INSTITUTE OF AERONAUTICAL ENGINEERING
(Autonomous)
Dundigal, Hyderabad - 500 043

COMPUTER SCIENCE ENGINEERING

QUESTION BANK

Department	**CYBER SECURITY**				
Course Title	**NETWORK SECURITY**				
Course Code	ACCC03				
Program	B.Tech				
Semester	V				
Course Type	Core				
Regulation	UG-20				
Course Structure	Theory			Practical	
	Lecture	Tutorials	Credits	Laboratory	Credits
	3	1	4	3	1.5
Course Coordinator	Y.Manohar Reddy,Asst.Professor				

COURSE OBJECTIVES:

The students will try to learn:

I	The Fundamental practices, policies, technologies and standards in providing security on network
II	The TCP/IP networking mechanism to diagnose the security problems in network.
III	The different network and communication protocols presence in the network to apply some security factors.

COURSE OUTCOMES:

After successful completion of the course, students should be able to:

CO 1	**Demonstrate** various security problems that implemented in Tcp/ip protocol suite.	Understand
CO 2	**Recall** Denial of Service(DoS) attcks can cause the problems in network.	Remember
CO 3	**Compare** different practices,policies and standards that provides security on network.	Understand
CO 4	**Analyze** Internet Control Message Protocol(ICMP) utilities that helps to monitor the networking mechanism.	Analyze

CO 5	**Utilize** the different Pretty Good Privacy(PGP) services that offered on Email Security.	Apply
CO 6	**Summarize** the Concept of Transport Layer Security(TLS) provides security against on web threats	Understand

QUESTION BANK:

Q.No	QUESTION	Taxonomy	How does this subsume the level	CO's
MODULE I				
INTRODUCTION ON NETWORKING AND SECURITY				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Extend the Concept of Model for Network Security and Network Access Security Model	Understand	The learner will try to **recall** the function of networking and security and then **explain** network security model	CO 1
2	Classify different TCP/IP Attacks and Explain Each of them with their Importance	Apply	The learner will try to **recall** the tcp/ip model and attacks on it.	CO 1
3	Relate the Process of How do attackers poison DNS caches in detail	Remember	The learner will try to **recall** Dns Concept and cache on Dns	CO 1
4	Recall and Explain all Attack prevention tools to Intrusion Prevention System Position in the network?	Remember	The learner will try to **recall** the concept of Attacks and its prevention ,defensive mechanisms.	CO 1
5	Explain about How Virtual Local Area Networks(VLAN)is implemented in Networking Mechanism	Understand	The learner will try to **recall** the concept of Local Area Network	CO 1
6	Explain various types of access controls that organizations can implement to safeguard their data and users	Understand	The learner will try to **recall** concept of Access control and methods.	CO 1
7	What steps can any organization take to protect against website attacks?	Remember	The learner will try to **recall** the definition of attacks and Protection and taken necessary steps .	CO 1

8	How does Demilitarized zone Network is implemented against its attacks	Remember	The learner will try to **recall** the network and Its types.	CO 1
9	Recall various steps can organization takes to Implement standard network Security	Remember	The learner will try to **recall** the network models and network topologies	CO 1
10	Explain various IP traceback Techniques identified to detect DDOS attacks	Understand	The learner will try to **recall** the concept of Dos attacks,Ip traceback techniques then explain	CO 2
PART-B LONG ANSWER QUESTIONS				
1	What is the function of Application Layer and explain the goal of attacks in Application layer?	Remember	The learner will try to **recall** various layers and attacks on them	CO 1
2	What is a DDoS attacks. And How does a DDOS attacks work.	Remember	The learner will try to **recall** the various attacks and understand that working process	CO 2
3	What is Border Gateway Protocol(BGP) and Explain How does it work in Networking.	Remember	The learner will try to **recall** the various protocols and its implementation	CO 1
4	What is DNS. Explain How does DNS caching Work.	Understand	The learner will try to **recall** DNS concept	CO 1
5	Compare and Explain all the Networking scanning tools in TCP/IP Networking	Understand	The learner will try to **recall** all tools to scan the network	CO 1
6	Recall the concept of Virtual Lan(VLAN) and Types of VLAN?	Understand	The learner will try to **recall** the Network types	CO 1
7	Explain the Process of Design and Architecture of DMZ Networks	Understand	The learner will try to **recall** the various types of networks and architecture	CO 1
8	Explain the Concept of Packet Marking in IP Traceback Techniqs.	Understand	The learner will try to **recall** the Ip Traceback techniqs.	CO 2
9	List and Explain about Each and Every TCP/IP Security Tool?	Understand	The learner will try to **recall** the security tools that offered on TCP/IP	CO 1

