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13 A, Poraiyur - Villupuram Main Road, Adiyur, Puducherry - 605 102.
ASPIRE TO EXCEL

ISO 21001

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE FILE

ACADEMIC YEAR 2022 – 2023 (ODD SEMESTER)

FIFTH SEMESTER

BATCH (2020 – 2024)

SUBJECT CODE / NAME: CS T52 / COMPUTER NETWORKS

SUBMITTTED BY

Mrs. K. ANDAL

ASSISTANT PROFESSOR/ CSE

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COURSE FILE

STAFF NAME	: K.ANDAL
DESIGNATION	: AP / CSE
DEPT HANDLED	: CSE
YEAR/SEM	: III / V
SUBJECT CODE	: CS T52
SUBJECT	: COMPUTER NETWORKS
DATE OF SUBMISSION	: 24.2.2023

SUBJECT IN-CHARGE HOD 24/2/23 DEAN PRINCIPAL

CONTENT

ACADEMIC YEAR 2022 – 2023 ODD SEMESTER

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- LECTURE NOTES
- UNIT WISE QUESTION BANK
- ASSIGNMENT
- MORNING TEST, CIA-1,CIA-2, TWO MARKS, MODEL QUESTION PAPERS
- CIA-1,CIA-2, MODEL ANSWER KEY
- ANSWER SCRIPT
- MARKLIST WITH RESULT ANALYSIS
- PREVIOUS UNIVERSITY QUESTION PAPERS

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022 - 2023 (ODD SEMESTER)

INDIVIDUAL TIME TABLE

STAFF NAME : Mrs.K.Andal
DESIGNATION : Assistant Professor / CSE

PERIOD	1	2	BREAK 10.20-10.35 am	3	4	BREAK 12.15-01.00 PM	5	6	BREAK 02.40-02.50 PM	7	8
DAY ORDER	8.45 - 9.30am	9.30 - 10.20am		10.35-11.25am	11.25-12.15pm		1.00-1.50pm	1.50-2.40pm		02.50-03.40pm	03.40-04.30pm
1	PT			CN							
2	CN						PT				
3	PT	CN		PT			PLACEMENT			PLACEMENT	
4					CN		PT	CN LAB		CN LAB	
5		CN					PT	PT LAB		PT LAB	

SUBJECT CODE	SUBJECT NAME	NAME OF THE FACULTY	NO. OF PERIODS
	Theory		
CS T52	Computer Networks (CN)	Mrs.K.Andal	5
CS T73	Platform Technology (PT)	Mrs.K.Andal	6
	Practical		
CS P52	Computer Networks Laboratory (CN Lab)	Mrs.K.Andal	3
CS P73	Platform Technology Laboratory (PT Lab)	Mrs.K.Andal	3
V YEAR	Placement	Mrs.K.Andal	3
		TOTAL	20

28/9/22

TIME TABLE COORDINATOR HOD DEAN PRINCIPAL

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ISO 21001

SYLLABUS

Subject Code	Subject Name	Lectures (Periods)	Tutorial (Periods)	Practical (Periods)
CS T52	COMPUTER NETWORKS	3	1	-

UNIT – I

Introduction – Uses – Network hardware – software – reference models – example networks – Theoretical basis for communication – transmission media – wireless transmission – Communication satellites

UNIT – II

Data link layer – design issues – Services - Framing - Error Control - Flow Control - Error detection and correction codes - data link layer protocols -Simplex Protocol – Sliding window Protocols - Medium Access control sublayer – Channel allocation problem – Multiple Access protocols – ALOHA – CSMA Protocols - Collision-Free Protocols - Limited-Contention Protocols - Wireless LANs - 802.11 Architecture - 802.16 Architecture – Data link layer Switching - Uses of Bridges - Learning Bridges - Spanning Tree Bridges - Repeaters, Hubs, Bridges, Switches, Routers, and Gateways - Virtual LANs.

UNIT – III

Network layer – design issues – Routing algorithms - The Optimality Principle - Shortest Path Algorithm – Flooding - Distance Vector Routing - Link State Routing - Hierarchical Routing - Broadcast Routing - Multicast Routing Congestion Control – Approaches - Traffic-Aware Routing - Admission Control - Traffic Throttling - Load Shedding – Internetworking - Tunneling - Internetwork Routing - Packet Fragmentation - IP v4 - IP Addresses – IPv6 - Internet Control Protocols – OSPF - BGP

UNIT – IV

Transport layer - Services - Berkeley Sockets -Example – Elements of Transport protocols – Addressing - Connection Establishment - Connection Release - Flow Control and Buffering – Multiplexing – Congestion Control - Bandwidth Allocation - Regulating the Sending Rate – UDP- RPC – TCP - TCP Segment Header - Connection Establishment - Connection Release - Transmission Policy - TCP Timer Management - TCP Congestion Control

UNIT – V

Application Layer – DNS – Name space – Resource records – name servers – e-mail - Architecture and Services - The User Agent - Message Formats - Message Transfer - Final Delivery – WWW – Architecture - Static Web Pages - Dynamic Web Pages and Web Applications - HTTP – Network Security - Introduction to Cryptography - Substitution Ciphers - Transposition Ciphers – Public key algorithms – RSA – Authentication Protocols - Authentication Using Kerberos.

TOTAL PERIODS: 60

Text Books:

1. Tanenbaum,A.S. and David J. Wetherall "Computer Networks", 5th ed., Prentice Hall, 2011,

Reference Books:

1. Larry L. Peterson and Bruce S. Davie, "Computer Networks- A system approach", 5th edition, ELSEVIER, 2012
2. Stallings, W., 'Data and Computer Communications', 10th Ed., Prentice Hall Int. Ed., 2013
3. James F. Kurose and Keith W. Ross, "Computer Networking: A Top-Down Approach Featuring the Internet", Pearson Education, Third edition, 2006.

Website:

1. http://depa.usst.edu.cn/chenjq/www2/wl/ComputerNetworksTanenbaum.htm
2. http://booksite.mkp.com/9780123850591/lec.php
3. http://williamstallings.com/DataComm/DCC10e-Student/

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

STAFF NAME: Mrs.K.ANDAL

DESIGNATION: Assistant Professor

SUBJECT: Computer Networks

DEPT HANDLED :CSE

YEAR/SEM : III / V

SUBJECT CODE :CS T52

No of periods required : 60

Theory : 45

Tutorial : 15

Sl.No	Unit Description	Duration		Test / Exam	
		From	To		
1	UNIT I	8/10/22	27/10/22	CIA - I 8/11/22	Two Marks 4/1/23
2	UNIT II	28/11/22	25/11/22		
3	UNIT III	26/11/22	7/12/22	CIA – II 27/11/22	Model Exam 5/1/23
4	UNIT IV	28/12/22	27/12/22		
5	UNIT V	27/1/23	5/1/23		

LESSON PLAN

	Topics	Period Req.	Book & Page No.	Teaching Method ONLINE/PPT/
	UNIT-I			
	Introduction : Uses	1	T1:1-16 R2:1-6	BB
	Network hardware	1	T1:17-28	BB
	Software	1	T1:29-40	BB
	Reference models Example networks	1	T1:41-53 R2:33-34 T1:54-74 R2:20-22	BB
	Tutorial-I	**1**	**Tutorial Topic**	
	Theoretical basis for communication	1	T1:90-94 R1:52-86	BB
	Transmission media	1	T1:95-104 R2:89-91	PPT
	Tutorial-II	**1**	**Tutorial Topic**	
	Wireless transmission	1	T1:105-115 R1:104-111	BB
	Communication satellites	1	T1:116-124	BB
	Reference models Example networks	1	T1:41-53 R2:33-34 T1:54-74 R2:20-22	BB
	Tutorial-III	**1**	**Tutorial Topic**	
	Total	**12**		
	UNIT II			
	Data link layer :design issues	1	T1:193-194 R2:192-193	BB
	Service Framing	1	T1:194-196 T1:197-199	BB
	Tutorial-I	**1**	**Tutorial Topic**	
	Error Control Flow Control	1	T1:200-201 R2:201-206 T1:201-202 R2:194-200	PPT
	Error detection and correction codes	1	T1:202-209 R1:171-185	BB
	Tutorial-II	**1**	**Tutorial Topic**	
	Data link layer protocols Simplex Protocol	1	T1:215-219 R1:192-212 T1:220-225	BB
	Sliding window Protocols Medium Access control sublayer Channel allocation problem	1	T1:226-243 R2:197-201 T1:258 R2:433-435 T1:258-259 R2:410-411	BB
	Multiple Access protocols ALOHA	1	T1261 T1:262-265 R1:459-473	BB

	CSMA Protocols		T1:266-268 R2:462-464	
9	Collision-Free Protocols Limited-Contention Protocols Wireless LANs 802.11 Architecture	1	T1:269-273 T1:274-276 T1:277-279 R2:495-503 T1:299-300 R2:504-507	BB / PP
10	802.16 Architecture Data link layer Switching Repeaters, Hubs, Bridges, Switches, Routers, and Gateways	1	T1:314-345 T1:332 R2:365-366 T1:340-341 T2:422-428	PPT
11	Uses of Bridges Learning Bridges Spanning Tree Bridges Virtual LANs	1	T1:332-333 R2:440-444 T1:334-336 R2:446-447 T1:337-339 R2:445-448 T1:342-348 R2:566-568	PPT
12	**Tutorial-III**	**1**	**Tutorial Topic**	
	Total	**12**		
	UNIT III			
1	Network layer : design issues Routing algorithms	1	T1:355-361 T1:362-363 R2:584-594	BB
2	The Optimality Principle Shortest Path Algorithm Flooding	1	T1:364-365 T1:366-367 T1:370-372 R1:342-344	BB
3	Distance Vector Routing Link State Routing	1	T1:370-372 R1:587 T1:373-377 R2:586-587	BB
4	**Tutorial-I**	1	**Tutorial Topic**	
5	Hierarchical Routing Broadcast Routing	1	T1:378-379 R2:811-813 T1:380-381 R2:200-205	BB
6	Multicast Routing Congestion Control Approaches Traffic-Aware Routing	1	T1:382-384 R2:500-505 T1:394-395 T1:395-396 R2:635-638	BB
7	Admission Control Traffic Throttling Load Shedding	1	T1:397-398 R2:599-600 T1:398-400 T1:401-403	PP
8	**Tutorial-II**	1	**Tutorial Topic**	
9	Internetworking Tunneling Internetwork Routing	1	T1:424-428 R2:526-527 T1:429-430 R2:753-756 T1:431-431 R2:536-545	B
10	Packet Fragmentation IP v4 IP Addresses	1	T1:432-435 R2:545-546 T1:439-441 T1:442-454 R2:227-228	B

	IPv6		T1:455-464 R2:556-565	
1	Internet Control Protocols OSPF BGP	1	T1:465-469 R2:546-555 T1:474-478 R1:252-261 T1:479-483 R1:313-324	PPT
2	**Tutorial-III**	1	**Tutorial Topic**	
		12		
	UNIT IV			
	Transport layer Services Berkeley Sockets	1	T1:495 T1:496 T1:500-502	PPT
2	Example Elements of Transport protocols Addressing	1	T1:503-506 T1:507-508 T1:509-511	BB
3	**Tutorial-I**	1	**Tutorial Topic**	
4	Connection Establishment Connection Release Flow Control and Buffering	1	T1:512-516 T1:517-521 T1:522-526	BB
5	Multiplexing Congestion Control	1	T1:527 T1:530	BB
6	**Tutorial-II**	1	**Tutorial Topic**	
7	Bandwidth Allocation Regulating the Sending Rate	1	T1:531-534 T1:535-539	BB
8	UDP RPC TCP TCP Segment Header	1	T1:541-542 R2:662-663 T1:543-545 R1:431-440 T1:552-555 R2:643-651 T1:557-559 R2:652-661	BB
9	Connection Establishment Connection Release Transmission Policy	1	T1:560-561 T1:562 T1:566	PPT
10	TCP Timer Management	1	T1:568-570	BB
11	TCP Congestion Control	1	T1:571-580 R1:499-510 R2:652-661	BB
12	**Tutorial-III**	1	**Tutorial Topic**	
	Total	**12**		
	UNIT V			
1	Application Layer :DNS Name space	1	T1:611 T1:611-615 R1:739-748	BB
2	Resource records	1	T1:616-618 R1:745	PPT

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERIN
ACADEMIC YEAR 2022-2023 (ODD SEM)

AR/SEM: III/V BATCH: 2020 - 2024

S.NO.	REGISTER NUMBER	STUDENT NAME
1	19TD1513	KARMEL AJAY. P
2	20TD0509	HRITIKA ROY
3	20TD0512	P.MANOJ KUMAR
4	20TD0511	M.MANISHA
5	20TD0516	PARITOSH BISWAS
6	20TD0521	M.SATISH
7	20TD0522	SHARON M THANKACHEN
8	20TD0523	SINDUJA. M
9	20TD0524	SNEHA LAKRA
10	20TD0801	ABIMANU. M
11	20TD0802	ABISHEK.K
12	20TD0803	AJAY.S
13	20TD0804	APSAR ALI
14	20TD0805	ARUL JENIFER.A
15	20TD0806	ARULSELVI.P
16	20TD0807	ARUNTHATHI.S
17	20TD0808	BARATH.R
18	20TD0809	DAVIDRAJ DOMINIQUE.V
19	20TD0810	DEVSRI.S
20	20TD0811	DHIVYA SRI
21	20TD0812	EZHILARASAN.P
22	20TD0813	GOKILASRI.G
23	20TD0814	GOWTHAM .S
24	20TD0815	HARI KRISHNAN.B
25	20TD0816	HARI PRASATH .S
26	20TD0817	HEMALATHA.M
27	20TD0818	JAGAN.S
28	20TD0819	JAYABALAJI.L
29	20TD0820	JAYACHANDRAN.R
30	20TD0821	KEERTHIKA.A
31	20TD0822	KIRTHIVERSHA

32	20TD0823	MURALI KRISHNAN. G
33	20TD0824	NISHANTHI
34	20TD0825	NITHYASRI.V
35	20TD0826	PRATHAP.V
36	20TD0827	PRAVEENKUMAR.V
37	20TD0828	PREETHISHA.M
38	20TD0829	PRITHIPA.A
39	20TD0830	PRIYADHARSHINI.M
40	20TD0831	RAMANA.S
41	20TD0832	RAMYA.M
42	20TD0833	ROHITH.V.S
43	20TD0834	SAKTHIVEL.A
44	20TD0835	SAKTHIVEL.P
45	20TD0836	SANTHIYA.S
46	20TD0837	SARASWATHIDEVI.S
47	20TD0838	SARATHRAM .K
48	20TD0839	SHIYAM.M
49	20TD0840	SIVAPRAKASAM.M
50	20TD0841	SIVARAJ.N
51	20TD0842	SOMAYA DEEPAK RAJU.M
52	20TD0844	SOUNDARYA .V
53	20TD0845	SOWMIYA.D
54	20TD0846	THAMIZHARASAN.D
55	20TD0847	THIRUVARASAN.M
56	20TD0848	VIGNESH.M
57	20TD0849	VISHNUPRIYA.K
58	20TD0850	YUVARAJ.K

CS T52 / COMPUTER NETWORKS

UNIT I

(2 marks)

