SREENIVASA INSTITUTE OF TECHNOLOGY AND MANAGEMENT STUDIES.
(AUTONOMOUS)

DEPARTMENT OF CSE

QUESTIONBANK

For

20CSE352T-Computer Network and Internet Protocols

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Prepared

by

Mr V.P.Manikandan Assistant Professor

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Unit-I

S.No	Part-A Questions
1.	Define a computer network.
2.	What is a Personal Area Network (PAN)?
3.	Give an example of a Local Area Network (LAN).
4.	What is a Home Network?
5.	Define Metropolitan Area Network (MAN).
6.	Differentiate between LAN and WAN.
7.	What is an Internetwork?
8.	What is meant by broadband access network?
9.	Give one example of broadband access technology.
10.	What is a mobile access network?
11.	Define wireless access network.
12.	How many layers are in the TCP/IP model?
13.	Give one protocol used in the TCP/IP Application layer.
14.	Differentiate between connection-oriented and connectionless services.
15.	What is meant by reliable service?

S.No	Part-B Questions
1.	Explain the different types of computer networks with examples.
2.	Compare LAN, MAN, and WAN in detail
3.	Explain the TCP/IP reference model with its layers
4.	Discuss the differences between OSI and TCP/IP reference models
5.	What are the design goals of computer networks? Explain
6.	Differentiate between connection-oriented and connectionless services with examples.
7.	Explain the concept of reliable service in computer networks
8.	What are service primitives? Explain their role in protocol design
9.	Critique the OSI reference model and its protocols.
10.	Critique the TCP/IP reference model and its protocols
11.	Explain the concept of an Internetwork with a neat diagram.
12.	What are network protocols? Explain their role in communication.
13.	Discuss the design goals of computer networks**.**

Unit-II

S.No	Part-A Questions
1.	What is guided transmission media?
2.	Name two types of guided transmission media.
3.	What is persistent storage?
4.	What is a twisted pair?
5.	Give one use of coaxial cable
6.	What is the advantage of fiber optics?
7.	What is the main function of the data link layer?
8.	Name two design issues of the data link layer.
9.	What is framing?
10.	Differentiate between error detection and error correction.
11.	What is an error-detecting code?
12.	What is an error-correcting code?
13.	What is a simplex protocol?
14.	What is a sliding window protocol?
15.	What is static channel allocation?

S.No	Part-B Questions
1.	Explain different guided transmission media.
2.	Describe the design issues of the data link layer
3.	Clarify error detection and error correction techniques.
4.	Explain ALOHA and CSMA protocols
5.	Write short notes on different versions of Ethernet.
6.	Compare different multiple access protocols**.**
7.	Explain the ALOHA protocol with advantages and disadvantages.
8.	Write notes on Carrier Sense Multiple Access (CSMA) protocols.
9.	Explain collision-free protocols with examples.
10.	Explain limited-contention protocols.
11.	Write short notes on wireless LAN protocols**.**
12.	Discuss the architecture of Classic Ethernet physical layer**.**
13.	Explain the Classic Ethernet MAC sublayer protocol**.**
14.	Write notes on Ethernet performance**.**
15.	Differentiate between Switched Ethernet and Classic Ethernet**.**

Unit-III

S.No	Part-A Questions
1.	What are the design issues of the network layer?
2.	What is store-and-forward packet switching?
3.	What services are provided to the transport layer by the network layer?
4.	What is connectionless service?
5.	What is connection-oriented service?
6.	What is the optimality principle?
7.	What is flooding?
8.	Define any cast and Multicast Routing?
9.	What is an internetwork?
10.	What is packet fragmentation?
11.	What is an IP address?
12.	Differentiate between IPv4 and IPv6.
13.	What is broadcast routing?
14.	What is hierarchical routing?
15.	What is link state and Distance vector routing?

