Basavarajeswari Group of Institutions

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

(Autonomous Institute under Visvesvaraya Technological University, Belagavi)

USN										Course Code	2	1	E	C	5	5	1

Fifth Semester B.E. Degree Examinations, April/May 2024

INTRODUCTION TO COMPUTER NETWORKS

Duration: 3 hrs **Max. Marks: 100**

Note: 1. Answer any* FIVE *full questions choosing ONE full Question from each Module.
2. Missing data, if any, may be suitably assumed

Q. No		*Question*	*Marks*	*(RBTL:CO:PI)*
		Module-1		
1.	**a.**	Explain the five components of data communication with a neat diagram.	**06**	(2:1:1.3.1)
	b.	Explain the communication between two devices with dataflow diagram.	**06**	(2:1:1.3.1)
	c.	Explain the different types of physical topologies in the network with diagram.	**08**	(2:1:1.3.1)
		(OR)		
2.	**a.**	Explain circuit switched network and packet switched network with a neat diagram.	**06**	(2:1:1.3.1)
	b.	Explain the encapsulation and decapsulation in TCP/IP model with a neat diagram.	**06**	(2:1:1.3.1)
	c.	Explain the TCP/IP suite.	**08**	(2:1:1.3.1)
		Module-2		
3.	**a.**	Explain Address Resolution Protocol (ARP).	**06**	(2:2:1.3.1)
	b.	Briefly explain (i) Flow control (ii) Error control (iii) Congestion control	**06**	(2:2:1.3.1)
	c.	Explain stop and wait protocol with its FSM and flow diagram.	**08**	(2:2:1.3.1)
		(OR)		
4.	**a.**	Explain (i) byte stuffing and unstuffing (ii) bit stuffing and unstuffing	**10**	(2:2:1.3.1)
	b.	Explain the CSMA protocol and also show the behaviour of three persistence methods of CSMA.	**10**	(2:2:1.3.1)
		Module-3		
5.	**a.**	Explain the virtual circuit packet switched network with a neat diagram.	**10**	(2:3:1.3.1)
	b.	Explain the classful addressing schemes briefly in IPV4.	**10**	(2:3:1.3.1)
		(OR)		
6.	**a.**	Explain IPV4 datagram format with a neat diagram.	**10**	(2:3:1.3.1)
	b.	Explain distance vector routing with a suitable example.	**10**	(2:3:1.3.1)

Note: (RBTL - Revised Bloom's Taxonomy Level: CO - Course Outcome: PI– Performance Indicator)

Module-4

7.	**a.**	Explain stop and wait protocol with its FSM in transport layer.	**10**	(2:4:1.3.1)
	b.	Explain Go-Back-N protocol with its FSM in transport layer.	**10**	(2:4:1.3.1)
		(OR)		
8.	**a.**	Explain TCP connection establishment using three way hand shaking.	**12**	(2:4:1.3.1)
	b.	Explain the TCP services briefly.	**08**	(2:4:1.3.1)

Module-5

9.	**a.**	Explain the client server paradigm and peer to peer paradigm in application layer	**10**	(2:5:1.3.1)
	b.	Explain the HTTP for persistence and non-persistence connection.	**10**	(2:5:1.3.1)
		(OR)		
10	**a.**	Explain the architecture of electronic mail with a neat diagram.	**08**	(2:5:1.3.1)
	b.	Explain the control and data connections in FTP.	**06**	(2:5:1.3.1)
	c.	Explain DNS name space in the internet.	**06**	(2:5:1.3.1)

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