1. Define computer network. (Nov 11)
2. What is LEO in satellite system? (Nov 11)
3. What are the two types of services that the internet provides to its application? (Jan 12)
4. Define and differentiate between transmission delay and propagation delay. (Jan 12)
5. Give any two advantages of packet switching. (Apr 12)
6. What are the two categories of physical media? Give an example for each category. (Apr 12)
7. Write any four reasons for using layered protocols. (May 12)
8. What are the various types of network topology? (May 12)
9. Classify the network access (Nov 12)
10. What is transmission delay? (Nov 12)
11. Define network. (Nov 13)
12. What is meant by packet? (Nov 13)
13. What is the function of home modem? (Apr 14)
14. What are the five layers in the internet protocol stack? (Apr 14)
15. List out various functions of Data Link Layer.
16. What is meant by DHCP?
17. What is meant by board casting and unicasting? (Nov.15)
18. Define store-and-forward subnet. (Nov.15)
19. Name the two types of transmission technology. (Apr.16)
20. What is the difference between a passive star and an active repeater in a fiber optic network? (Apr.16)

(11 marks)

1. Explain Uses of Networks.
2. Discuss network hardware.
3. Explain network software
4. Explain Theoretical basis for communication.
5. Explain Transmission media
6. Explain Wireless Transmission

7. Describe Communication satellites.
8. Difference between OSI and TCP/IP reference model.

UNIT II

(2 marks)

1. What are the techniques used for detecting errors in the transmitted data? (Apr 14)
2. Write the various fields of the Ethernet frame. (Apr 14)
3. What is DHCP? (Nov 13)
4. Define multicast. (Nov 13)
5. State the purpose of CRC code. (Nov 12)
6. What are the problems overcome by bridge when compared with hub? (Nov 12)
7. Define syntax conversion. (May 12)
8. Who are the people who cause security problems? (May 12)
9. Difference between IPV4 and IPV6. (Apr 12)
10. Define ARP. (Apr 12)
11. Define Forward Error Correction. (Jan 12)
12. Give some basic idea about LAN address. (Jan 12)
13. Mention the methods for error detection and correction. (Nov 11)
14. List out various IEEE 802 project standards. (Nov 11)
15. Compare IEEE 802.5 and FDDI.
16. Define PPP.
17. State the three phases involved in connected-oriented service. (Nov.15)
18. Define Stop-and-wait protocol. (Nov.15)
19. Define hamming distance. (Apr.16)
20. What is hub? (Apr.16)

(11 marks)

1. Explain Design issues of DL Layer.
2. Discuss Error correction and detection in detail.
3. Explain DL Layer Protocol.
4. Explain Sliding Window protocol.
5. Explain ALOHA & CSMA.
6. Explain Multiple Access Protocol.
7. Describe Wireless LAN

8. Write short notes on the following

(a) Hubs (4) Apr14 ,(b) Bridges (4) Apr14 ,(c)Switches (3)

9. Discuss in detail about VLAN.

UNIT-III

(2 marks)

1. What is the function of network layer? (Nov 11)
2. List out various internetworking devices. (Nov 11)
3. What are the important functions of network layer? (Jan 12)
4. What is the importance of Time-to-live field in IPV4 datagram format? (Jan 12)
5. When the routing algorithm is said to be dynamic? (Apr 12)
6. What are the key fields of an IP datagram? (Apr 12)
7. What is CGI? (May 12)
8. Discuss the three main divisions of the domain name space. (May 12)
9. What is the use of global routing algorithm? (Nov 12)
10. What are the components of internet's network layer? (Nov 12)
11. What is the use of routing algorithm? (Nov 13)
12. What is meant by virtual circuit? (Nov 13)
13. What is the use of Internet Control Message Protocol (ICMP)? (Apr 14)
14. What is the difference between a group shared tree and a source based tree in the context of multicast routing? (Apr 14)
15. Define ICMP and IGMP protocols.
16. What is multicasting?
17. What is session routing? Give an example. (Nov.15)
18. State the optimality principle. (Nov.15)
19. Define spanning tree. (Apr.16)
20. Why traffic shaping approach is used in congestion? (Apr.16)

(11 marks)

1. Explain design issues of Network Layer.
2. Explain Routing Algorithms.
3. Discuss congestion control of Network layer.
4. Explain Internetworking
5. Explain IPv4 & IPv6
6. Explain OSPF and BGP.

UNIT-IV

(2 marks)

1. Define TCP/IP. (Nov 11)
2. Differentiate IPV4 & IPV6. (Nov 11)
3. Compare the TCP and UDP. (Jan 12)
4. Narrate the significances of stop and wait protocol. (Jan 12)
5. What is the drawback of UDP? (Apr 12)
6. What is the use of option field in TCP? (Apr 12)
7. What is multicasting? (May 12)
8. What is the function of a gateway? (May 12)
9. Why an application developer would ever choose to build an application over UDP rather than TCP? (Nov 12)
10. What is round trip time? (Nov 12)
11. Define UDP. (Nov 13)
12. What is flow control? (Nov 13)
13. What is meant by demultiplexing? (Apr 14)
14. What do you mean by receive window? (Apr 14)
15. Define SIP.
16. Compare TCP and UDP.
17. What is marshalling? (Nov.15)
18. State the two array problem. (Nov.15)
19. What is Berkeley socket? (Apr.16)
20. What are the two different types of multiplexing? (Apr.16)

(11 marks)

1. Explain Services of Transport Layer.
2. Describe Elements of Transport layer.
3. Explain Congestion control of Transport layer.
4. Explain UDP.
5. Explain TCP
6. Explain TCP Timer Management.
7. Explain TCP Congestion Control.

UNIT V

(2 marks)

1. What is DNS? (Nov 11)
2. What is meant by cryptography? (Nov 11)
3. State the essential characteristics of a web page. (Jan 12)
4. What is a RTSP? State its significance. (Jan 12)
5. Why HTTP is said to be a stateless protocol? (Apr 12)
6. What do you mean by streaming? (Apr 12)
7. Give the frame format for bit oriented protocols. (May 12)
8. What are the four types of redundancy checks used in data communication? (May 12)
9. List out the services provided by TCP. (Nov 12)
10. What is cipher text? (Nov 12)
11. Define FTP. (Nov 13)
12. What is LDAP? (Nov 13)
13. Write any two examples for multimedia applications. (Apr 14)
14. Mention the desirable properties of secured communications. (Apr 14)
15. What is meant by VoIP?
16. What are the functions of SSL?
17. What are the basic functions of e-mail systems. (Nov.15)
18. Expand MIME,POP. (Nov.15)
19. For what purpose the domain name system is used? (Apr.16)
20. Write the difference between static web pages and dynamic web pages. (Apr.16)

(11 marks)

1. Explain DNS.
2. Explain E-mail.
3. Describe WWW.
4. Discuss HTTP in detail.
5. Explain Cryptography in detail.
6. Explain RSA.
7. Describe Authentication in Kerberos.

COMPUTER NETWORKS

ASSIGNMENT - 1

10/10

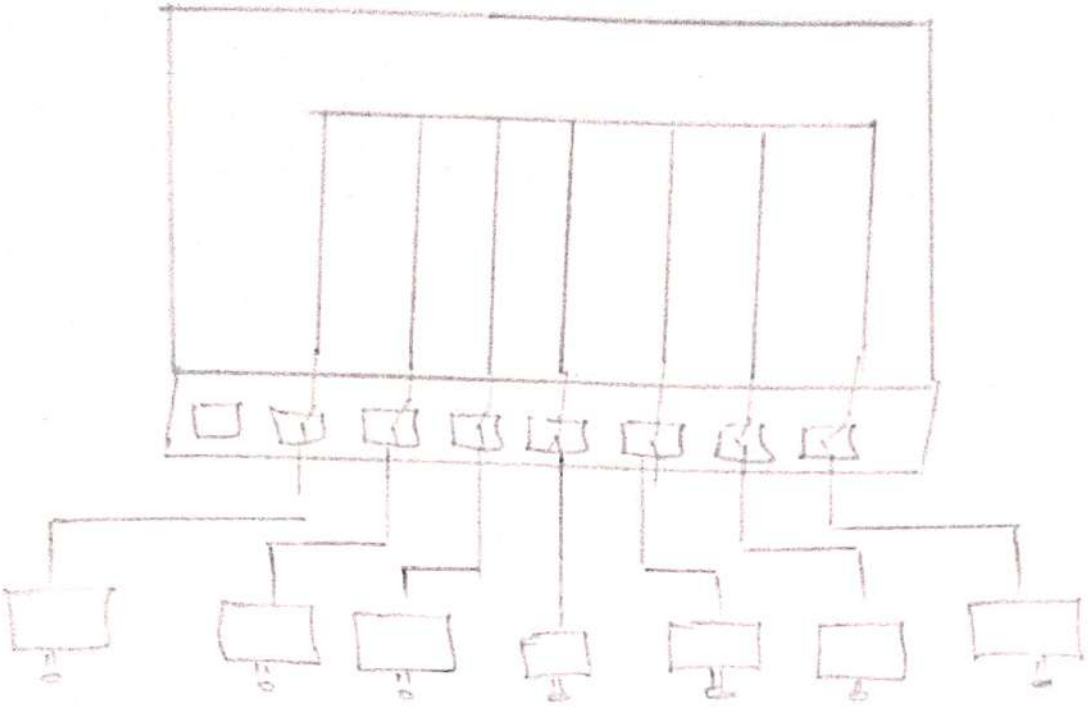
26/10/22

Barath. R

CSE - III rd/A

26/10/2022

HUB:



* Hub is a networking device which is used to transmit the signal to each port (except the port) a respond from which the signal was received Hub is operated on Physical layer.

In this packet filtering is not available.

* it is of 2 type.

1. Active Hub
2. Passive Hub

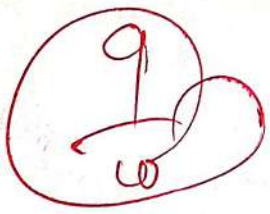
COMPUTER NETWORKS

ASSIGNMENT - 2

Arul Jenifa. A

III Year

CSE.



SLIDING WINDOW PROTOCOL

* The sliding window is a technique fo sending multiple frames at a time.

* It controls the data packets between the two devices where reliable and gradu delivery of data frames needed.

* It is also used in Transmission Cor Protocol (TCP).

* The sequence numbers are used to find the missing data in the reciever e

* The purpose of sliding is to avoid duplicate data, so it uses the sequence number.

Types of sliding Window: Protocol:

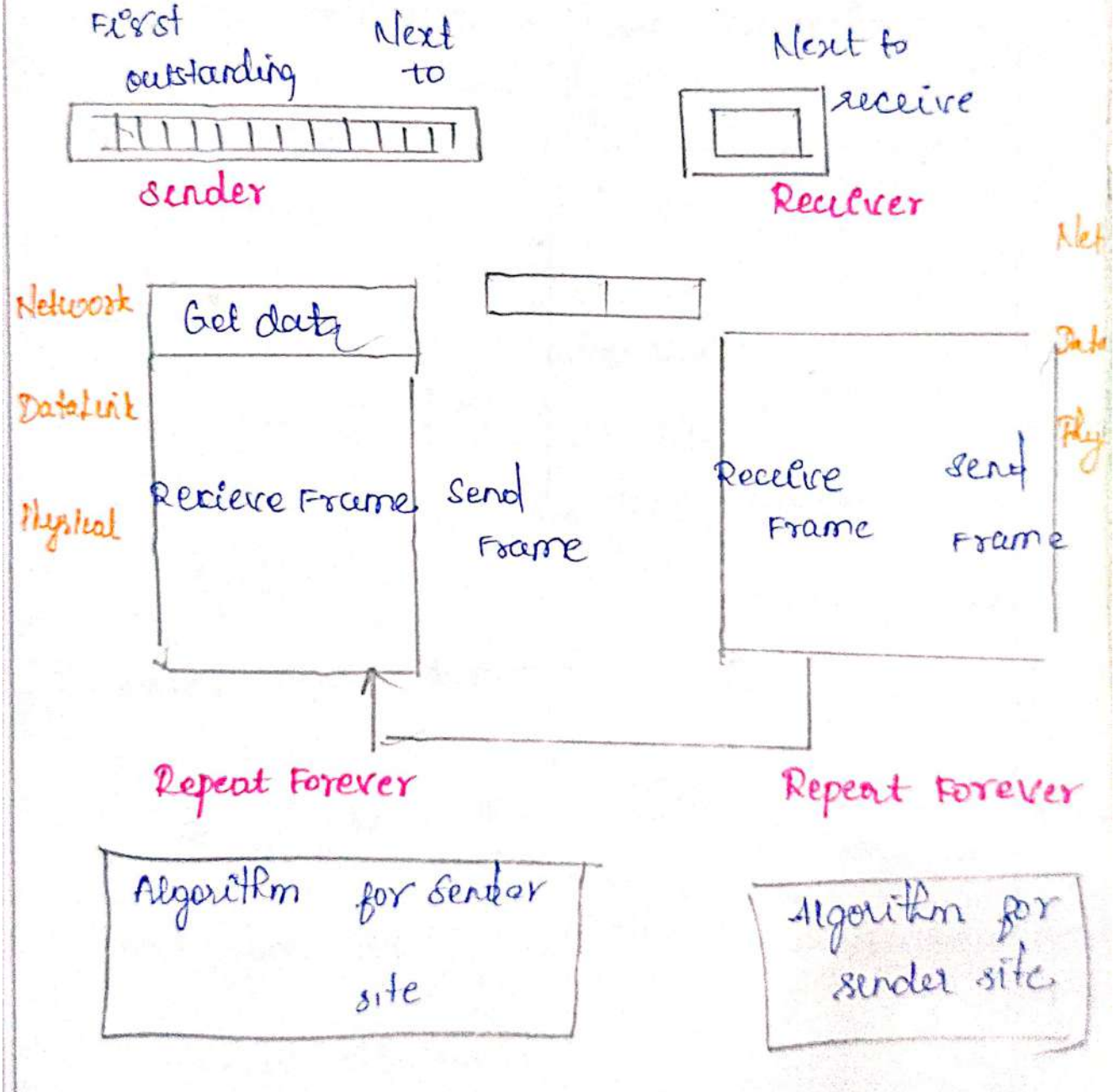
(i) Go-Back-N ARQ

(ii) Selective Repeat ARQ

Selective Repeat ARQ:

* Selective Repeat ARQ is also known as the Selective Repeat Automatic Repeat Request.

* It is a data link layer protocol it uses a sliding window method.