S.No	Part-B Questions
1.	Explain the design issues of the network layer
2.	Compare virtual-circuit and datagram networks
3.	Explain routing algorithms in the network layer
4.	Explain traffic management at the network layer
5.	Compare IPv4 and IPv6.
6.	Explain OSPF and BGP routing protocols
7.	Write notes on the IPv4 protocol.
8.	Explain the concept of IP addressing with classes.
9.	Explain IPv6 protocol and its advantages over IPv4.
10.	Write notes on Internet control protocols (ICMP, IGMP, ARP, RARP, etc.)**.**
11.	Explain label switching and MPLS**.**
12.	Discuss the working of OSPF (Interior Gateway Protocol)**.**
13.	Explain methods of connecting heterogeneous networks**.**
14.	How are endpoints connected across heterogeneous networks**?**
15.	Explain internetwork routing across multiple networks**.**

Unit-IV

S.No	Part-A Questions
1.	What is the main function of the transport layer?
2.	What services are provided to the upper layers?
3.	What are transport service primitives?
4.	What is Berkeley socket?
5.	Give an example of socket programming
6.	What is addressing in transport layer?
7.	What is connection establishment?
8.	What is connection release?
9.	What is error control in transport protocols?
10.	What is flow control in the transport layer?
11.	What is multiplexing in the transport layer?
12.	What is crash recovery in transport protocols?
13.	What is congestion control?
14.	What is desirable bandwidth allocation?
15.	What is regulating the sending rate?

S.No	Part-B Questions
1.	Explain the services provided by the transport layer to the upper layers.
2.	Explain transport service primitives and Berkeley sockets
3.	Explain the elements of transport protocols
4.	Explain congestion control in transport protocols
5.	Compare UDP and TCP
6.	Explain TCP connection establishment and release
7.	Explain the process of addressing in transport layer using port numbers.
8.	Describe the steps of connection establishment and release in TCP.
9.	Write notes on error control and flow control in transport layer.
10.	Explain the concept of multiplexing and demultiplexing in transport protocols.
11.	Discuss how the transport layer handles crash recovery.
12.	Explain the role of congestion control in transport protocols with techniques.
13.	What is desirable bandwidth allocation**?** How is sending rate regulated?
14.	Write short notes on transport issues in wireless networks**.**
15.	Explain UDP and its applications. Why is it called unreliable?

Unit-V

S.No	Part-A Questions
1.	What is the purpose of electronic mail ?
2.	What is a user agent in e-mail systems?
3.	Name two standard e-mail protocols.
4.	What is the function of SMTP?
5.	What is the role of IMAP?
6.	What is MIME?
7.	What is the World Wide Web?
8.	Differentiate between static and dynamic web pages.
9.	What is a web application?
10.	What is HTTP?
11.	What is a web proxy?
12.	What is a Content Delivery Network (CDN)?
13.	What is a server farm?
14.	What is web caching?
15.	What is web privacy?

S.No	Part-B Questions
1.	Explain the architecture and services of electronic mail.
2.	Differentiate between static and dynamic web pages.
3.	Explain HTTP and HTTPS protocols.
4.	Explain content delivery using CDNs, server farms, and web proxies.
5.	Explain peer-to-peer (P2P) networks with applications.
6.	Explain the evolution of the Internet.
7.	Describe the role of Server Farms and Web Proxies in improving web performance.
8.	Write an essay on the evolution of the Internet from ARPANET to present-day IoT and Cloud computing.
9.	Explain Content and Internet Traffic Management with reference to scalability and performance
10.	Write short notes **on** Web applications and their role in e-commerce and cloud services.
11.	Explain the importance of Server Farms in large-scale websites like Google, Amazon, or YouTube
12.	Explain the concept of Content Delivery and how Internet traffic is managed.
13.	Describe the role of the User Agent, Message Formats, Message Transfer and Final Delivery in e-mail.
14.	Discuss HTTP and HTTPS protocols**.** Why is HTTPS more secure than HTTP?
15.	Write notes on Web Privacy issues and methods to protect user privacy.