10	Draw the architecture and Explain the Model of TCP/IP Protocol Family?	Understand	The learner will try to **recall** the layers and protocols	CO 1
11	illustrate most popular and widespread Internet application services in Tcp/Ip?	Understand	The learner will try to **recall** the layers and protocols	CO 1
12	Explain different Network-Level Internet Services that offered on TCP/IP	Understand	The learner will try to **recall** the layers and protocols	CO 1
13	Explore application programs at your site that use TCP/IP.	Understand	The learner will try to **recall** the layers and protocols	CO 1
14	Explore the fields of Ethernet Frame Format and explain them.	Understand	The learner will try to **recall** the layers and protocols	CO 1
15	What is the maximum size packet that can be sent on a high-speed network like Network System Corporation's Hyperchannel? .	Remember	The learner will try to **recall** the layers and protocols	CO 1
16	Recall the advantages and disadvantages of tunneling?	Understand	The learner will try to **recall** the layers and protocols	CO 1
17	What characteristic of a satellite communication channel is most desirable? Least desirable?	Remember	The learner will try to **recall** the layers and protocols	CO 1
18	Approximately how many networks comprise the internet at your site? Approximately how many routers? Find	Remember	The learner will try to **recall** the layers and protocols	CO 1
19	Compare the organization of a TCP—IP internet to the style of internet designed by Xerox Corporation?	Understand	The learner will try to **recall** the layers and protocols	CO 1
20	What characteristic of a network that understand the mechanism of Protocol Influence?	Remember	The learner will try to **recall** the layers and protocols	CO 1
PART-C SHORT ANSWER QUESTIONS				

1	Find Is there Difference Between Authentication and Authorization?	Remember	The learner will try to **recall** the definition of both authentication and authorization	CO 1
2	State the name of Routing Information Protocol (RIP) ?	Understand	The learner will try to **recall** the concept of Routing mechanism.	CO 1
3	Recall the term security in Networking?	Remember	The learner will try to **recall** the security definition	CO 1
4	List the Components of Access Control?	Remember	Recall the concept of Access control	CO 1
5	State the term Access Control?	Understand	The learner will try to recall Access control definition.	CO 1
6	How does we refer LAN?	Remember	The learner will try to recall definition of LAN	CO 1
7	Recall the term website security?	Remember	the learner will recall the definition of web security	CO 1,CO 5
8	List some additional steps to protect against website attacks?	Remember	The learner will recall the attacks and steps.	CO 1
9	List out Some Security Services?	Remember	the learner will recall the definition of Security	CO 1
10	What is the difference between a DDoS attack and a DOS attack?	Remember	the learner will recall the definitions of Attacks .	CO 2
11	List some Network Security Services?	Remember	the learner will recall the definitions of services and mechanisms .	CO 1
12	State and Present Loop Back Address in the networking?	Understand	the learner will recall the definitions of networking.	CO 1
13	List the properties of Internet?	Remember	the learner will recall the definitions of Attacks .	CO 1
14	Explain the concept of DOS attacks are the target for accessing or attacking Wireless network environment.	Remember	the learner will recall the definitions of Attacks .	CO 2
15	State and refer the term Wireless Security Measures in detail.	Understand	the learner will recall the definitions of Attacks .	CO 1