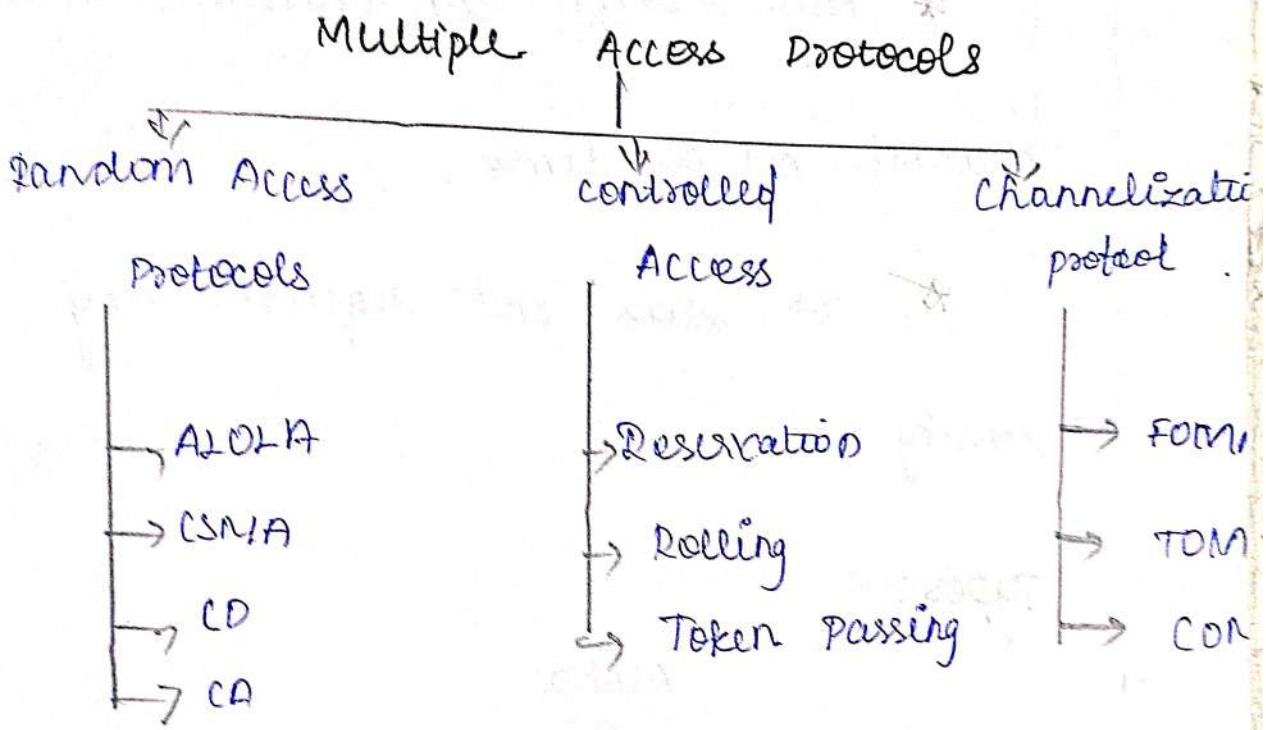
Algorithm for Sender site

Algorithm for sender site

ALOHA

Multiple Access protocol.

* When a sender and receiver have a dedicated link to transmit data packets, the data link central is enough to handle the channel.



Random Access Memory:

* In this protocol, all the station has the equal priority to send the data over a channel.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR (2022-2023) – ODD SEM
MORNING TEST-1

SUBJECT NAME: Computer Networks
SUBJECT CODE: CS T52
DATE: 11.10.2022

TOTAL MARK: 20
DURATION: 45 mins

PART-A (2 MARKS) 5*2=10

1. Define Computer Networks?	K1	CO1
2. Define Network?	K1	CO1
3. Define Middleware?	K1	CO1
4. What is Server	K1	CO1
5. What is Client?	K1	CO1

PART-B (10 MARKS) 1*10=10

1. Explain OSI Model with suitable diagram?	K2	CO1

10/10/22
SUBJECT IN-CHARGE

HOD 10/10/22

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR (2022-2023) – ODD SEM
MORNING TEST-2

SUBJECT NAME: Computer Networks
SUBJECT CODE: CS T52
DATE: 18.10.2022

TOTAL MARK: 20
DURATION: 45 mins

PART-A (2 MARKS) 5*2=10

1. Define Routing?	K2	CO2
2. Define Internet or Internetworking?	K2	CO2
3. Define Switch ,Router?	K2	CO2
4. What is Ethernet	K2	CO2
5. What is Access Point?	K2	CO2

PART-B (10 MARKS) 1*10=10

1. Explain Transmission Media?	K2	CO2

17/10/22
SUBJECT IN-CHARGE

17/10/22
HOD

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIA – I EXAM

YEAR/SEM : III / V
SUBJECT CODE : CS T52
DATE : 08.11.2022

MAX. MARKS : 75 Marks
SUBJECT NAME : CN
DURATION : 3 Hrs

SECTION –A (20 Marks)
PART - I (10 x 2 = 20 Marks)

Answer all the questions

1. Define Computer Networks.	K1	CO1
2. Define Switch & Router	K1	CO1
3. Define IP.	K1	CO1
4. What are the categories of physical media?	K1	CO1
5. What is transmission delay?	K1	CO1
6. What is the purpose of Hamming code?	K1K2	CO2
7. What is ARQ?	K2	CO2
8. What is Frame buffering?	K1	CO2
9. Define Piggy backing.	K1	CO2
10. Define Hub	K1	CO2

SECTION – B (55 Marks)
Part – II (5 x 11 = 55)

Answer the questions

11. Discuss network hardware (11)	K1	CO1
OR		
12. Explain Theoretical basis for communication (11)	K2	CO1
13. Explain network software (11)	K1	CO1
OR		
14. Explain Transmission media(11)	K2	CO1
15. Describe Communication satellites (11)	K2	CO1
OR		
16. Explain Uses of Networks (11)	K1	CO1
17. Difference between OSI and TCP/IP reference model (11)	K2	CO2
OR		
18. Explain Architecture of Internet (11)	K2	CO2
19. Explain OSI Model with neat architecture (11)	K2	CO2
OR		
20. Explain Wireless LAN 802.11 & RFID (11)	K2	CO2

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIA – I EXAM ANSWER KEY

YEAR/SEM : III / V
SUBJECT CODE : CS T52
DATE : 08.11.2022

MAX. MARKS : 75 Marks
SUBJECT NAME : CN
DURATION : 3 Hrs

SECTION –A (20 Marks)
PART - I (10 x 2 = 20 Marks)

Answer all the questions

1. Define Computer Networks.

A computer network is a system that connects numerous independent computers in order to share information (data) and resources.

2. Define Switch & Router

A router is a device that connects two or more packet-switched networks or subnetworks. Switches are key building blocks for any network. They connect multiple devices, such as computers, wireless access points, printers, and servers; on the same network within a building or campus.

3. Define IP.

An IP address is a unique address that identifies a device on the internet or a local network.

4. What are the categories of physical media?

Physical media fall into two categories: guided media and unguided media. With guided media, the waves are guided along a solid medium, such as a fiber-optic cable, a twisted-pair cooper wire or a coaxial cable.

5. What is transmission delay?

n a network based on packet switching, transmission delay (or store-and-forward delay, also known as packetization delay or serialization delay) is the amount of time required to push all the packet's bits into the wire.

6. What is the purpose of Hamming code?

Hamming code is an error correction system that can detect and correct errors when data is stored or transmitted. It requires adding additional parity bits with the data.

7. What is ARQ?

Automatic Repeat Request (ARQ) is an error-control mechanism for data transmission which uses acknowledgements (or negative acknowledgements) and timeouts to achieve reliable data transmission over an unreliable communication link.

8. What is Frame buffering?

A framebuffer (frame buffer, or sometimes framestore) is a portion of random-access memory (RAM) containing a bitmap that drives a video display

9. Define Piggy backing.

Piggybacking is a method of attaching acknowledgment to the outgoing data packet .

10. Define Hub

A hub is a network device in a computer network where data from various directions converge and are then distributed to various devices.

SECTION – B (55 Marks)
Part – II (5 x 11 = 55)

Answer the questions

11. Discuss network hardware (11)

Repeater – A repeater operates at the physical layer. Its job is to regenerate the signal over the network before the signal becomes too weak or corrupted to extend the length to which the signal can be transmitted over the same network. An important point to be noted about repeaters is that they only amplify the signal.

Hub – A hub is a basically multi-port repeater. A hub connects multiple wires coming from different branches, for example, the connector in star topology which connects different stations.

Bridge – A bridge operates at the data link layer. A bridge is a repeater, with add on the functionality of filtering content by reading the MAC addresses of the source and destination. It is also used for interconnecting two LANs working on the same protocol.

Switch – A switch is a multiport bridge with a buffer and a design that can boost its efficiency (a large number of ports imply less traffic) and performance. A switch is a data link layer device. The switch can perform error checking before forwarding data, which makes it very efficient as it does not forward packets that have errors and forward good packets selectively to the correct port only.

Routers – A router is a device like a switch that routes data packets based on their IP addresses. A router is mainly a Network Layer device. Routers normally connect LANs and WANs and have a routing table updating routing table based on which they make decisions on routing the data packets.

Gateway – A gateway, as the name suggests, is a passage to connect two networks that may work on different networking models. They work as messenger agents that take data from one system, interpret it, and transfer it to another system. Gateways are also called protocol converters and can operate at any network layer.

Brouter – It is also known as the bridging router is a device that combines features of both bridge and router. It can work either at the data link layer or a network layer. Working as a router, it is capable of routing packets across networks and working as the bridge, it is capable of filtering local area network traffic.

NIC – NIC or network interface card is a network adapter that is used to connect the computer to the network. It is installed in the computer to establish a LAN. It has a unique id that is written on the chip, and it has a connector to connect the cable to it. The cable acts as an interface between the computer and the router or modem.

12. Explain Theoretical basis for communication (11)

Data Flow- Communication between two devices can be simplex, half-duplex, or full-duplex.

Simplex- In simplex mode, the communication is unidirectional, as on a one- way street. Only one of the two devices on a link can transmit; the other can only receive Keyboards and traditional monitors are examples of simplex devices.

Half-Duplex- In half-duplex mode, each station can both transmit and receive, but not at the same time. When one device is sending, the other can only receive, and vice versa Walkietalkies and CB (citizens band) radios are both half- duplex systems.

Full-Duplex- In full-duplex, both stations can transmit and receive simultaneously (Figure). One common example of full-duplex communication is the telephone network.

Type of Connection

Point-to- Point -A point-to-point connection provides a dedicated link between two devices. The entire capacity of the link is reserved for transmission between those two devices.

Multipoint A multipoint (also called multi-drop) connection is one in which more than two specific devices share a single link

Physical Topology -The term physical topology refers to the way in which a network is laid out physically.

MESH: A mesh topology is the one where every node is connected to every other node in the network.

STAR: A star network, star topology is one of the most common network setups. In this configuration every node connects to a central network device, like a hub, switch, or computer.

BUS: A line topology, a bus topology is a network setup in which each computer and network device is connected to a single cable or backbone.

RING: Ring topology is a network configuration in which device connections create a circular

13. Explain network software (11)

Network software is an umbrella term used to describe a wide range of software that streamlines the operations, design, monitoring, and implementation of computer networks.

- **User management** allows administrators to add or remove users from the network. This is particularly useful when hiring or relieving
- **File management** lets administrators decide the location of data storage and control user access to that data.
- **Access** enables users to enjoy uninterrupted access to network resources.
- **Network security systems** assist administrators in looking after security and preventing data breaches.

Network software is an advanced, robust, and secure alternative to traditional networking, making the network easier to administer in terms of management, modifications, configuration, supply resources, and troubleshooting. The use of network software makes it possible to administer from one centralized user interface while completely eliminating the need to acquire additional hardware. It offers administrators the option to customize with greater flexibility to change and define the network speed, expand network capacity, and look after security.

14. Explain Transmission media(11)

Guided Transmission Media

Guided media are also known as wired or bounded media. These media consist of wires through which the data is transferred. Guided media is a physical link between transmitter and recipient devices. Signals are directed in a narrow pathway using physical links.

Twisted Pair Cable

this type of transmission media, two insulated conductors of a single circuit are twisted together to improve electromagnetic compatibility. These are the most widely used transmission medium cables.

Optical Fibre Cable

Also known as fiber optic cable, these are thin strands of glass that guide light along their length. These contain multiple optical fibers and are very often used for long-distance communications.

Coaxial cable

These guided transmission media contain an insulation layer that transmits information in baseband mode and broadband mode. Coaxial cables are made of PVC/Teflon and two parallel conductors that are separately insulated.

Unguided Transmission Media

Radio Waves

Radio waves are transmitted in every direction throughout free space. Since these are omnidirectional, sent waves can be received by any antenna. These waves are useful when the data is to multicasted from one sender to multiple receivers

Infrared

These waves are useful for only very short distance communication. Unlike radio waves, they do not have the ability to penetrate barriers.

Microwaves

it is important for the transmitter and receiver antenna to be aligned. This is why it is known as line-of-sight transmission. Due to this, they are suitable for shorter distances.

15. Describe Communication satellites (11)

A communication satellite is an artificial satellite that transmits the signal via a transponder by creating a channel between the transmitter and the receiver at different Earth locations.Telephone, radio, television, internet, and military applications use satellite communications

The communication satellites are similar to the space mirrors that help us bounce signals such as radio, internet data, and television from one side of the earth to another. Three stages are involved, which explain the working of satellite communications. These are:

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Name / Register Number : Barath.R / 207D0808

Program / Branch : Computer Science And Engineering

Subject Title : Computer Networks

Subject Code : CS552 (CIA - I)

Year / Semester : III / V

Date & Session : 08/11/2022 & FN

No. of Pages Used :

All Particulars Given are Verified

8/11/22

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Name of the Hall Supdt.,

PART-A		PART-B							
Question No.	Marks	Question No.		Marks					
				i	ii	iii	iv	Total	
1.	2	11	a	7					
2.	2		b						
3.	1	12	a						
4.	2		b						
5.	1	13	a	8					
6.	1		b	5					
7.	2	14	a	7					
8.	2		b						
9.	2	15	a	9					
10.	1		b						
Total	16			36					

GRAND TOTAL (IN WORDS)

FIVE TWO

GRAND TOTAL

52

Name of the Examiner : R. Anand

9/11/22

Signature of Examiner
(With Date)

9/11/22

Router:

* Router is a device that forwards data along the Network.

* Router are Connected to at least there two are two LAN or WAN or ISP of it.

* Router are located in gateway. the the multinetwork are Connected

3. IP (Internet Protocol)

Ans

* IP - Internet Protocol is the local internet Communication Protocol internet Protocol. uses the datagram the network Boundaries.

* In the Routing function enable the Protocol to internetwork.

Physical Media.

Def:

Physical Media is categories into two types

⇒ Guided Media

⇒ Unguided Media

Guided Media

In this type, the wave are transmitted through the physical solid medium such as twisted-Pair Copper wire, coaxial cable etc.,

Unguided Media:

In this type, the waves are Propogated through the atmosphere and or outer space such as satellites communication links, Radio wave Spatrum etc,

---

Transmission Delay

Def

Transmission Delay is defined as amount of time required to Push the all Packet byts into the network communication media.

Transmission Delay = $\frac{\text{Packets Size}}{}$

* Open System Interconnection was developed by the International standard organisation (ISO) in 1984.

* OSI model is consist of seven layer of operation and each layer are the model is assign a particular operation.

* In this model, each layer is self contained. So that they are perform different task independently

Layer of the OSI Reference Model.

i) Application
ii) Presentation
iii) Session
iv) Transport
v) Network
vi) Data-link
vii) Physical

NETWORK:

DEFINITION!

* Network are defined as the connection. two or more device together to form a network. Network is divided basend on their size.

* The different Types of Network are.

⇒ LAN
⇒ PAN
⇒ MAN
⇒ WAN

Local Area Network (LAN):

* Local Area Network is network connected a two or more device in small local area such as building or office.

* local Area Network uses the network Connection as twisted wire, Coaxial cables etc,

* Local Area Network (LAN) is simple and inexpensive to build the network and it is extremely faster rate of Access time.

In the application use the satellite wave Spectrum etc. Communication.

Home Application.

* Home Application are if the Small Scale industries, shopes, are interconnected together.

