SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR (AUTONOMOUS)
Siddharth Nagar, Narayanavanam Road – 517583

QUESTION BANK (DESCRIPTIVE)

Subject with Code: Computer Networks(20CS0513)   **Course & Branch**: B.Tech & CSE

Year & Sem: II/II   **Regulation:** R20

UNIT –1
INTRODUCTION

1	a	Define Computer Network and elaborate the Network criteria.	[L1][CO1]	[6M]
	b	Discuss briefly about Computer Network Types.	[L2][CO1]	[6M]
2		Examine the various Network topologies.	[L3][CO1]	[12M]
3		Explain in detail about OSI reference model.	[L2][CO1]	[12M]
4		Compare OSI and TCP/IP Network models.	[L5][CO1]	[12M]
5		Explain in detail about TCP/IP Network model.	[L2][CO1]	[12M]
6	a	Discuss about Physical layer in detail.	[L2][CO1]	[6M]
	b	Illustrate about Twisted Pair cable with neat diagram.	[L3][CO1]	[6M]
7	a	Explain about Transmission Impairment	[L2][CO1]	[6M]
	b	Explain about Propagation modes used in Unguided media of Physical layer	[L2][CO1]	[6M]
8	a	Illustrate with neat diagram about any of the Guided media used in Physical layer	[L3][CO1]	[6M]
	b	Explain about usage of Infrared waves used as Unguided media in physical layer of computer networks	[L2][CO1]	[6M]
9	a	Illustrate about Coaxial cable.	[L3][CO1]	[6M]
	b	Explain in detail about Fiber optic cable.	[L2][CO1]	[6M]
10	a	Dissect about the usage of Radio Waves as unguided media, their propagation mode and antennas used with neat diagram	[L4][CO1]	[6M]
	b	Illustrate a notes on Microwaves used as unguided media.	[L3][CO1]	[6M]

UNIT –II
INTRODUCTION TO DATA LINK LAYER

1	a	Explain about the services provided by the Data link layer.	[L2][CO2]	[8M]
	b	Explain Link layer addressing	[L2][CO2]	[4M]
2	a	What is framing? Name the framing methods available.	[L1][CO2]	[4M]
	b	Explain about Bit oriented framing method with illustration of bit stuffing.	[L3][CO2]	[8M]
3	a	Explain Cyclic Redundancy check method used for error detection.	[L2][CO2]	[6M]
	b	Describe about checksum in data link layer.	[L2][CO2]	[6M]
4		Explain the various Error correction methods	[L2][CO2]	[12M]
5	a.	Explain about the Elementary data link protocols.	[L2][CO2]	[6M]
	b.	Discuss about Selective Repeat Protocol	[L2][CO2]	[6M]
6		Discuss HDLC Protocol with the elaborative explanation of its frames.	[L2][CO2]	[12M]
7		Write about Point to Point (PPP) protocol in detail.	[L4][CO2]	[12M]
8	a	Write about Slotted ALOHA protocol.	[L4][CO2]	[6M]
	b	Explain in detail about Controlled access protocols which are Used in MAC sub layer.	[L2][CO2]	[6M]

9	a	Write about CSMA/CA protocol.	[L4][CO2]	[8M]
	b	Explain about FDMA protocol.	[L2][CO2]	[4M]
10	a	Write about CDMA protocol.	[L4][CO2]	[6M]
	b	Explain about TDMA protocol.	[L2][CO2]	[6M]

UNIT–III
THE NETWORK LAYER

1		What are the network layer design issues explain them.	[L1][CO3]	[12M]
2		Explain about Static Routing algorithms.	[L2][CO3]	[12M]
3	a	Calculate the Shortest Path Algorithm considering an example.	[L4][CO3]	[6M]
	b	Explain Flooding concept.	[L2][CO3]	[6M]
4	a	Explain distance vector routing algorithm.	[L2][CO3]	[6M]
	b	Examine state what is count to infinity problem.	[L3][CO3]	[6M]
5		Illustrate Link State Routing algorithm to find the best route	[L3][CO3]	[12M]
6	a	Discuss about Leaky bucket algorithm with neat diagram	[L2][CO3]	[6M]
	b	Discuss about Token bucket algorithm.	[L2][CO3]	[6M]
7		List and explain congestion control algorithms in network layer.	[L1][CO3]	[12M]
8	a	Explain about quality of service techniques in network layer.	[L2][CO3]	[6M]
	b	Describe the term internetworking in network layer.	[L2][CO4]	[6M]
9	a	Sketch and explain in detail about IPV4protocol.	[L3][CO4]	[6M]
	b	Sketch and explain in detail about IPV6protocol.	[L3][CO4]	[6M]
10	a	Examine Internet control protocols.	[L4][CO4]	[6M]
	b	Write about BGP– Exterior Gateway routing protocol.	[L4][CO3]	[6M]

UNIT –IV
THE TRANSPORT LAYER

1	a	List the transport service primitives.	[L1][CO5]	[6M]
	b	List and define the elements of transport layer.	[L1][CO5]	[6M]
2		Explain the three-way handshake protocols with suitable diagram.	[L2][CO5]	[12M]
3		Illustrate the different Primitives used for transport service. Elaborate them.	[L3][CO5]	[12M]
4	a	Summarize congestion control in transport layer.	[L2][CO5]	[8M]
	b	Explain in detail about Remote Procedure Call.	[L2][CO5]	[4M]
5		Sketch and explain in detail about User Datagram Protocol (UDP).	[L3][CO5]	[12M]
6		Explain the TCP protocol with neat sketch.	[L2][CO4]	[12M]
7	a	Illustrate TCP segment header	[L3][CO5]	[4M]
	b	Explain about each field of TCP segment header	[L2][CO5]	[8M]
8	a	Describe about TCP connection Establishment.	[L2][CO5]	[6M]
	b	Describe about TCP Connection Release.	[L2][CO5]	[6M]
9		Discuss the various timers used by TCP to perform its operations	[L3][CO5]	[12M]
10		Write in detail about performance issues of transport layer.	[L4][CO4]	[12M]

UNIT–V
INTRODUCTION TO APPLICATION LAYER

1	a	Describe short notes on application layer.	[L2][CO6]	[6M]
	b	Illustrate in detail about WWW in application layer.	[L3][CO6]	[6M]
2	a	Write about static web pages.	[L4][CO6]	[6M]
	b	Explain about dynamic webpages.	[L2][CO6]	[6M]
3	a	List out the four main properties of HTTP.	[L1][CO6]	[6M]
	b	Illustrate in detail about function and structure of e-mail protocol.	[L3][CO6]	[6M]
4		Discuss the features of HTTP and explain how HTTP works.	[L2][CO6]	[12M]
5		Discuss about File Transfer Protocol with neat diagram.	[L2][CO6]	[12M]
6	a	Name the basic functions of E-Mail.	[L1][CO6]	[6M]
	b	Explain about TELNET.	[L2][CO6]	[6M]
7		Discuss about MIME Protocol with neat diagram.	[L2][CO6]	[12M]
8	a	Explain about secure shell in application layer.	[L2][CO6]	[6M]
	b	Justify in detail about cookies.	[L6][CO6]	[6M]
9		Write in detail about DNS Name Space and Domain Resource records.	[L4][CO6]	[12M]
10	a	Describe SMTP protocol.	[L2][CO6]	[6M]
	b	Discuss in detail SNMP.	[L2][CO6]	[6M]

Prepared by: Dr.B.Geethavani G.Raghul K.SravanKumar P.Balaji K.G.ponnambalam