Sardar Patel Institute of Technology

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

NPTEL Re-examination

August 2023

Max Marks : 100   Duration : 3 hours

Name of the course : Ethical Hacking

T. E.- VI   IT/ Com

Q. No.		Max. Mks
1 a	Compare OSI Model and TCP/IP model.	04
1 b	How are the packets transmitted on a network model?	06
1 c	Explain Circuit and Packet Switching with the help of a diagram.	10
2 a	Explain in detail ARP Spoofing with diagrams.	07
2 b	What is the need for fragmentation in IP Packets?	03
2c	Explain transparent and non-transparent fragmentation with the help of a diagram.	10
3 a	Compare public-key and private-key cryptography.	05
3 b	What are hash functions? With the help of the diagram explain modification detection code(MDC) and message authentication code(MAC). **OR** What are digital signatures? Explain X.509 v3 certificate format in detail.	15
4 a	Explain how to perform packet sniffing using wireshark.	08
4 b	Explain Social Engineering attacks and Denial of Service attacks in detail.	12

5	Write short note on: **(any four)**	20
	a. Biometric authentication	
	b. DNS and Email Security	
	c. Steganography	
	d. SQL injection	
	e. Malware and Virus	
	f. IP version 6	