* This Application used to connect with help of network like mobile phone, telephone exchange Signals, to con- people

* In Some Shop or Industries a LAN network to interconnect the managers the data and faster access request.

* In Home, most of device like laptop, routers, Play station are con

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ame / Register Number : 20TD0850

rogram / Branch : BTECH (CSE)

ubject Title : COMPUTER NETWORK.

ubject Code : CS-T520

Year / Semester	III / V
Date & Session	08.11.22 / FN.
No. of Pages Used	

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T. Loga Sundari
Name of the Hall Supdt.,

PART-A				PART-B					
Question No.	Marks	Question No.		Marks i	ii	iii	iv	Total
1.	1	11	a					
2.	1		b	8				
3.	1	12	a					
4.	1		b	6				
5.	1	13	a	7				
6.	1		b					
7.	1	14	a	6				
8.	1		b					
9.	1	15	a	2				
10.	1		b					
Total	10			30				

Yours

GRAND TOTAL (IN WORDS)

FOUR ZERO

GRAND TOTAL

40

ame of the Examiner : K. Andal

9/11/22

Signature of Examiner (With Date)

* It containg a bitmap that drive a vedio display.

(9) Piggy backing:

Def: * Piggy backing the is the method of attaching an acknowladgment to the outgoing data packet.

(10) Hub:

Def: * A network hub is a n that boardcast data to every computer or Ethernet - based device connected it.

(4) Types of physical media:

Def: * In the physical media there two types of physical m

* guided media.

* un guided media.

Transmission delay.

Def: * the amount of time required to push all the packets bit into the wire.

* This time requirment is called as the Transmission delay.

computer networks.

Def: The computer network as have many types of network

mobile user.

server application

Home application

social users.

SECTION - B.

ommunication satellite.

finition:

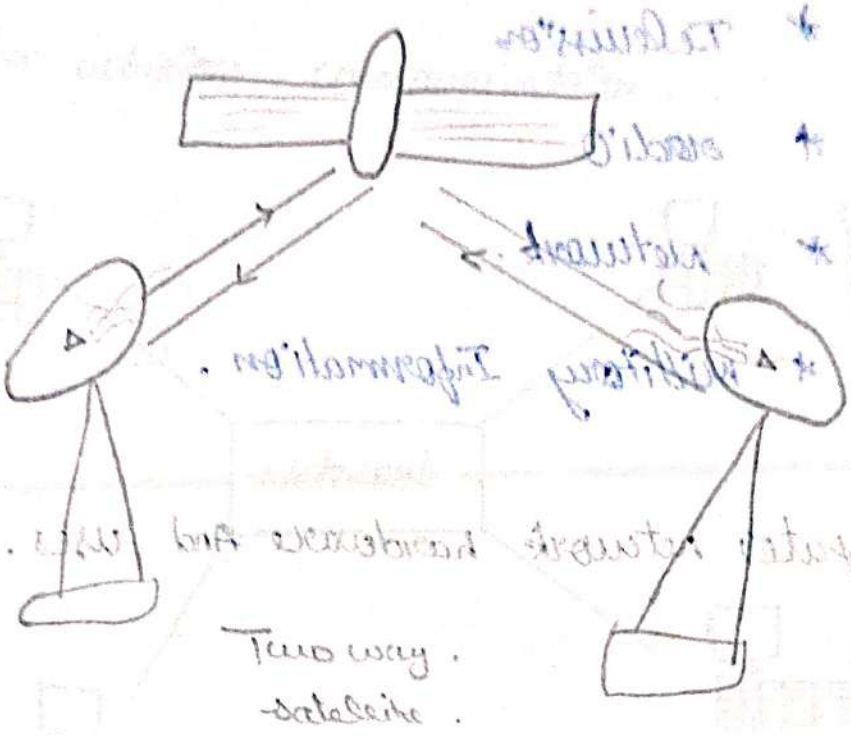
* In the computer network the satellite used for transfer the data and information in one place. to another place using the commication satellite

* It is used in the radio, network, Television, and military informations.

* In a space there are more than 2000 satellite are there in our up to dead.

* It is very useful to data transfer, card commiciation to one place to the another place. and the communiation satellite is also very

Two way satellite.



It is a two way of the satellite, because there are two way have to get and send the Input and Information.

Satellite	Information
GISAT-1	communication.
GISAT-3	communication.
GISAT-7	communication.
GISAT-10	communication climate
KALPANA-1	

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rogram / Branch : B.Tech / CSE

ubject Title : COMPUTER NETWORKS

ubject Code : CS T52

Year / Semester : III / V

Date & Session : 8/11/22 / F.N

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Question No.	Marks	Question No.		Marks					
				i	ii	iii	iv	Total	
1.	1	11	a						Arulselvi
2.	2		b						GRAND TOTAL (IN WORDS)
3.	1	12	a						
4.	-		b	5					THIRTY ONE
5.	-	13	a						
6.	-		b	8					
7.	—	14	a	7					
8.	—		b						GRAND TOTAL
9.	—	15	a	7					
10.	—		b						31
Total	4			27					

ame of the Examiner : K. Arulal

9/11/22

9/11/22

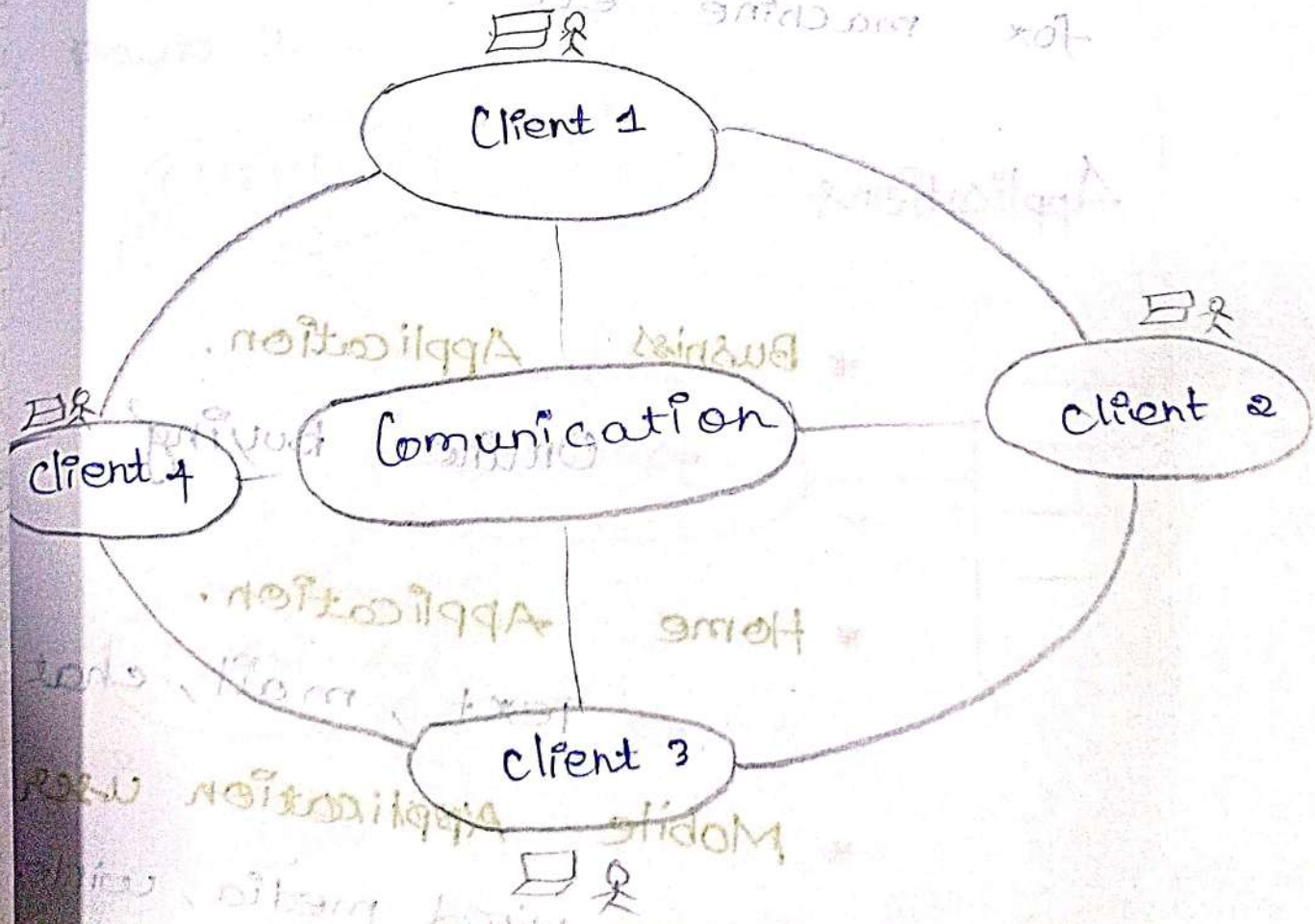
Signature of Examiner
(With Date)

PART- II

USES OF NETWORKS

Definition:

The Computer Network to a transmite of a satisfied which have a interconnected media. transmion to source to the share resources and data other. For share resoure, data, Text comunication, video, INternet etc...

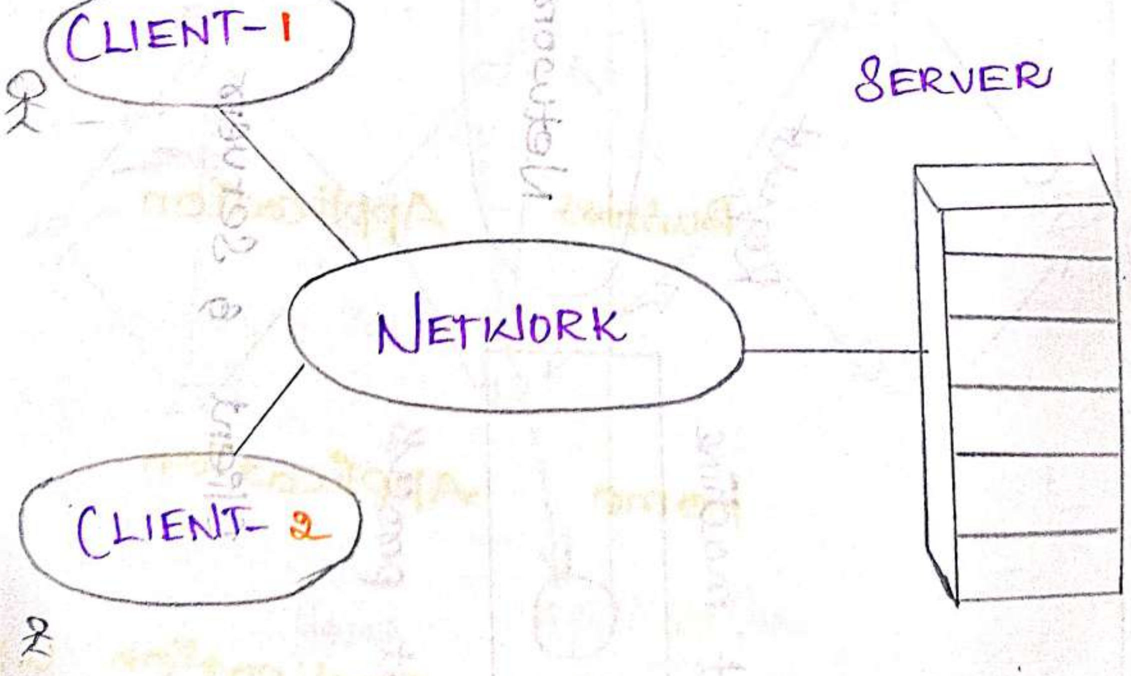


Busniss Application

* To Busniss Application is a company it have a comiupters. that many worked in which desien product.

* For eg: company have a computer each client to have it worked.

* To write bounded and payroll.



Two client and one server.

bile user.

* The mobile user is Open Soure Interconnective a wirless media.

* wirless media is a the Software Applications.

* Tablet, laptop, computs, TVS, ML, etc...

* Text comunication, voice communication, videos.

* the mobile phone is opensoure interconnected.

yes	NO	Mobile uses to Data
NO	yes	cable connected.
yes	yes	TUS connecting cable.
NO	NO	More data user.

Difference between OSI & TCP/IP.

OSI	TCP / IP
* OSI model is open source Interconnected.	* The TCP is Truncate control protocol
* It's 7 layer	* It's 4 layer
* Vertical approce	* Horizontal Approce
* Strict.	* Lossely.

OSI Model

* OSI model refer to the open Source Interconnect the OSI model based on which vertical approach.

* Open Source Interconnected to the OSI model is based

IP

Definition:

The IP address is a data's store in a IP address.

Physical media.

Def: The Physical media is Guided media based.

ARQ.

* Aprog Recpt Request.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIA – II EXAM

YEAR/SEM : III / V
SUBJECT CODE : CS T52
DATE : 27.12.2022

MAX. MARKS : 75 Marks
SUBJECT NAME : CN
DURATION : 3Hrs

SECTION –A (20 Marks)
PART - I (10 x 2 = 20 Marks)

Answer all the questions

1. What is address resolution?	K1	CO3
2. Discuss the class field in IP address.	K2	CO3
3. What is Traffic Throttling?	K1	CO3
4. What are the three main elements of Link state routing?	K1	CO3
5. What is congestion control?	K1	CO3
6. Define Remote Procedure call?	K1	CO4
7. Define TCP/IP?	K1	CO4
8. What is Bandwidth allocation?	K1	CO4
9. What is meant by de-multiplexing?	K2	CO4
10. What is transport layer?	K1	CO4

SECTION – B (55 Marks)
Part – II (5 x 11 = 55)

Answer the questions

11. a. Describe Link State Routing	(5)	K2	CO3
b. Explain hierarchical Routing	(6)	K2	CO3
(Or)			
12. Explain the following			
a. Traffic Aware Routing & Traffic Throttling	(6)	K2	CO3
b. Admission Control	(5)	K2	CO3
13. a. Describe Packet Fragmentation	(5)	K2	CO3
b. Explain Tunneling	(6)	K2	CO3
(Or)			
14. Discuss about IPv4 & IPv6	(11)	K2	CO3
15. a. Explain OSPF	(5)	K2	CO3
b. Describe BGP	(6)	K2	CO3
(Or)			
16. Explain Services of Transport protocols	(11)	K2	CO3
17. Explain Congestion control in Network Layer	(11)	K1 K2	CO4
(Or)			
18. Explain UDP	(11)	K2	CO4
19. Describe the following			
a. TCP Segment Header	(5)	K2	CO4
b. TCP Connection Establishment	(6)	K2	CO4
(Or)			
20. Explain TCP Timer Management	(11)	K2	CO4

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CIA – II EXAM

YEAR/SEM : III / V
SUBJECT CODE: CS T52
DATE : 27.12.2022

MAX. MARKS : 75 Marks
SUBJECT NAME: CN
DURATION : 3Hrs

SECTION –A (20 Marks)
PART - I (10 x 2 = 20 Marks)

Answer all the questions

1. What is address resolution?
   Address Resolution Protocol (ARP) is **a procedure for mapping a dynamic IP address to a permanent physical machine address in a local area network (LAN)**. The physical machine address is also known as a media access control (MAC) address.
2. Discuss the class field in IP address.
   TCP/IP defines five classes of IP addresses: **class A, B, C, D, and E.** Each class has a range of valid IP addresses. The value of the first octet determines the class. IP addresses from the first three classes (A, B and C) can be used for host addresses.
3. What is Traffic Throttling?
   Traffic Throttling - **networks warn users to slow down sending transmissions if congestion is about to occur.** Catches congestion before it happens and sends a choke packet , requiring the host to reduce its amount of traffic.
4. What are the three main elements of Link state routing?
   Link State routing protocols hold 3 distinctive tables: **a neighbor table, a topology table, and an actual routing table**
5. What is congestion control?
   Congestion Control is **a mechanism that controls the entry of data packets into the network, enabling a better use of a shared network infrastructure and avoiding congestive collapse.**
6. Define Remote Procedure call?
   Remote Procedure Call is **a technique for building distributed systems.** Basically, it allows a program on one machine to call a subroutine on another machine without knowing that it is remote.
7. Define TCP/IP?
   TCP/IP stands for **Transmission Control Protocol/Internet Protocol** and is a suite of communication protocols used to interconnect network devices on the internet. TCP/IP is also used as a communications protocol in a private computer network
8. What is Bandwidth allocation?
   Bandwidth allocation is **the process of assigning radio frequencies to different applications.** The radio spectrum is a finite resource, which means there is great need for an effective allocation process.
9. What is meant by de-multiplexing?
   Demultiplexing is **a process in which one input data signal is divided into various output signals.** It takes various input signals and gives one output signal only. It provides multiple output signals and takes one input signal only. Serial to parallel conversion is used in multiplexing
10. What is transport layer?
    The transport layer is **the layer at which TCP/IP ports listen.** For instance, the standard port which HTTP listens on is TCP Port 80, although HTTP could really run on any TCP port,this is the standard.