16	What are the different ways that security threats presented in Mobile Devices.	Remember	the learner will recall the definitions of threats and security .	CO 1
17	Explain the process of applying security in mobile devices in terms of Elements.	Remember	the learner will recall the definitions of mobile security .	CO 1
18	Identify all the technical standard elements of IEEE 802.11 Terminology in networking.	Remember	the learner will recall the Concepts of IEEE standards .	CO 1
19	How Media Access Control will helps to control the transmission in devices.	Remember	the learner will recall the concept of MAC .	CO 1
20	List and Explain the different Services offered in IEEE802.11	Remember	the learner will recall the concept of IEEE802.11 .	CO 1
MODULE II				
REAL-TIME COMMUNICATION SECURITY				
PART-A PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Explain the Process of Implement Virtual Private Network (VPN) in LAN configuration?	Understand	The learner will try to **recall** various types of networks and manage the settings	CO 3
2	Can Distribution Groups be Managed by Security Groups? Explain it?	Understand	The learner will try to **recall** the security concepts and services	CO 3
3	Demonstrate the association between an IKE header and the Key Exchange Payload with the aid of a diagram, detailing each field of both?	Understand	The learner will try to **recall** the concept of Internet Key Exchange process	CO 3
4	List and Explain about the IP Security Modes along with Ip Security Services?	Understand	The learner will try to **recall** the Ip security mechanism and services.	CO 3
5	Procedure to Implement Confidentiality, Integrity, Non-Repudiation in Internet Protocol?	Understand	The learner will try to **recall** the internet protocol services.	CO 3
6	Implement the Procedure of Packet Filtering mechanism in FireWalls?	Understand	The learner will try to **recall** the concept of firewalls.	CO 3

7	What is the Communication Process Scenario will help to Do Email Communication in IP?	Remember	The learner will try to **recall** the Email concept along with protocol	CO 3
8	How to Managing Security Groups and Distribution Groups in real time Communication security.	Remember	The learner will try to **recall** the Security Services	CO 3
9	How Payload types are having importance in the Internet Key Exchange Mechanism?	Understand	The learner will try to **recall** the concept of Internet Key exchange	CO 3
10	What are the parameters that Associated with Security Association Database? and Explain them.	Understand	The learner will try to **recall** the Security association in networking	CO 3
PART-B LONG ANSWER QUESTIONS				
1	Explain the Layered Architecture of TCP/IP Protocol stack?	Understand	The learner will try to **recall** various layers of TCP/IP protocol.	CO 3
2	Illustrate the Concept of Application Level Gateway that operated in Application Layer?	Understand	The learner will try to **recall** the concept of Application level gateways.	CO 3
3	Classify the Tcp/Ip layers and Protocol stack implemented in Networking?	Understand	The learner will try to **recall** the TCP/IP protocol Implementation with format	CO 3
4	Model the format of Authentication Header(AH) and IP header?	Apply	The learner will try to **recall** the concept of Authenticate Header and IP header	CO 3
5	Draw The IPsec Architecture and Explain Applications of IPsec?	Understand	The learner will try to **recall** the concept of IP Security and applications	CO 3
6	Draw and Explain the Flow of ESP packet Format?	Understand	The learner will try to **recall** the concept of Encapsulating Secure Payload(ESP)	CO 3
7	List different IP Sec Services and Explain IP Sec in Transport Mode?	Understand	The learner will try to **recall** the Concept of IP Security Services	CO 3

