

St. Philomena's College (Autonomous), Mysore
PG Department OF COMPUTER SCIENCE
First year – Second Semester (2019 Batch)
COMPUTER NETWORKS QP Code: 56102

Unit	Sl No	Question	Marks
1	1.	What are the different types of connections (direct links) available	2
1	2.	What is a protocol?	2
1	3.	What is topology?	2
1	4.	Mention the different physical media?	2
1	5.	Mention the advantages of co-axial cables	2
1	6.	What are the responsibilities of data link layer?	2
1	7.	Mention the main functions of Data Link Layer.	2
1	8.	Differentiate between Flow control and Error control.	2
1	9.	List out the available error detection methods	2
1	10	What are the functions of MAC?	2
1	11	What is CSMA/CD	2
1	12	Differentiate between lost frame and damaged frame	2
1	13	What are the two sub layers of Data Link Layer and their functions	2
1	14	What is preamble in frame format?	2
1	15	Define Repeater, Hub	2
1	16	Discuss the use of computer networks	5
1	17	Define Simplex, Half Duplex, Full Duplex transmission system	5
1	18	Differentiate between Physical Address and Logical Address	5
1	19	What is the use of data link layer in OSI?	5
1	20	What is a hidden node and exposed node?	5
1	21	Describe the features of LAN and	10

		Differentiate between WAN and MAN	
1	22	What are the functions of physical layer?	10
1	23	Write a short note on CRC	10
1	24	Explain hamming code.	10
1	25	With relevant examples discuss any 3 topologies in detail	15
1	26	Explain various Guided Transmission media	15
1	27	Explain various wireless transmission media that are widely used in networking	15
1	28	Explain bus type topology and ring type topology. Compare their performance.	15
1	29	With a neat diagram, explain OSI reference model.	15
1	30	Describe error detecting and correcting techniques employed in data communication.	15
1	31	Explain checksum and CRC error detection with ex.	15
1	32	Explain different flow control mechanisms in brief.	15
1	33	explain CSMA/CD and CSMA/CA	15
1	34	Discuss in detail about Ethernet(802.3) frame format	15
1	35	What are the functions of physical layer in IEEE 802 reference model	15
1	36	How does token ring works? /Access Method (Token Passing) Token Ring - 802.5	15
1	37	Explain CSMA and protocols with Collision detection and Avoidance	15
1	38	explain WLA N MAC Frame format	15
1	39	Explain Bluetooth Architecture in detail	15

2	40	What is ARP?	2
2	41	What is RARP?	2
2	42	What is switching?	2
2	43	Define CIDR	2
2	44	What is unicast addressing?	2
2	45	What is multicast addressing?	2
2	46	What is any cast addressing?	2
2	47	What is broadcast addressing?	2
2	48	What is ICMP?	2
2	49	What do you mean by ICMP? To whom ICMP reports error message	2
2	50	Differentiate between circuit switching and packet switching and Give the salient features of IP Version 6 protocol.	15
2	51	Explain switching techniques in detail	15
2	52	What are the various classes in IP addresses? Write a note on classless addressing in ipv4.	15
2	53	Differentiate between IPV4 and IPV6 .Explain IPV4 datagram format	15
2	54	Explain different types of special addresses in ipv4. Compare datagram approach and virtual circuit approach	15
2	55	Explain in detail about IP class full addressing	15
2	56	Explain error reporting messages in Internet Control Message Protocol	15
2	57	Explain Routing Information protocol/Distance vector routing in detail.	15
2	58	Explain Link State routing algorithm with an example	15
2	59	What is border gateway protocol	15
3	60	List any four services of transport layer.	2
3	61	Differentiate between Congestion and collision.	2

3	62	Define congestion	2
3	63	Explain flow control mechanism in transport layer	15
3	64	Explain TCP segment format	15
3	65	Explain the different phases in TCP	15
3	66	What are congestion control strategies in TCP	15
3	67	Explain DEC and RED congestion avoidance in TCP	15
3	68	What is the main difference between TCP & UDP and what are the services of transport layer	15
3	69	Give Datagram Format for UDP. Explain	15
3	70	Write a note on real time protocol	15
4	71	what is domain name system	2
4	72	Mention methods in HTTP	2
4	73	List out the functions of SNMP	2
4	74	Mention the components of SNMP model	2
4	75	What is cipher text and Plain text?	2
4	76	What are the functions of presentation layer and application layer?	15
4	77	Explain DNS in detail	15
4	78	Explain SMTP in detail	15
4	79	Explain www in detail.	15
4	80	Explain the various security measures used to protect data in networks.	15
4	81	Explain DES in detail.	15
4	82	Explain in detail the RSA Algorithm	15
4	83	What is SSL?	15

MODEL QUESTION PAPER

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St. Philomena's College (Autonomous) Mysore
II Semester M.Sc. Final Examination May - 2019
Subject: **COMPUTER SCIENCE**
Title: **HUMAN COMPUTER INTERACTION (SC)**

Time: 3 Hours

Max Marks: 70

PART -A

5x2=10

Answer any FIVE of the following questions:

1. a. Define network topology
- b. Define UDP
- c. What is an IP address Abbreviate MAC
- d. What is flooding? List the algorithm of congestion control
- e. Define protocols.
- f. What is Ethernet
- g. Define Router, Bridge and switch

PART -B

15x4=60

Answer one full question from each Module:

Module 1

2. a. Differences between connection oriented and connectionless services
- b. Explain the services provided by data link layer to network layer

OR

3. a. Brief about error correcting code in detail
- b. List and explain the LAN topology

Module2

4. a. Define traffic shaping and explain leaky and token bucket
- b. Write short notes on quality of service.

OR

5. a. What is internetworking? Explain tunneling
b. Explain 10 principles of network layer in the internet

Module 3

6. a. Explain error control and flow control in transport layer
b. Brief TCP header in detail

OR

7. a. Explain remote procedure call in Transport layer
b. Define TCP and Explain TCP protocol

Module4

8. a. Explain DNS Namespace.
b. Write about HTTP and its connections.

OR

9. a. Explain electronic mail with architecture and services.
b. Write a short note on IMAP.