SECTION – B (55 Marks)
Part – II (5 x 11 = 55)

Answer the questions

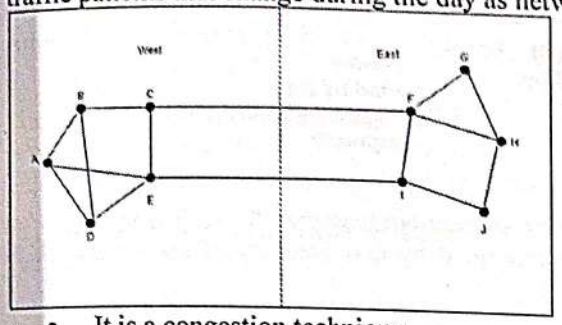
11. a. Describe Link State Routing(5)

Link state routing is **a method in which each router shares its neighbourhood's knowledge with every other router in the internetwork.** In this algorithm, each router in the network understands the network topology then makes a routing table depend on this topology.

12. Explain the following

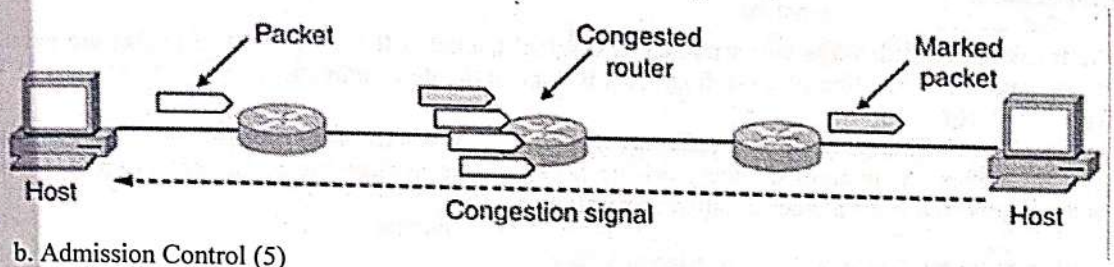
a. Traffic Aware Routing & Traffic Throttling (6)

The first approach we examine is traffic aware routing. These schemes adapted to change in topology, but not change the load. The goal of taking a load into to make most existing network capacity, routs can be tailored to traffic patterns that change during the day as network users wake and sleep in different zones.



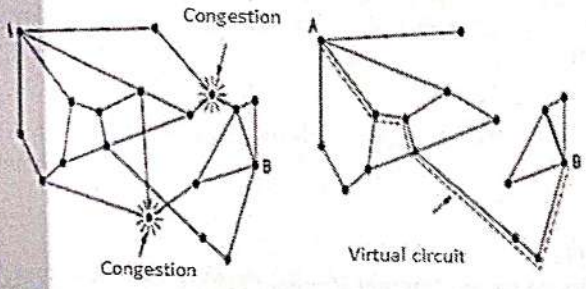
- It is a congestion technique.
- In these roots can be altered according to traffic pattern's because these traffic patterns changes during a day as network user we can sleep in different time zones.
- As there are heavily used paths so roots can be changed to shift traffic away.
- Traffic can be split across multiple paths.

Traffic throttling is one of the approaches for congestion control. In the internet and other computer networks, senders trying to adjust the transmission need to send as much traffic as the network can readily deliver. In this setting the network aim is to operate just before the onset of congestion.



b. Admission Control (5)

Admission control is a validation process in communication systems where a check is performed before a connection is established to see if current resources are sufficient for the proposed connection.



Step 1 – Suppose a host attached to router A wants to set up a connection to a host attached to router B. Normally this connection passes through one of the congested routers.

Step 2 – To avoid this situation, we can redraw the network as shown in figure (b), removing the congested routers and all of their lines.

Step 3 – The dashed line indicates a possible route for the virtual circuit that avoids the congested routers.

13. a. Describe Packet Fragmentation (5)

Fragmentation is an important function of network layer. It is technique in which gateways break up or divide larger packets into smaller ones called fragments. Each fragment is then sent as a separate internal packet. Each fragment has its separate header and trailer.

1. Transparent Fragmentation:

This fragmentation is done by one network is made transparent to all other subsequent networks through which packet will pass. Whenever a large packet arrives at a gateway, it breaks the packet into smaller fragments as shown in the following figure i.e the gateway G1 breaks a packet into smaller fragments.

IPv4	IPv6
The Security feature is dependent on application	IPSEC is an inbuilt security feature in the IPv6 protocol
Address representation of IPv4 is in decimal	Address Representation of IPv6 is in hexadecimal
Fragmentation performed by Sender and forwarding routers	In IPv6 fragmentation performed only by the sender
In IPv4 Packet flow identification is not available	In IPv6 packet flow identification are Available and uses the flow label field in the header
In IPv4 checksum field is available	In IPv6 checksum field is not available
It has broadcast Message Transmission Scheme	In IPv6 multicast and anycast message transmission scheme is available
In IPv4 Encryption and Authentication facility not provided	In IPv6 Encryption and Authentication are provided
IPv4 has a header of 20-60 bytes.	IPv6 has header of 40 bytes fixed
IPv4 can be converted to IPv6	Not all IPv6 can be converted to IPv4
IPv4 consist of 4 fields which are separated by dot (.)	IPv6 consist of 8 fields, which are separated by colon (:)
IPv4's IP addresses are divided into five different classes. Class A , Class B, Class C , Class D , Class E.	IPv6 does not have any classes of IP address.
IPv4 supports VLSM(Variable Length subnet mask).	IPv6 does not support VLSM.
Example of IPv4: 66.94.29.13	Example of IPv6: 2001:0000:3238:DFE1:0063:0000:0000:FEFB

. a. Explain OSPF

n Shortest Path First (OSPF) is a link-state routing protocol that was developed for IP networks and is based on Shortest Path First (SPF) algorithm. OSPF is an Interior Gateway Protocol (IGP).

n Shortest Path First (OSPF) is a link-state routing protocol that is used to find the best path between the source the destination router using its own Shortest Path First). OSPF is developed by Internet Engineering Task Force TF) as one of the Interior Gateway Protocol (IGP), i.e, the protocol which aims at moving the packet within a large nomous system or routing domain. It is a network layer protocol which works on protocol number 89 and uses value 110. OSPF uses multicast address 224.0.0.5 for normal communication and 224.0.0.6 for update to gnated router(DR)/Backup Designated Router (BDR).

Describe BGP

order Gateway Protocol is used to Exchange routing information for the internet and is the protocol used between P which are different ASes.

ne protocol can connect together any internetwork of autonomous system using an arbitrary topology. The only quirement is that each AS have at least one router that is able to run BGP and that is router connect to at least one her AS's BGP router. BGP's main function is to exchange network reach-ability information with other BGP

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Subject Title : Computer Networks / CIA - II

Subject Code : CST52

Year / Semester	III / V
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K. Anbal
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Question No.	Marks	Question No.		Marks i	ii	iii	iv	Total	Arul Jenifer.
1.	2	11	a	4					
2.	2		b	5					GRAND TOTAL (IN WORDS)
3.	2	12	a	4					FIVE EIGHT
4.	2		b	3					
5.	2	13	a	4					
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7.	1	14	a	8					
8.	2		b						GRAND TOTA
9.	1	15	a	5					58
10.	2		b	3					
Total	18			40					

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REMOTE PROCEDURE CALL:

* Remote Procedure Call is a communication protocol where a program from one computer request service to another program in another computer.

* This can happen without understanding the another computer internal or networking details.

TCP /IP:

* TCP/IP stands for Transmission control Protocol / Internet Protocol which highly used for communication and networking purpose.

* The TCP and IP are combined together and work as the same where each device have a separate IP

9) TRANSPORT LAYER:

* Transport layer is one of the layers in OSI model.

* The transport layer is used to transfer data packets from one level to another level.

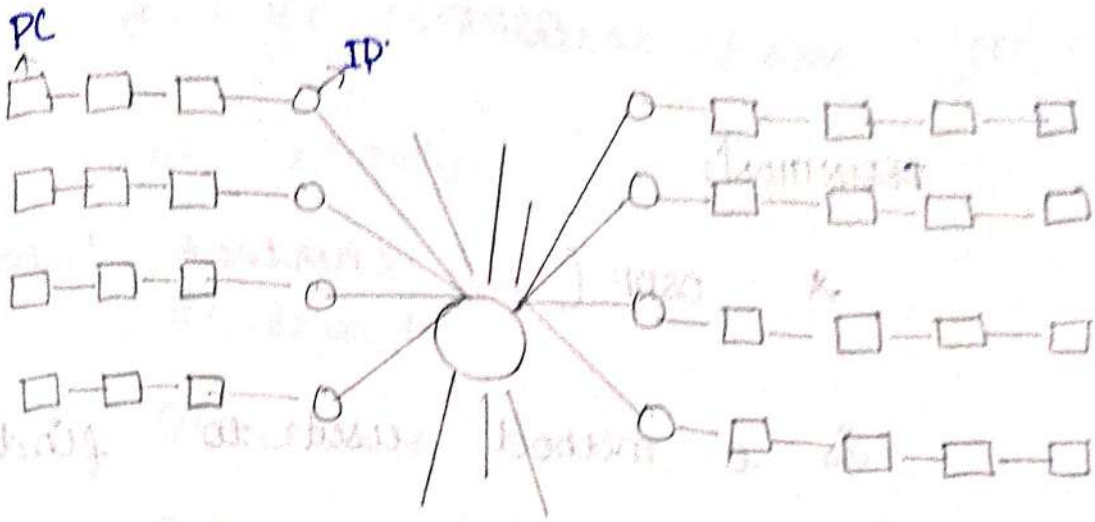
* This layer is called as Transport Layer.

10) ADDRESS RESOLUTION:

* Address Resolution Protocol in Computer Networks is used to change the dynamic IP address to a physical machine.

* The physical machine is known as Media Access Control.

* This is called Address Resolution



Difference between IPv4 and IPv6:

IPv 4	IPv6
* It is a 32 bit addressing.	* It is a 128 bit addressing.
* Numbers are seperated by four 2 and dots.	* seperated by eight with dots.
* they can produce about 4 billion address. so not efficient.	* they are 128 bit address. so they are efficient than IPV4

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5.	1	13	a	5				
6.	2		b	3				
7.	2	14	a	2				
8.	1		b	–				
9.	1	15	a	4				
10.	2		b	3				
Total	15			34				

Arunthathi

GRAND TOTAL (IN WORDS)

FOUR NINE

GRAND TOTAL

49

Name of the Examiner : K. Andal

Signature of Examiner (With Date) 28/12

Part-2

a) Link State Routing:-

Ans

Definition

→ Link state routing is the method is to share the route with the neighborhood

→ It stores the information in the route table.

→ The route table is has the information of ip address or mac address of the neighborhood.

→ The Link state routing has three keys.

* knowledge about neighbor.
* Flooding
* information Sharing.

Knowledge about neighbor:-

→ Instead of sharing the ta route table, it

Flooding phase:-

* Initial State: It knows the cost of the routing table

* Finial State - It knows the entire graph.

Routing calculation:-

→ Routing calculation is use the Dijstrac algorithum.

→ The Link-State routing is also known as Dijstra algorithm.

→ It is used to find the shortest path for the network.

→ Dijstra algorithm is iterative. It has the Proposition of k.

Algorithm:

→ Measure the route of the network

→ calculate the delay and cost of the network

→ Get the packet of the information

→ Send to the neighbor of the router

→ Calculate the short way of data

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Subject Title : COMPUTER NETWORKS CIA-II

Subject Code : CST52

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Question No.	Marks	Question No.		Marks i	ii	iii	iv	Total	Devsris
1.	2	11	a	2					
2.	2		b	8					GRAND TOTAL (IN WORDS)
3.	2	12	a	5					FIVE SEVEN
4.	2		b	4					
5.	2	13	a	5					
6.	2		b						
7.	2	14	a	8					
8.	2		b						GRAND TOTAL
9.	2	15	a	4					
10.	2		b	5					57
Total	20			37					

Name of the Examiner : K. Andal

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(With Date)

Address Ressolution

Ans:

→ the Address Resolution Protolol are Provided to dynamic IP address into the Permanent Physical domain Address to the local area network.

→ The Physical address is also known as the Media access control (MAC) address.

→ It has 4 types of Address Ressolution

* Poxy
* gratuitous
* Reverse ADx
* Inverse ADx

Class field in IP address

Ans:

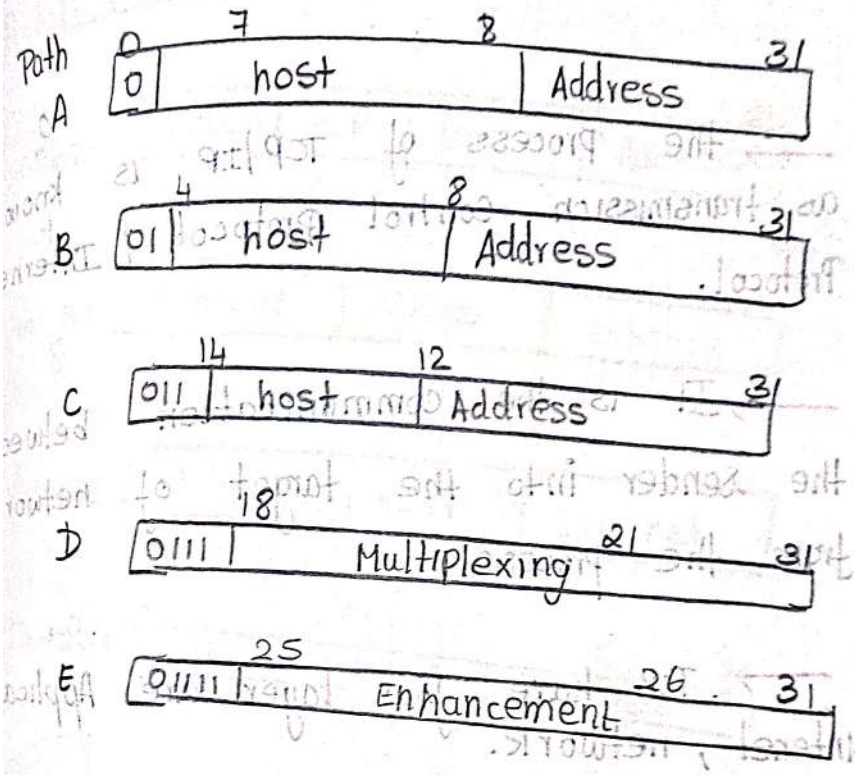
→ the TCP/IP of the address are in class IP : A, B, C, D, E of the field.