8	Explore the Features of Internet Key Exchange(IKE) determination?	Understand	The learner will try to **recall** the concept of Internet Key Exchange.	CO 3
9	Explain The Protocol Operations of Encapsulating Security Payload(ESP)?	Understand	The learner will try to **recall** the concept of ESP	CO 3
10	Illustrate the Internet Key Exchange(IKE) phases Message structure Modes?	Understand	The learner will try to **recall** the Internet Key Exchange.	CO 3
11	How do we compare the concept of IPSec in Tunnel Mode and Transport Mode.	Remember	The learner will try to **recall** the IPSecurity.	CO 3
12	How many ways IPSec documents are categorized into the groups.	Remember	The learner will try to **recall** the IPSecurity documents.	CO 3
13	What are the different Parameters that identified by Security Association.	Understand	The learner will try to **recall** the IPSecurity.	CO 3
14	Recall the concept of Processing Model for Outbound Packets in IP traffic Processing.	Remember	The learner will try to **recall** the IPSecurity Outbound.	CO 3
15	Recall the concept of Processing Model for Inbound Packets in IP traffic Processing.	Remember	The learner will try to **recall** the IPSecurity Inbound.	CO 3
16	What do you understand from services Padding and Anti Replay service.	Understand	The learner will try to **recall** the Encapsulating Security Payload(ESP).	CO 3
17	Recall the Scope of ESP Encryption and Authentication in Transport mode	Remember	The learner will try to **recall** the ESP Authentication.	CO 3
18	state the concept of End-to-end IPsec Transport-Mode Encryption.	Understand	The learner will try to **recall** the ESP in IPSecurity.	CO 3
19	How Virtual Private Network Implemented with IPsec Tunnel Mode.	Remember	The learner will try to **recall** the IPSecurity.	CO 3
20	Explain the Features of IKE key determination	Understand	The learner will try to **recall** the Internet Key Exchange.	CO 3

PART-C SHORT ANSWER QUESTIONS				
1	define the Format of Authenticate Header in Transport Mode?	Remember	–	CO 3
2	State the term of TCP/IP protocol importance?	Remember	–	CO 3
3	Write the importance of Packet Firewall in Network Security?	Remember	–	CO 4
4	recall the concept of Anonymity?	Remember	–	CO 3
5	How do we Understand Message Integrity?	Remember	–	CO 3
6	How do we Understand Message Integrity?	Remember	–	CO 3
7	Define Internet Protocol Security ?	Remember	–	CO 3
8	Recall the Protocol IKE?	Remember	–	CO 3
9	Formulate the Term IPSecurity?	Remember	-	CO 3
10	Write various Improvements in IKEv2 over IKEv1 ?	Understand	-	CO 3
11	List different authentication methods can be used with IKE key determination	Remember	-	CO 3
12	List different fields that contains in IKE header Format.	Remember	-	CO 3
13	List IKE payload Types in detail	Remember	-	CO 3
14	Why does ESP include a padding field?	Remember	-	CO 3
15	What are the roles of the Oakley key determination protocol and ISAKMP in IPsec?	Remember	-	CO 3
16	What are the types of secret key algorithms used in IPsec?	Remember	-	CO 3
17	List some design goals for a firewall in security.	Remember	-	CO 3

18	compare the types of firewalls such as Application proxy firewall and circuit level proxy firewall.	Understand	-	CO 3
19	state the countermeasure concept IP Address spoofing	Understand	-	CO 3
20	List four techniques used by firewalls to control access and enforce a security policy	Remember	-	CO 3
MODULE III				
INTERNET CONTROL MESSAGE PROTOCOL				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	Find Testing Destination Reachability And Status using PING Command?	Remember	The learner will try to **recall** all Networking Scanning commands	CO 4
2	How OS Fingerprinting use to exploit the vulnerabilities present in that operating system?	Remember	The learner will try to **recall** the concept of OS Fingerprinting	CO 4
3	Analyze the status of Reports Of Unreachable Destinations in ICMP?	Analyze	The learner will try to **recall** ICMP protocol	CO 4
4	Explore different Features available for SolarWinds IP Address Manager (IPAM)?	Understand	The learner will try to **recall** concept of SolarWinds IP address	CO 4
5	Understand the Process of Angry IP Scanner Tool to use for Network Scanning Purpose?	Understand	The learner will try to **recall** the concept of Networking scanning tools	CO 4
6	Explain The process of Error Reporting vs. Error Correction in Internet Control Message Protocol(ICMP)?	Understand	The learner will try to **recall** the ICMP for error reporting and correcting	CO 4
7	Implement the process of Scanning the network of the target using the port specification?	Understand	The learner will try to **recall** the scanning process on Network under ports.	CO 4
8	Explore the process of Performing TRACERT command for Networking Monitor?	Understand	The learner will try to **recall** the networking scanning tools with commands	CO 4

