protocol Version 4, Src: 192.168.1.118, Dst: 192.168.1.139
- TCP, Src Port: 62823, Dst Port: 80, Seq: 1, Ack: 1, Len: 297
- Application/javascript
- GET / HTTP/1.1

- A. OS X
- B. Microsoft
- C. Linux
- D. Raspbian

b. What must a user have in order to sniff the full stack of wireless traffic?

- A. Wireless device set to promiscuous mode
- B. Wireless device that has 2.4 GHz and 5 GHz set to read only
- C. Wireless device set to monitor mode
- D. Ettercap set to clone

c. Which of the following can be used to check for wireless signals?

- A. AirCheck
- B. Netcheck
- C. Neat
- D. AirWare

2

4

2

1.5

2

3

1.5

1

4