Register No : _____

THE KAVERY ENGINEERING COLLEGE

(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, NOV /DEC 2024

Sixth Semester

Information Technology

CCS354 - Network Security

(Common to Computer Science and Engineering)

Regulations - 2021

Duration : 3 Hrs *Maximum : 100 Marks*

*PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)*

Q.No	*Questions*	*BLT*	*CO*	*Marks*
1.	Define cryptography.	RE	1	2
2.	Differentiate active attack and passive attack.	UN	1	2
3.	State how public keys are distributed.	RE	2	2
4.	What is meant by authentication?	RE	2	2
5.	What is internet key exchange and how does it work?	RE	3	2
6.	List the application secure shell.	RE	3	2
7.	State the need for email security.	RE	4	2
8.	Define mobile device security.	RE	4	2
9.	Show the characteristics of a firewall.	UN	5	2
10.	Summarize the advantages of intrusion detection system over firewall.	UN	5	2

*PART – B (ANSWER ALL QUESTIONS) (Marks 5*13 = 65)*

Q.No			*Questions*	*BLT*	*CO*	*Marks*
11.	a		Explain in detail about the classical encryption technique with an example.	UN	1	13
			Or			
	b		Illustrate the following			
			i. Conventional cryptography	UN	1	07
			ii. Digital signatures	UN	1	06
12.	a		Discuss in detail about X.509 authentication services with neat sketch.	UN	2	13
			Or			
	b		Demonstrate the roles of the different servers in Kerberos protocol. How does the user get authenticated to the different servers?	UN	2	13
13.	a	i	Inspect transport mode and tunnel mode authentication in IP. Describe how ESP is applied to both these modes.	AN	3	07
		ii	Examine the IP security authentication header and describe the functions of each field.	AN	3	06
			Or			
	b		Analyze the functions of SSL protocol with neat sketch.	AN	3	13

14.	a	Identify and discuss the operational description of PGP with block diagram.	AP	4	13
		Or			
	b	Explain in detail about S/MIME and discuss how it provides security to e-mails.	AP	4	13
15.	a	Explain in detail about various types of firewalls and its configuration with neat diagrams.	EV	5	13
		Or			
	b	Explain in detail about intrusion detection with an example.	AN	5	13

*PART – C (Marks 1*15 = 15)*

Q.No		*Questions*	*BLT*	*CO*	*Marks*
16.	a	Discuss the working principle of IEEE 802.1X with neat sketch.	AN	3	15
		Or			
	b	Analyze secure hash algorithm in detail with suitable diagrams.	AN	1	15