9	Implement the process of Scanning the network of the target using Firewall/IDS evasion and spoofing?	Understand	The learner will try to **recall** the concept of Network scanning	CO 4
10	Explain the usage of ICMP Router Discovery to Send messages and Receive in Network?	Understand	The learner will try to **recall** the concept of ICMP	CO 4
PART-B LONG ANSWER QUESTIONS				
1	List and Classify different ICMP sweep tools to scan and monitor in the network?	Remember	The learner will try to **recall**the concept of ICMP and tools for Network scanning	CO 4
2	What is a Ping(ICMP)flood attack? How does a Ping flood attack works on network?	Remember	The learner will try to **recall**the concept of ICMP and tools for Network scanning	CO 4
3	Implement the Process of ICMP echo request or reply message format in detail?	Understand	The learner will try to **recall**the concept of ICMP and tools for Network scanning	CO 4
4	What is Internet Control Message Protocol(ICMP) and draw the structure of ICMP packet?	Remember	The learner will try to **recall**the concept of ICMP and tools for Network scanning	CO 4
5	Compare and Explain About IP versions in Networking ?	Understand	The learner will try to **recall** the concept of Ip Versions.	CO 4
6	Understand and Frame the ICMP router advertisement message format used with IPv4?	Understand	The learner will try to **recall** the concept of ICMP router discovery.	CO 4
7	What is reconnaissance technique? Explain different tools offered to scan the network?	Understand	The learner will try to **recall** the concept of Network Scanning and Monitoring	CO 4
8	Extend the different types of ICMP Attacks in Networking Mechanism?	Understand	The learner will try to **recall** the concept of ICMP attacks	CO 4
9	Explain the process of Scanning the network of the target using the NSE scripts?	Understand	The learner will try to **recall** the Network Security Commands and Scripts	CO 4

10	Explain different Tools to perform Ping Sweep In ICMP?	Understand	The learner will try to **recall** the ICMP tools	CO 4
11	Compare the concept of Error Reporting vs. Error Correction in ICMP protocol.	Understand	The learner will try to **recall** the concept of ICMP	CO 4
12	What are the Two levels of ICMP Encapsulation and Explian it.	Remember	The learner will try to **recall** the concept of ICMP	CO 4
13	what the term ICMP echo request or reply message format.	Remember	The learner will try to **recall** the concept of ICMP	CO 4
14	state and Explain ICMP destination unreachable message format.	Understand	The learner will try to **recall** the concept of ICMP	CO 4
15	List different Reports Of Unreachable Destinations in ICMP	Understand	The learner will try to **recall** the concept of ICMP	CO 4
16	Explain the concept of Congestion And Datagram Flow Control in ICMP	Understand	The learner will try to **recall** the concept of ICMP	CO 4
17	Recall the concept of Detecting Circular Or Excessively Long Routes	Remember	The learner will try to **recall** the concept of ICMP	CO 4
18	What is the ICMP timestamp request or reply message format.	Remember	The learner will try to **recall** the concept of ICMP	CO 4
19	illustrates the format of the advertisement message a router sends in the networking.	Understand	The learner will try to **recall** the concept of ICMP	CO 4
20	Find that a router give ICMP messages priority over normal traffic? Why or why not?	Remember	The learner will try to **recall** the concept of ICMP	CO 4
PART-C SHORT ANSWER QUESTIONS				
1	Find the Importance of IP Host Network Monitor?	Remember	–	CO 4
2	refer the use of ICMP Router Discovery in Networking?	Understand	–	CO 4
3	List the Parameters that ICMP contains?	Remember	–	CO 4