→ It have five main class that octet are first determines the value.

→ the (A, B, C) are the IP address and the first are contain host address.

→ the Address Resolution Protocol are Provided to dynamic IP Address to the pemenant Physical domain Address to the local area network

→ the physical Address is also known as the media access control (MAC) Address.



→ TCP/IP of the address are in class IP: A,B,C;D,E of the field.

→ It have five main class that has octet determines of first value.

→ the A,B,C are the IP address the first three are called host address.

IPV4 Represent.

0, 1 → So the IPV4 are Representing the of the individual network.

It runs

Computer Networks.

GOKILAADSRI. G
20700813.

63/100

Type of transmission technology

=> Broadcast network

-> point-to-point network

are the two type of transmission technology

uses of network

-> Resource sharing

-> Cost Reduction

-> Simultaneous access

-> high Reliability

Switch

A networking device that uses packet switching to receive, process and forward data to destination

Router.

A networking device that forward data packet from computer networks

It uses ip address.

Repeater.

It is networking device operating at physical

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MODEL EXAM

R/SEM : III/V
JECT CODE: CST52
E : 05.01.2023

MAX.MARKS : 75 Marks
SUBJECT NAME: CN
TIME : 3 Hrs

SECTION –A (20 Marks)
PART - I (10 x 2 = 20 Marks)

Answer the following

1.	Give any two advantages of packet switching	K1	CO1
2.	What are the two types of services that the internet provides to its application?	K1	CO1
3.	Difference between IPV4 and IPV6	K2	CO2
4.	Mention the methods for error detection and correction	K2	CO2
5.	What is the importance of Time-to-live field in IPV4 datagram format?	K1	CO3
6.	What is the use of Internet Control Message Protocol?	K1	CO3
7.	What is marshalling?	K1	CO4
8.	Why an application developer would ever choose to build an application over UDP rather than over TCP?	K2	CO4
9.	Mention the desirable properties of secured communications	K1	CO5
10.	Give the frame format for bit oriented protocols?	K1	CO5

SECTION – B (55 Marks)
Part – II (5 x 11 = 55)

Answer the following

11.	Explain Network Hardware. (11)	K2	CO1
	OR		
12.	Explain Reference Model. (11)	K2	CO1
13.	Explain Error Correction? Describe Error Detection? (11)	K2	CO2
	OR		
14.	Explain ALOHA& CSMA Protocols (11)	K2	CO2
15.	Explain Routing Algorithm (11)	K2	CO3
	OR		
16.	Explain Congestion Control (11)	K2	CO3
17.	Explain UDP (11)	K2	CO4
	OR		
18.	Explain TCP Timer Management (11)	K2	CO4
19.	Explain RSA. (11)	K2	CO5
20.	*OR* Explain HTTP. (11)	K2	CO5

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MODEL EXAM

YEAR/SEM : III/V
SUBJECT CODE: CST52
DATE : 05.01.2023

MAX.MARKS : 75 Marks
SUBJECT NAME: CN
TIME : 3 Hrs

SECTION –A (20 Marks)
PART - I (10 x 2 = 20 Marks)

Answer the following

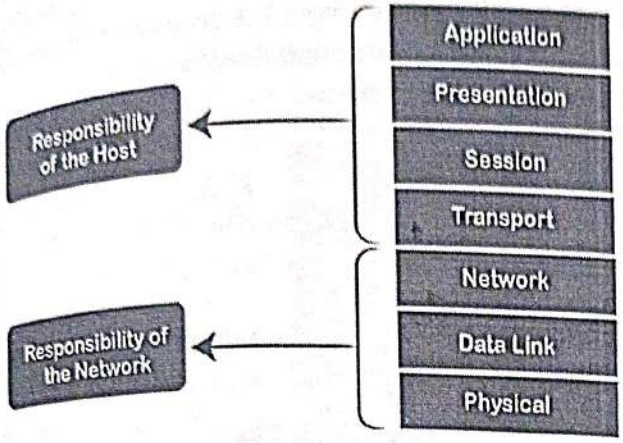
1. Give any two advantages of packet switching
   More efficient than circuit switching. Data packets are able to find the destination without the use of a dedicated channel. Reduces lost data packets because packet switching allows for resending of packets.
2. What are the two types of services that the internet provides to its application?
   A connection- oriented service and a connectionless oriented service. Loosely speaking, connection -oriented service guarantees that data transmitted from a sender to a receiver will eventually be delivered to the receiver in order and its entirety.
3. Difference between IPV4 and IPV6

IPv4	IPv6
IPv4 has a 32-bit address length	IPv6 has a 128-bit address length
It Supports Manual and DHCP address configuration	It supports Auto and renumbering address configuration
In IPv4 end to end, connection integrity is Unachievable	In IPv6 end to end, connection integrity is Achievable

4. Mention the methods for error detection and correction
   Simple Parity check, Two-dimensional Parity check, Checksum, and Cyclic redundancy check are error detection methods. When the data is sent from the sender side to the receiver's side it needs to be detected and corrected. So an error correction method is used for this purpose
5. What is the importance of Time-to-live field in IPV4 datagram format?
   Time-to-live (TTL) is a value for the period of time that a packet, or data, should exist on a computer or network before being discarded.
6. What is the use of Internet Control Message Protocol?
   ICMP is mainly used to determine whether or not data is reaching its intended destination in a timely manner.
7. What is marshalling?
   Marshalling is the process of transforming types when they need to cross between managed and native code. Marshalling is needed because the types in the managed and unmanaged code are different.
8. Why an application developer would ever choose to build an application over UDP rather than over TCP?

the International Organization for Standardization (ISO) in 1984, and it is now considered as an architectural model for the inter-computer communications.OSI model divides the whole task into seven smaller and manageable tasks. Each layer is assigned a particular task.Each layer is self-contained, so that task assigned to each layer can be performed independently

Characteristics of OSI Model



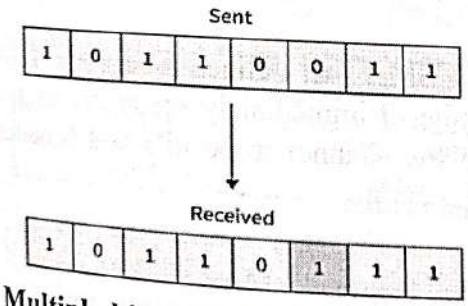
13. Explain Error Correction? Describe Error Detection? (11)

Errors are introduced into the binary data transmitted from the sender to the receiver due to noise during transmission. The error can be a single-bit error, multi-bit error, or burst error. Error detection methods are used to check whether the receiver has received correct data or corrupted data. And error correction is used to correct the detected errors during the transmission of data from sender to receiver.

Single-bit Error

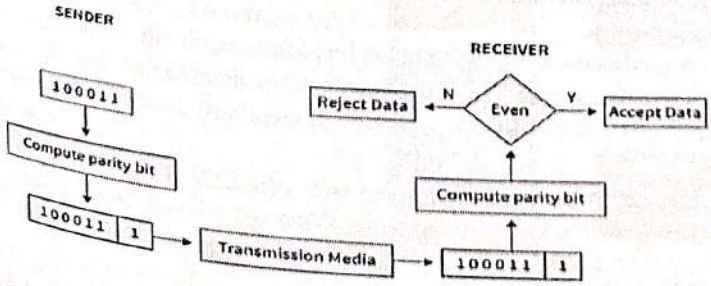
Typically, only one bit of the frame received is corrupt, and the corrupted bit can be located anywhere in the frame.

Refer to the below image for the single-bit error



Multiple-bit Error

More than one bit received in the frame is found to be corrupted. Refer to the below image for the multiple-bit error



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Question No.	Marks	Question No.		Marks i	ii	iii	iv	Total	Aruljenifer
1.	2	11	a	7					GRAND TOTAL (IN WORDS)
2.	1		b						
3.	2	12	a						FIVE
4.	2		b	8					FIVE
5.	2	13	a	8					
6.	2		b						
7.	1	14	a	7					
8.	2		b						GRAND TOTAL
9.	1	15	a	8					55
10.	2		b						
Total	17			38					

Name of the Examiner : K. Anbalagan

Signature of Examiner
(With Date)

PART-I

1) TWO ADVANTAGES OF PACKET SWITCHING:

* Packet switching is faster.
* Packet switching is more efficient than circuit switching.
* Allows faster transmission.

---

2) TWO TYPES OF SERVICES PROVIDED BY INTERNET:

* Communication services
* Web services
* Internet services.
* World wide web services.

---

3) DIFFERENCE BETWEEN IPV4 AND IPV6:

IPV4	IPV6
* IPV4 has 32 bit address.	* IPV6 has 128 bit address.
* It has fields which are 4 seperated by dot(.).	* It has fields which are 8 separated by semicolon.

7) MARSHALLING:

* Marshalling or marshaling is the technique where the memory is translated into object code for some easy access or use of data.

* This is known as "Marshalling".

8) CHOOSING UDP RATHER THAN TCP - WHY:

* We choose UDP rather than TCP because of its features.

* some of its features were

(i) Transport layer

(ii) connectionless

(iii) Ports

(iv) Faster Transmission

(v) Acknowledgment mechanism

(vi) Segments are handled independently

(vii) Stopless

PART-II

(a) ANSWER:

RSA ALGORITHM

DEFINITION:

* RSA algorithm is a algorithm where it is known as public key encryption algorithm.

* It was named after its inventors Rivest, Shamir, Adleman.

PUBLIC KEY ENCYPTION:

* There are 2 types of keys used by the sender and the receiver. They are

(i) Public Key.

(ii) Private Key.

* The Public key is used for the encryption.

* The private key is used for the

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1.	1	11	a						GRAND TOTAL (IN WORDS)
2.	2		b					8	
3.	2	12	a						FOUR NINE
4.	2		b					8	
5.	1	13	a						
6.	2		b					9	
7.	2	14	a						
8.	2		b						GRAND TOTAL
9.	1	15	a					7	49
10.	2		b						
Total	17							32	

Name of the Examiner : C. Arulal

Signature of Examiner
(With Date)
5/1/23

SECTION-A

1. Advantage of Packet Switching

Ans:

→ The Advantage of Packet Switching contains two they are

→ they can Provide variable data items in rates

It has better use of "bursty" traffic.

2. two types of services.

Ans:

The two type of services are

→ Connection oriented protocol
→ Connection less Protocol.

→ And the Application of this services in internet the TCP are the connection less Services in the internet protocol.

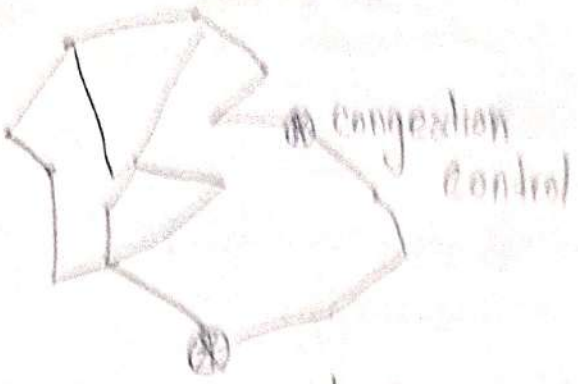
→ then UDP are the connection oriented Protocol services in the internet.

3. IPV4 / IPV6

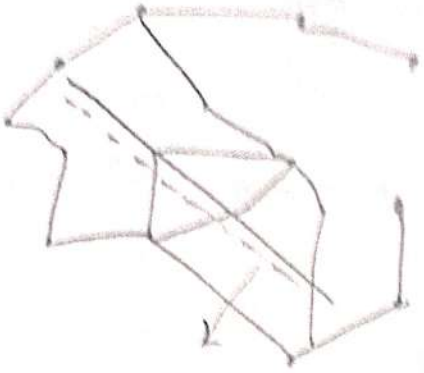
Ans:

IPV4	IPV6.
* In IPV4 they have 32 bit internet work is Protocol.	* In IPV6 they have 128 bit internet provide by protocol.
* They have the Checksum field	* they does not have

Admission Control



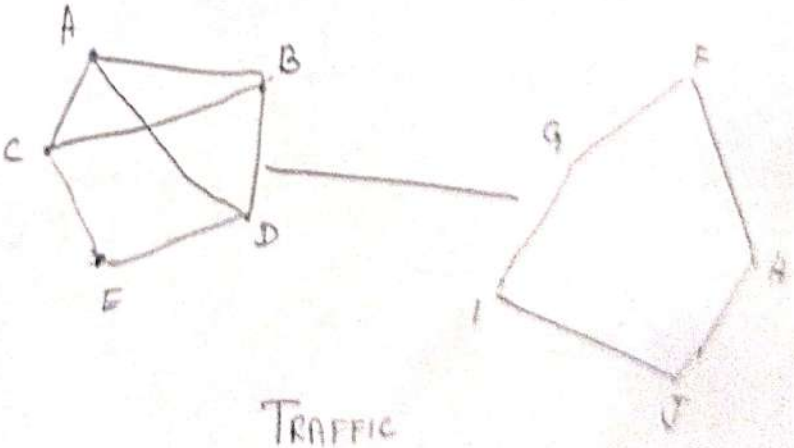
congestion control



Virtual circuit

Traffic Routing.

→ Traffic Routing are control the Congestion technique of Source.



TRAFFIC ROUTING.

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Ariyur, Puducherry - 605 102.

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(To be filled in By the Candidate)

Name / Register Number : P.ARULSELVI / 20TD0806
Program / Branch : CSE / B.Tech
Subject Title : COMPUTER NETWORK
Subject Code : CS152

Year / Semester : III / V
Date & Session : 5.1.2023
No. of Pages Used : 6

All Particulars Given are Verified
Signature of the Hall Supdt., with Date
A.V.SRINATH
Name of the Hall Supdt.,

PART-A		PART-B						
Question No.	Marks	Question No.		Marks i	ii	iii	iv	Total
1.	2	11	a					
2.	1		b					7
3.	1	12	a					
4.	1		b					7
5.	1	13	a					
6.	1		b					6
7.	1	14	a					3
8.	1		b					
9.	2	15	a					7
10.	2		b					
Total	31							36

GRAND TOTAL (IN WORDS): FIFTY SIX ZERO

GRAND TOTAL: 56

Signature of the Examiner :

Signature of Examiner (With Date)
6

PART - II

REFERENCE MODEL

Definition:

* The computer network is reference model to the Network communicate the reference model and determine to the use of heterogenous model.