4	State the Protocol Internet Control Message Protocol (ICMP)?	Remember	–	CO 4
5	List different Scanning and reconnaissance tools ?	Remember	–	CO 4
6	What Is the Difference Between Ping and Traceroute?	Remember	–	CO 4
7	List different types of attacks and utilities of ICMP?	Remember	–	CO 4
8	Write the attacks available with ICMP?	Remember	–	CO 4
9	state the term reconnaissance technique?	Remember	–	CO 4
10	Recall the term ping sweep (ICMP sweep)?	Remember	–	CO 4
11	What is mean by Router Solicitation?	Remember	–	CO 4
12	What is mean by Checksum field?	Remember	–	CO 4
13	Recall that each IP header specifies a type of service used for routing.	Remember	–	CO 4
14	What are the Route Change Requests From Routers .	Remember	–	CO 4
15	find that ICMP redirect messages do not provide routing changes among routers	Remember	–	CO 4
16	Define the situation congestion in Broadcasting Messages.	Remember	–	CO 4
17	What is the importance of PING command	Remember	–	CO 4
18	what is the Importance of Tracert command.	Remember	–	CO 4
19	What are the levels of ICMP Encapsulation.	Remember	–	CO 4
20	Define the term error reporting mechanism in ICMP	Remember	–	CO 4

MODULE IV				
ELECTRONIC MAIL SECURITY				
PART A- PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS				
1	How the steps involved in Transmission and Reception of PGP Messages?	Remember	The learner will try to **recall** the Protocol Services PGP	CO 5
2	Summarize Why does PGP take so long to add new keys to my key ring?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5
3	Recall the Concept of Session Key Generation and Key Identifiers in PGP?	Remember	The learner will try to **recall** the Protocol Services PGP	CO 5
4	Recall the Reasons for PGP has grown explosively and is now very widely used in Networking?	Remember	The learner will try to **recall** the Protocol Services PGP	CO 5
5	Explain the General Format of PGP Message using Keys and Key Rings?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5
6	Why does PGP complain about checking signatures every so often?	Remember	The learner will try to **recall** the Protocol Services PGP	CO 5
7	How Can I use PGP under a ”swapping” operating system like Windows or OS/2?	Remember	The learner will try to **recall** the Protocol Services PGP	CO 5
8	Explain How does PGP handle multiple addresses with Security?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5
9	What are the Public Key Servers? And Explain Commands of the Key servers?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5
10	How do I verify that my copy of PGP has not been tampered with?Explain?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5
PART-B LONG ANSWER QUESTIONS				
1	What are public keys and private keys? Explain Them in detail?	Remember	The learner will try to **recall** the concept of Public keys and private keys	CO 5
2	Summarize the Concept of Transmission and Reception of PGP Messages Over the Network?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5

3	What is the use of PGP and what are the services offered in PGP?	Remember	The learner will try to **recall** the Protocol Services PGP	CO 5
4	Draw and Explain the PGP Cryptographic functions?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5
5	Explain the reasons for signature is generated before compression in PGP?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5
6	Identify various Cryptography keys and Key Rings that offered in PGP?	Apply	The learner will try to **recall** the Protocol Services PGP	CO 5
7	Implement How does PGP handle multiple addresses?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5
8	Illustrate the summary of PGP Services?	Understand	The learner will try to **recall** the Protocol Services PGP	CO 5
9	Why PGP Protocol does it take so long to encrypt/decrypt messages?	Remember	The learner will try to **recall** the Protocol Services PGP	CO 5
10	Draw and Explain the General structure of private and public-key rings?	Understand	The learner will try to **recall** the Key Rings	CO 5
11	illustrates the key components of the Internet mail architecture?	Understand	The learner will try to **recall** the Email components	CO 5
12	Explain the Function Modules and Standardized Protocols Used between them in the Internet Mail Architecture	Understand	The learner will try to **recall** the Components of Email	CO 5
13	what are Mail Access Protocols and Explain them?	Understand	The learner will try to **recall** the Mail Access Protocol	CO 5
14	Outline the PGP Protocol take so long to encrypt/decrypt messages?	Understand	The learner will try to **recall** the PGP protocol	CO 5
15	list Some limitations of the SMTP/5322 scheme for the use of Multipurpose Internet Mail Extension(MIME)?	Remember	The learner will try to **recall** the MIME	CO 5