TYPES

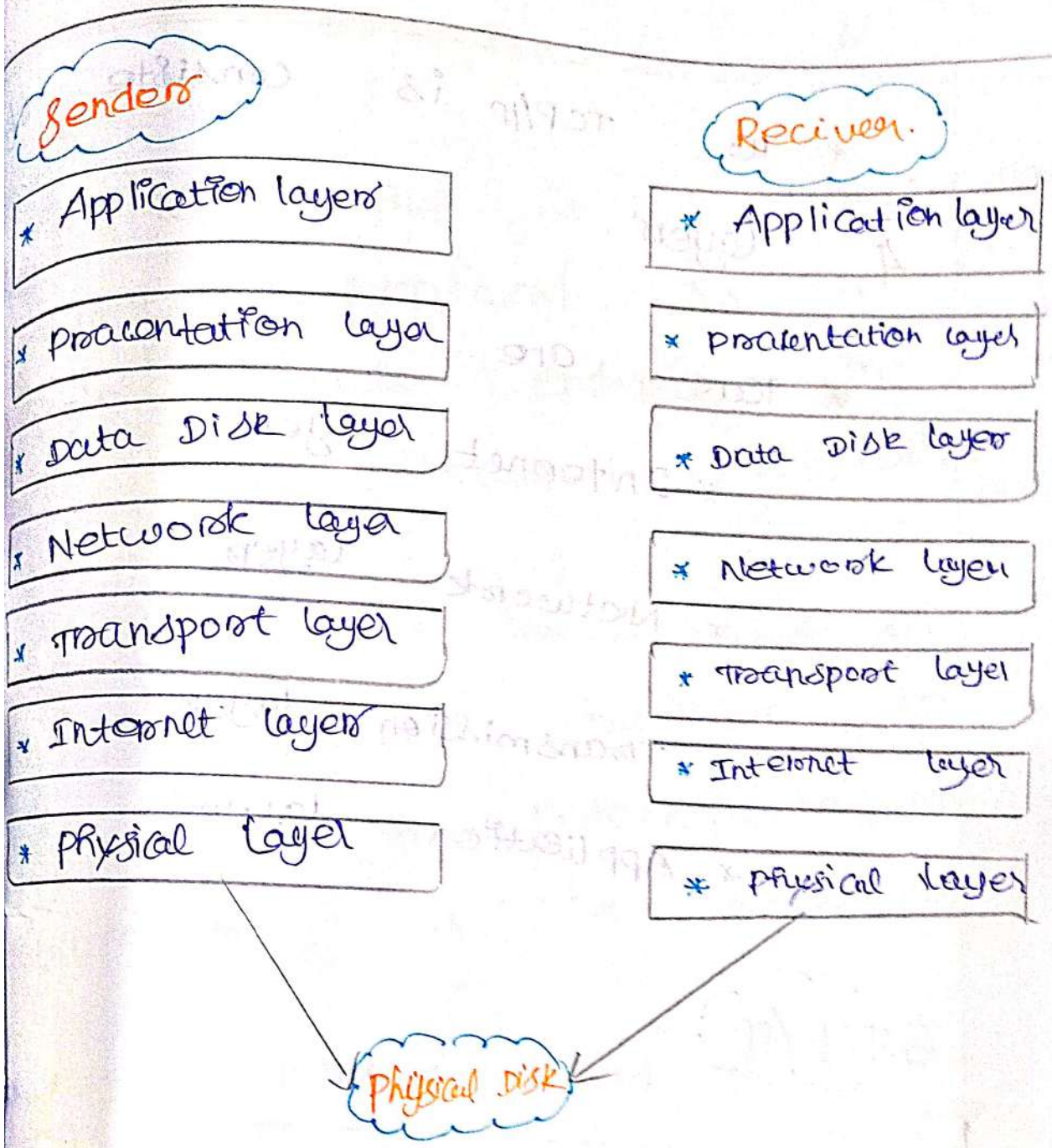
* The reference model is divided into two types.

* There are

  * OSI Model

  * TCP/IP model

OSI VS TCP/IP



TCP / IP

* The TCP is Standed based on Transmission control protocal.

* The IP is Standed based on the Internet protocol.

* typically to use to marshal the internet Stored on the data.

---

8. UDP & TCP

Ans. Definition:

* the application over UDP than the over of the transport build an application of the intermediate. of the UDP
* the application determine the secured.

---

9. Secured communication

Ans: Definition:

* public → secured communication provi
* Integrity → secured communication Integrity
* Authenation → secured commuetion protocol.

---

10. bit oriented protocol

Ans: Definition:

* the Sroame formate bit oriented protocol is two types. there the bit oriente protocol, visual

REG. NO	NAME	CIA-1	CIA-1 RETEST	CIA-2	CIA-2 RETEST	CYCLIC TEST-1	CYCLIC TEST-2	CYCLIC TEST-3	MODEL%	ATTINTERNAL
1.	Kannel Ajay	AB	44	AB	42		59	40	AB	38
2.	Abimanin .M	55		50			58		49	
3.	Abishek .K	AB	47	39			59		45	
4.	Ajay .S	54		55			60		54	
5.	Apsan Ali	AB	38	39			AB		38	
6.	Arul Jenifer .A	58		58			72		55	
7.	Arulselvi .P	31	9/10	AB	63		56		AB	50
8.	Arunthathi .S	50		49			71		49	
9.	Barath .R	52		50			69		44	
10.	Davidraj Dominique .V	AB	51	38			48		AB	48
11.	Devisri .S	48		47			72		49	
12.	Dhivya Sri .N	AB	38	40			AB	38	40	
13.	Ezhilarasan .P	41		40			55		44	
14.	Gokilasri .G	51		AB	59		AB	48	50	
15.	Gowtham .S	34		21			50		30	
16.	Hari Krishnan .B	52		45			AB	46	51	
17.	Hari Prasath .S	34		38			51		46	
18.	Hemalatha .M	AB	54	43			62		43	
19.	Jagan .S	38		AB	38		59		AB	40
20.	Jaya balaji .L	38		40			AB	58	AB	49
21.	Jayachandran .R	AB	41	AB	38		AB		AB	
22.	Keerthika .A	AB	45	AB	42		AB		AB	42
23.	Kirthikeresha .M	56		53			72		51	
24.	Murali Krishnan .G	42		33	9/10		51		41	
25.	Nishanthi .K	46		AB	50		76		AB	38
26.	Nithyasri .V	53		50			66		45	
27.	Prathap .V	45		42			62		52	
28.	Praveen Kumar .V	43		13			40		AB	42
29.	Preethika .M	AB	40	40			43		AB	43
30.	Prithipa .A	49		AB	46		58		50	
31.	Priyadharshini .M	46		48			55		45	
32.	Ramana .S	38		44			65		AB	47

REG. NO	NAME	CIA-1	CIA-1 RETEST	CIA-2	CIA-2 RETEST	CYCLIC TEST -1	CYCLIC TEST-2	CYCLIC TEST-3	MODEL %	ATTINTERNAL
33.	Ramya .M	AB	A1	AB	56		63		A7	
34.	Rohith .V.S	AB	A8	AB	A1		AB	41	AB	
35.	Sakthivel .A	2A		3A			AB	39	AB	38
36.	Sakthivel .P	AB	38	AB			AB		AB	
37.	Santhiya .S	AB	40	AB	53		AB	60	AB	60
38.	Saraswathidevi .S	A8		53			64		46	
39.	Saravanan .K	43		AB	50		52		50	
40.	Shijan .M	45		52			63		39	
41.	Shivaprakasam .M	50		52			72		A5	
42.	Sivaraj .N	AB	38	AB	A3		AB	40	AB	50
43.	Somaya Deepakeeja .M	A5		38			62		39	
44.	Soundarya .V	57		AB	57		75	53	AB	5A
45.	Sowmiya .D	52		5A			78		5A	
46.	Thamizharasan .D	A7		AB	38		59		A4	
47.	Thiruvarasan .M	AB	A5	A0			53		43	
48.	Vignesh .M	54		A5			68		A8	
49.	Vishnupriya .K	55		55			71		50	
50.	Yuvaraj .K	40		AB	38		60		AB	38
51.										
52.	Manisha. .M	51		55			65	50	AB	A2
53.	Hrithika Boy	45		A6			AB	A9	50	
54.	Satish .M	40		40			65		A8	
55.	Paritosh Biswas	39		56			60		53	
56.	Manoj kumar .P	A1		52			58		52	
57.	Sindhuja .M	53		52			65		55	
58.	Shaha Lakra	43		55			70		52	
59.	Sharon .M	48		50			AB	A2	5A	
60.										
61.										
62.										
63										
64.										

Exam	Test - 1	Test - 2	Test - 3	Test - 4	Test - 5	Test - 6	Test - 7	CIA-1	CIA-2	CYCLE TEST-1	CYCLE TEST-2	CYCLE TEST-3	MODEL EXAM
Portion Covered								Ist unit	II & III units	1 to 5 units			1 to 5 units
Proposed Date of Exam								8/11/22	27/12/22	4/1/23			5/1/23
Actual Date of Exam								8/11/22	27/12/22	4/1/23			5/1/23
Date of return of corrected Answer Books								9/11/22	28/12/22	5/1/23			6/1/23
Strength								58.	58	59			58
Attended								38	41	39			42
Absent								15	17	19			16
% Pass								89.47	90.2	100			72
% Fail								7.2	9.7	-			27
Sub. In charge SIGN													
HoD SIGN													
PRINCIPAL SIGN													

5635131

B.Tech. DEGREE EXAMINATION,
SEPTEMBER 2020.

Fifth Semester

Computer Science and Engineering

COMPUTER NETWORKS

(2013-14 onwards)

Time : Three hours Maximum : 75 marks

PART A — (10 × 2 = 20 marks)

Answer ALL questions.

All questions carry equal marks.

1. Mention the components of a computer network.

2. Give examples of network topologies.

3. Distinguish between guided and unguided media.

4. What do you mean by multiplexing?

5. Expand CSMA and CDMA.

6. What are the variants of Ethernet?

7. Write notes on classful addressing of IP.

8. Define congestion.

9. What is meant by three-way handshake?

10. Write about DNS.

PART B — (5 × 11 = 55 marks)

Answer ALL questions ONE from each Unit.

All questions carry equal marks.

UNIT I

11. Explain in detail about different guided an unguided media used in computer networks.

Or

12. With a neat diagram, briefly explain all the layers of OSI model and the services provided by each layer.

UNIT II

13. Write notes on CRC. How error detection can be achieved using CRC? Explain with an example.

Or

14. Write notes on :

(a) FDMA

(b) CDMA

(c) TDMA

UNIT III

15. Explain various IP addressing principles with suitable examples.

Or

16. What is ICMP? Explain ICMP header format various ICMP messages with their applications

UNIT IV

17. Explain in detail about various TCP congestion control mechanisms.

Or

18. With a neat diagram, give a detailed explanation about TCP state transition diagram.

UNIT V

9. (a) Write an XML page for a university registrar listing multiple students, each having a name, an address, and a GPA (6)

(b) How do you make an image cliekable in HTML? Give an example. (5)