16	List and Explain Multipurpose Internet Mail Extension(MIME) Content Types	Remember	The learner will try to **recall** the MIME	CO 5
17	classify different types of email security threats?	Understand	The learner will try to **recall** the Key Rings	CO 5
18	frame the table of Email Threats and Mitigations in the Email Security?	Understand	The learner will try to **recall** the Key Rings	CO 5
19	Explain the Simplified S/MIME Functional Flow in Email Communication?	Understand	The learner will try to **recall** the Key Rings	CO 5
20	Explain different Enhanced Security Services for S/MIME	Understand	The learner will try to **recall** the Key Rings	CO 5
PART-C SHORT ANSWER QUESTIONS				
1	List various Cryptographic Keys and Key Rings offered by PGP?	Remember	—	CO 5
2	Write the steps that to perform Message Transmission?	Remember	—	CO 5
3	list the steps for How Does PGP Encryption Work?	Remember	—	CO 5
4	Refer the uses of PGP Encryption	Remember	—	CO 5
5	Define the Term PGP in Electronic Mail Security?	Remember	—	CO 5
6	Understand the process of Digital Signature Verification?	Understand	—	CO 5
7	How do we understood PGP is safe ?	Remember	—	CO 5
8	List the Parameters in structure of private and public-key rings?	Remember	-	CO 5
9	What are the various services offered by PGP?	Remember	–	CO 5
10	What are the public key versions of PGP?	Remember	—	CO 5

11	what is Mean by Domain-Based Message Authentication, Reporting, and Conformance (DMARC) ?	Remember	—	CO 5
12	define Sender Policy Framework(SPF)?	Remember	—	CO 5
13	what is mean by DNSSEC	Remember	—	CO 5
14	List out various steps that performs on DNS operation	Remember	—	CO 5
15	What is mean by Domain Name System(DNS)?	Remember	—	CO 5
16	List out various services offered in S/MIME ?	Remember	—	CO 5
17	Extend the term DMARC?	Remember	—	CO 5
18	List some Email Threats on Internet?	Remember	—	CO 5
19	List some MIME Transfer Encodings?	Remember	—	CO 5
20	What is the use of RFC5322?	Remember	—	CO 5
MODULE V				
WEB SECURITY				
PART A-PROBLEM SOLVING AND CRITICAL THINKING QUESTIONS)				
1	Illustrate the Operational steps To perform Handshake Protocol Action?	Understand	The learner will try to **recall** the concept of Hand shake protocol	CO 6
2	How Secure Shell(SSH) is organized as different protocols that to run on Top of TCP?	Remember	The learner will try to **recall** the concept of Secure Shell	CO 6
3	Briefly discuss the different levels of awareness of a connection in HTTPS.	Understand	The learner will try to recall the HTTP protocol	CO 6
4	What are the steps involved that to exchange message and Authentication methods?	Remember	The learner will try to **recall** the Message authentication modes.	CO 6
5	Explain the process of Server Authentication and Key Exchange Mechanism?	Understand	The learner will try to **recall** the Message authentication modes.	CO 6

6	Explain the process of Client Authentication and Key Exchange Mechanism ?	Understand	The learner will try to **recall** the Message authentication modes.	CO 6
7	Write the Operational steps that performs TLS Record Protocol Operation?	Remember	The learner will try to recall Transport Layer Security	CO 6
8	Explain Transport Layer Security(TLS) Handshake Protocol Message Types?	Understand	The learner will try to recall Transport Layer Security	CO 6
9	Implement the mechanism of SSH Transport Layer Protocol Packet Exchanges?	Remember	The learner will try to recall Transport Layer Security	CO 6
10	Write the operational steps that Generation of Cryptographic Parameters in between client and server?	Remember	The learner will try to recall Transport Layer Security	CO 6
PART-B LONG ANSWER QUESTIONS				
1	Explain the Architecture of Transport Layer Security(TLS) In Web?	Understand	The learner will try to recall Transport Layer Security Services.	CO 6
2	List and Explain the parameters that defined on session state in Transport Layer?	Understand	The learner will try to recall Transport Layer Security Services.	CO 6
3	WWhat are the Exchanging Phases that establish a logical connection between client and server?	Remember	The learner will try to **recall** the client and server architecture.	CO 6
4	What is Mean by Secure Socket Layer(SSL) and How does it Works?	Remember	The learner will try to **recall** concept of Secure Shell and Layers	CO 6
5	What are the considerations for selection of materials to be used for construction of thrust chambers of liquid rocket engine	Understand	The learner will try to **recall** materials for combustion chamber and **explain** the materials used in combustion chamber along with its properties	CO 6
6	define Web security?Identify different threats attacks on Web?	Understand	The learner will try to **recall** various attacks on web	CO 6

7	Draw and explain the steps of SSH Transport Layer Protocol Packet Formation?	Understand	The learner will try to **recall** the concept of Secure Shell and Transport Layer Security	CO 6
8	Explain the process of Change Cipher Spec Protocol in Transport Layer?	Understand	The learner will try to **recall** the concept of Transport layer	CO 6
9	List and Explain key exchange methods are supported in Transport Layer?	Understand	The learner will try to **recall** the concept of Transport layer	CO 6
10	Explain the important areas that provided by HTTP to send data between client and server?	Understand	The learner will try to **recall** the concept of Application layer	CO 6
11	What is mean by TLSA RR and explain them.	Remember	The learner will try to **recall** the concept of Application layer	CO 6
12	List and Explain some session state parameters?	Understand	The learner will try to **recall** the concept of Application layer	CO 6
13	What are the Services offered TLS Record Protocol for TLS Connections?	Remember	The learner will try to **recall** the concept of Application layer	CO 6
14	How makes use of the HMAC algorithm defined in RFC 2104	Remember	The learner will try to **recall** the concept of HMAC Algorithm	CO 6
15	Summarize the importance of Change Cipher Spec Protocol?	Understand	The learner will try to **recall** the concept of Application layer	CO 6
16	Illustrate the key exchange methods are supported in Crypto graphic keys for conventional encryption?	Understand	The learner will try to **recall** the concept of Application layer	CO 6
17	Explain the use of Pseudorandom Function for key generation?	Understand	The learner will try to **recall** the concept of Application layer	CO 6
18	classify and Explain different Attack Categories?	Understand	The learner will try to **recall** the concept of Application layer	CO 6

19	Explain How SSH organized as three protocols run on TCP?	Understand	The learner will try to **recall** the concept of Application layer	CO 6
20	Explain the usage of User Authentication Protocol(UAP)?	Understand	The learner will try to **recall** the concept of Application layer	CO 6
PART-C SHORT ANSWER QUESTIONS				
1	What is an SSL certificate?	Remember	—	CO 6
2	How do we understand SSL/TLS working?	Remember	—	CO 6
3	List various higher-layer protocols are defined as part of TLS?	Remember	—	CO 6
4	What are TLS Record Protocol provides services for TLS connections?	Remember	—	CO 6
5	Write the types of SSL certificates?	Remember	—	CO 6
6	What are the different TLS Handshake Protocol Message Types?	Remember	-	CO 6
7	List various Protocols that implemented on Web?	Remember	-	CO 6
8	State the importance of SSL?	Remember	–	CO 6
9	Understand different states associated with sessions in Web?	Understand	-	CO 6
10	State the importance of Handshake Protocol?	Remember	-	CO 11
11	What is mean by TLSA RR?	Understand	-	CO 6
12	write the format of Authentication requests from the client?	Understand	-	CO 6
13	List out some message exchange involving steps?	Remember	-	CO 6
14	List and Define some Authentication Methods?	Remember	-	CO 6
15	Write the Example of SSH Connection Protocol Message Exchange?	Understand	-	CO 6

16	What is the difference between a TLS connection and a TLS session?	Understand	-	CO 6
17	What steps are involved in the TLS Record Protocol transmission?	Understand	-	CO 6
18	List and briefly define the SSH protocols?	Understand	-	CO 6
19	What are three important areas of protection while Data sent using Https?	Understand	-	CO 6
20	Write content of the finished message in key exchange mechanism?	Understand	-	CO 6

Course Coordinator: **HOD CSE(CS)**
Y.Manohar Reddy, Asst Professor