Or

9. Explain any two public key algorithms with suitable examples.

Department of Computer Science and Engineering

Batch: 2020 - 2024

Internal Attainment - CIA-I

Faculty Name : Mrs.K.ANDAL

% Level of Attainment: 70 %

Year / Sem : III/ V

		Subject Name with Code :	CS T52-Computer Networks																			
		Blooms Taxonomy (K1, K2, K3, K4, K5, K6) :	K1	K2	K2	K3	K1	K2	K3	K3	K2	K3	K2	K1	K2	K4	K1	K3	K2	K2	K2	K5
		Question Mapped to which Course Outcomes (Cos) :	CO1	CO1	CO1	CO1	CO1	CO2	CO2	CO2	CO2	CO2	CO1	CO1	CO1	CO1	CO1	CO2	CO2	CO2	CO2	CO2
		No. of Student attempted count :	58	56	54	58	58	58	58	58	58	58	24	32	50	6	54	2	45	11	4	52
			H - Full Marks				M - Half Marks					L - Nil Marks										
S.No.	Reg. No.	Name of the Students	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	19TD1513	KARMEL AJAY	M	H	H	H	H	H	L	H	H	L	H	L	H	L	L	H	H	L	L	H
2	20TD0801	ABIMANIU .M	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
3	20TD0802	ABISHEK.K	H	M	H	H	H	H	H	L	H	H	H	L	L	H	H	L	M	L	L	H
4	20TD0803	AJAY.S	H	H	H	M	H	M	H	H	H	H	L	H	M	L	M	L	H	L	M	L
5	20TD0804	APSAR ALI.A	H	H	L	H	M	H	H	H	H	H	M	L	H	L	H	L	H	L	L	H
6	20TD0805	ARUL JENIFER.A	H	H	L	H	H	H	H	H	H	H	M	L	H	L	H	L	H	L	L	H
7	20TD0806	ARULSELVI.P	M	H	H	H	H	H	L	H	H	L	H	L	H	L	H	L	M	L	L	H
8	20TD0807	ARUNTHATHI.S	M	H	H	H	M	H	L	H	H	L	L	M	H	L	H	L	L	H	L	H
9	20TD0808	BARATH.R	H	H	H	H	H	H	H	H	H	H	H	L	L	H	H	L	H	L	L	H
10	20TD0809	DAVIDRAJ DOMINIQUE.V	H	H	H	H	M	H	H	H	H	H	H	L	H	L	H	L	H	L	L	H
11	20TD0810	DEVSRI.S	H	H	H	H	H	H	H	H	H	H	H	L	L	M	H	L	L	H	L	H
12	20TD0811	DHIVYA SRI.N	H	H	H	H	H	H	H	H	H	H	L	M	H	L	H	L	H	L	H	L
13	20TD0812	EZHILARASAN.P	H	H	H	H	M	H	H	H	M	H	L	M	H	L	H	L	H	L	L	H
14	20TD0813	GOKILASRI.G	H	H	H	H	H	H	H	H	M	H	L	M	H	L	H	L	L	H	L	H
15	20TD0814	GOWTHAM.S	H	H	H	H	H	H	H	H	M	H	H	L	H	L	H	L	H	L	L	H
16	20TD0815	HARIKRISHNAN.B	H	H	H	H	H	H	H	H	M	H	L	M	M	L	H	L	L	H	L	H
17	20TD0816	HARI PRASATH .S	H	H	H	H	H	H	H	H	M	H	L	M	M	L	H	L	H	L	L	H
18	20TD0817	HEMALATHA.M	H	H	H	H	H	H	H	H	M	H	L	M	M	L	H	L	L	H	L	H
19	20TD0818	JAGAN.S	H	H	H	H	H	H	H	H	M	H	L	M	M	L	H	L	H	L	L	H
20	20TD0819	JAYABALAJI.L	H	H	H	H	H	H	H	H	M	H	L	M	M	L	H	L	H	L	L	H
21	20TD0820	JAYACHANDIRAN.R	H	H	L	H	M	H	H	H	H	H	L	M	M	L	H	L	H	L	L	H
22	20TD0821	KEERTHIGA.A	H	H	H	H	H	H	H	H	H	H	M	L	M	L	H	L	H	L	L	H
23	20TD0822	KIRTHIVERSHA.M	M	H	H	H	M	H	L	H	H	L	L	M	M	L	H	L	M	L	L	H
24	20TD0823	MURALI KRISHNAN. G	H	H	H	H	H	H	H	H	H	H	M	L	H	L	H	L	H	L	L	H
25	20TD0824	NISHANTHI.K	H	H	H	H	H	H	H	H	H	H	L	H	H	L	H	L	H	L	L	H
26	20TD0825	NITHYA SRI.V	M	H	H	H	H	H	L	H	H	L	H	L	H	L	L	H	H	L	L	H
27	20TD0826	PRATHAP.V	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L
28	20TD0827	PRAVEENKUMAR.V	H	M	H	H	H	H	H	L	H	H	H	L	L	H	H	L	M	L	L	H
29	20TD0828	PREETHISHA.M	H	H	H	M	H	M	H	H	H	H	L	H	M	L	M	L	H	L	M	L
30	20TD0829	PRITHIPA	H	H	L	H	M	H	H	H	H	H	H	L	H	L	H	L	H	L	L	H
31	20TD0830	PRIYADHARSHINI.M	H	H	L	H	H	H	H	H	H	H	H	L	H	L	H	L	H	L	L	H
32	20TD0831	RAMANA.S	M	H	H	H	H	M	L	H	H	L	H	L	H	L	H	L	M	L	L	H
33	20TD0832	RAMYA. M	M	H	H	H	M	M	L	H	H	L	L	M	H	L	H	L	L	H	L	H
34	20TD0833	ROHITH.V.S	H	H	H	H	H	M	M	H	H	H	H	L	L	H	H	L	H	L	L	H
35	20TD0834	SAKTHIVEL.A	H	H	H	H	M	M	M	M	H	H	H	L	H	L	H	L	H	L	L	H
36	20TD0835	SAKTHIVEL.P	H	H	H	H	H	M	M	M	H	H	H	L	L	M	H	L	L	H	L	H
37	20TD0836	SANTHIYA.S	H	H	H	H	M	M	M	M	H	H	L	H	H	L	H	L	H	L	H	L
38	20TD0837	SARASWATHIDEVI.S.	H	H	H	M	M	M	M	M	H	H	L	H	H	L	H	L	H	L	L	H
39	20TD0838	SARATHRAM.K	H	H	H	M	M	M	M	M	H	H	L	H	H	L	H	L	L	H	L	H
40	20TD0839	SHIYAM.M	H	H	H	M	M	M	M	M	H	H	H	L	H	L	H	L	H	L	L	H
41	20TD0840	SIVAPRAKASAM.M	H	H	H	M	M	M	M	M	H	H	L	H	H	L	H	L	L	H	L	H
42	20TD0841	SIVARAJ.N	H	H	H	M	M	M	M	M	H	H	L	H	H	L	H	L	H	L	L	H
43	20TD0842	SOMAYA DEEPAKRAJU.M	H	H	L	M	M	M	M	M	H	H	L	H	H	L	H	L	L	H	L	H
44	20TD0844	SOUNDARYA.V	H	H	L	H	M	M	M	M	H	H	L	H	H	L	H	L	H	L	L	H
45	20TD0845	SOWMIYA.D	H	H	L	H	M	M	H	M	H	H	L	H	H	L	H	L	H	L	L	H
46	20TD0846	THAMIZHARASAN.D	H	H	L	H	M	M	H	M	H	H	L	H	H	L	H	L	H	L	L	H
47	20TD0847	THIRUVARASAN.M	H	H	H	H	M	H	H	M	H	H	M	L	H	L	H	L	H	L	L	H
48	20TD0848	VIGNESH.M	M	H	H	H	M	H	L	M	H	L	L	M	H	L	H	L	H	L	L	H
49	20TD0849	VISHNUPRIYA.K	M	H	H	H	M	H	H	M	H	H	M	L	H	L	H	L	H	L	L	H
50	20TD0850	YUVARAJ.K	M	H	H	H	M	M	H	H	H	H	L	H	H	L	H	L	H	L	L	H
51	20TD0512	P.MANOJ KUMAR	M	H	L	H	M	H	H	H	H	H	L	H	H	L	H	L	H	L	L	H
52	20TD0521	SATHISH.M	M	H	L	H	H	H	H	H	H	H	L	H	H	L	H	L	L	H	L	H
53	20TD0511	MANISHA.M	H	H	L	H	H	H	H	H	H	H	L	H	H	L	H	L	H	L	L	H
54	20TD0516	PARITOSH BISWAS	H	H	L	H	M	H	H	H	H	H	L	H	H	L	H	L	H	L	L	H
55	20TD0509	HRITIKA ROY	H	H	H	H	H	H	H	H	H	H	H	L	H	L	H	L	H	L	L	H
56	20TD0523	SINDUJA.M	M	H	H	H	M	H	L	H	H	L	L	H	H	L	H	L	H	L	L	H
57	20TD0524	SNEHA LAKRA	H	H	H	H	H	H	H	H	H	H	H	L	H	L	H	L	M	L	L	H
58	20TD0522	SHARON THANKACHEN	H	H	H	H	H	H	H	H	H	H	L	H	H	L	H	L	H	L	L	H
		Maximum Mark 'H' Count :	43	54	43	48	30	38	36	39	48	47	18	19	40	4	52	2	39	11	2	52
		Medium Mark 'M' Count :	13	2	0	8	26	18	11	15	8	0	6	13	10	2	2	0	6	0	2	0
		Nil Mark 'L' Count :	2	2	15	2	2	2	11	4	2	11	34	26	8	52	4	56	13	47	54	6
		% of Max Marks :	74.1	96.4	79.6	82.8	51.7	65.5	62.1	67.2	82.8	81	75	59.4	80	66.7	96.3	100	86.7	0	50	0
		Attainment Levels :	2	3	3	3	1	2	1	2	3	3	2	1	3	2	3	3	3	0	1	0
		Average of Attainment :	2.73																			

Note: Convert the score for 100

RANGE	Mark Attainment
Student scoring < 50	L
Student scoring above 50 and below 55	M
Student scoring above 55 and below 60	H
Student scoring above 60	

% of range of H level attainment	CO Attainment
H scoring % < 50	0
H scoring % between 50 and 59	1
H scoring % between 60 and below 75	2
H scoring % above 75	3

Department of Computer Science and Engineering

Batch: 2020 - 2024

Internal Attainment - CIA-II

Faculty Name : Mrs.K.ANDAL

% Level of Attainment: 75 %

Year / Sem : III / V

		Subject Name with Code :	CS T52-Computer Networks																			
		Blooms Taxonomy (K1, K2, K3, K4, K5, K6) :	K1	K2	K2	K3	K1	K2	K3	K3	K2	K3	K2	K1	K2	K4	K1	K3	K2	K2	K2	K5
		Question Mapped to which Course Outcomes (Cos) :	CO1	CO1	CO1	CO1	CO1	CO2	CO2	CO2	CO2	CO2	CO1	CO1	CO1	CO1	CO1	CO2	CO2	CO2	CO2	CO2
		No. of Student attempted count :	50	48	48	46	48	50	50	48	50	48	20	30	30	20	44	6	48	2	48	2
			H - Full Marks				M - Half Marks					L - Nil Marks										
S.No.	Reg. No.	Name of the Students	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	19TD1513	KARMEL AJAY	M	H	H	H	H	H	M	H	H	L	H	L	L	H	H	L	M	L	H	L
2	20TD0801	ABIMANIU .M	M	L	H	H	H	H	M	H	H	L	L	M	H	L	H	L	M	L	H	L
3	20TD0802	ABISHEK.K	M	H	H	H	H	H	M	H	H	L	H	L	H	L	L	M	L	H	H	L
4	20TD0803	AJAY.S	H	H	H	H	H	H	H	H	H	H	H	L	H	H	H	L	H	L	H	L
5	20TD0804	APSAR ALI.A	H	H	H	L	H	H	H	L	H	H	L	M	H	L	H	L	H	L	H	L
6	20TD0805	ARUL JENIFER.A	M	H	H	H	H	H	M	H	H	L	H	L	L	H	L	H	M	L	H	L
7	20TD0806	ARULSELVI.P	H	H	H	H	H	H	H	H	H	H	L	M	H	L	H	L	H	L	H	L
8	20TD0807	ARUNTHATHI.S	H	H	H	M	L	H	H	H	H	H	L	M	L	M	H	L	H	L	L	H
9	20TD0808	BARATH.R	H	H	M	H	H	H	H	H	H	H	M	L	H	L	L	H	H	L	H	L
10	20TD0809	DAVIDRAJ DOMINIQUE.V	H	H	M	H	H	H	H	H	H	H	M	L	L	M	H	L	H	L	L	H
11	20TD0810	DEVSRI.S	H	H	M	H	H	H	H	H	H	H	L	H	H	L	H	L	H	L	H	L
12	20TD0811	DHIVYA SRI.N	H	H	M	H	H	H	H	H	H	H	L	H	H	L	H	L	H	L	H	L
13	20TD0812	EZHILARASAN.P	H	H	M	H	H	H	H	H	H	H	H	L	L	H	H	L	H	L	H	L
14	20TD0813	GOKILASRI.G	H	M	M	H	H	H	H	H	H	H	L	M	L	H	L	L	H	L	H	L
15	20TD0814	GOWTHAM.S	H	M	M	L	H	H	H	H	H	H	H	L	H	L	H	L	H	L	L	H
16	20TD0815	HARIKRISHNAN.B	H	M	H	H	H	H	H	H	H	H	L	M	H	L	H	L	M	L	H	L
17	20TD0816	HARI PRASATH .S	H	M	H	H	H	H	H	H	H	H	M	L	L	M	H	L	M	L	H	L
18	20TD0817	HEMALATHA.M	H	M	H	H	H	H	H	H	H	H	L	M	H	L	H	L	M	L	H	L
19	20TD0818	JAGAN.S	M	M	H	H	H	H	H	H	H	H	L	H	H	L	H	L	M	L	H	L
20	20TD0819	JAYABALAJI.L	M	M	H	H	H	H	H	H	H	H	L	M	M	H	H	L	M	L	H	L
21	20TD0820	JAYACHANDIRAN.R	M	H	H	H	H	H	H	H	H	H	H	L	H	L	L	L	M	L	H	L
22	20TD0821	KEERTHIGA.A	M	H	H	H	H	H	H	H	H	H	L	M	L	H	H	L	M	L	H	L
23	20TD0822	KIRTHIVERSHA.M	M	H	H	H	H	H	M	H	H	L	H	L	H	L	H	L	M	L	H	L
24	20TD0823	MURALI KRISHNAN. G	H	H	L	H	H	H	H	H	H	H	L	M	H	L	H	L	H	L	H	L
25	20TD0824	NISHANTHI.K	H	H	H	H	H	H	H	H	H	H	L	M	M	L	H	L	H	L	H	L
26	20TD0825	NITHYA SRI.V	M	H	L	H	H	H	M	H	H	L	H	L	L	H	H	L	M	L	H	L
27	20TD0826	PRATHAP.V	M	L	H	H	H	H	M	H	H	L	L	M	H	L	H	L	M	L	H	L
28	20TD0827	PRAVEENKUMAR.V	H	H	H	H	H	H	M	H	H	L	H	L	H	L	L	M	L	H	H	L
29	20TD0828	PREETHISHA.M	H	H	H	H	H	H	H	H	H	H	H	L	H	H	H	L	H	L	H	L
30	20TD0829	PRITHIPA	H	H	H	L	H	H	H	L	H	H	L	M	H	L	H	L	H	L	H	L
31	20TD0830	PRIYADHARSHINI.M	H	H	H	H	H	H	M	H	H	L	H	L	L	H	L	H	M	L	H	L
32	20TD0831	RAMANA.S	H	H	H	H	H	H	H	H	H	H	L	M	H	L	H	L	H	L	H	L
33	20TD0832	RAMYA .M	H	H	H	M	L	H	H	H	H	H	L	M	L	M	H	L	H	L	L	H
34	20TD0833	ROHITH.V.S	H	H	H	M	H	H	H	H	H	H	M	L	H	L	L	H	H	L	H	L
35	20TD0834	SAKTHIVEL.A	H	H	M	M	H	H	H	H	H	H	M	L	L	M	H	L	H	L	H	L
36	20TD0835	SAKTHIVEL.P	H	H	M	M	H	H	H	H	H	H	L	M	H	L	H	L	H	L	H	L
37	20TD0836	SANTHIYA.S	H	H	M	M	H	H	H	H	H	H	L	M	H	L	H	L	L	L	H	L
38	20TD0837	SARASWATHIDEVI.S.	H	H	M	M	H	H	H	H	H	H	H	L	L	M	H	L	H	L	H	L
39	20TD0838	SARATHRAM.K	H	H	M	M	H	H	H	H	H	H	L	M	L	M	L	L	H	L	H	L
40	20TD0839	SHIYAM.M	H	M	M	M	H	H	H	H	H	H	H	L	H	L	H	L	H	L	H	L
41	20TD0840	SIVAPRAKASAM.M	H	M	H	M	H	H	H	H	H	H	L	M	H	L	H	L	M	L	H	L
42	20TD0841	SIVARAJ.N	H	M	H	M	H	H	H	H	H	H	M	L	L	M	H	L	M	L	H	L
43	20TD0842	SOMAYA DEEPAKRAJU.M	H	M	H	M	H	M	H	H	H	H	L	M	H	L	H	L	M	L	H	L
44	20TD0844	SOUNDARYA.V	H	M	H	M	H	M	M	H	H	H	L	M	M	L	H	L	M	L	H	L
45	20TD0845	SOWMIYA.D	H	M	H	M	H	M	M	H	H	H	L	M	M	H	H	L	M	L	H	L
46	20TD0846	THAMIZHARASAN.D	M	M	H	M	M	M	H	H	H	H	H	L	H	L	L	L	M	L	H	L
47	20TD0847	THIRUVARASAN.M	M	H	H	M	M	M	H	H	H	H	L	M	L	H	H	L	M	L	H	L
48	20TD0848	VIGNESH.M	M	M	M	M	M	M	M	M	H	L	H	L	M	L	H	L	M	L	M	L
49	20TD0849	VISHNUPRIYA.K	H	M	M	M	M	M	M	M	H	H	L	M	M	L	M	L	H	L	M	L
50	20TD0850	YUVARAJ.K	H	M	M	M	M	M	M	M	M	H	L	M	M	L	M	L	H	L	M	L
51	20TD0512	P.MANOJ KUMAR	H	M	M	M	M	M	M	M	M	H	L	M	M	L	M	L	M	L	M	L
52	20TD0521	SATHISH.M	M	M	M	M	M	M	M	M	M	H	L	M	M	L	M	L	M	L	M	L
53	20TD0511	MANISHA.M	M	M	M	M	M	M	M	M	M	H	L	M	M	H	H	L	M	L	M	L
54	20TD0516	PARITOSH BISWAS	M	M	M	M	M	M	M	M	M	H	H	L	M	L	L	L	M	L	M	L
55	20TD0509	HRITIKA ROY	M	M	M	M	M	M	M	M	M	H	L	M	L	H	M	L	M	L	M	L
56	20TD0523	SINDUJA.M	M	M	M	M	M	M	M	M	M	L	H	L	M	L	M	L	M	L	H	L
57	20TD0524	SNEHA LAKRA	H	M	M	H	H	M	H	M	M	H	L	M	M	L	M	L	H	L	H	L
58	20TD0522	SHARON THANKACHEN	H	M	H	H	H	M	H	H	H	H	L	M	M	L	M	L	H	L	H	L
		Maximum Mark 'H' Count :	39	31	33	30	45	42	38	46	50	47	18	3	27	14	39	4	27	2	46	4
		Medium Mark 'M' Count :	10	18	16	24	11	16	15	10	8	0	3	20	12	5	8	1	17	0	8	0
		Nil Mark 'L' Count :	0	1	1	1	1	0	0	1	0	6	20	13	9	21	6	30	2	32	1	32
		% of Max Marks :	78	64.6	68.8	65.2	93.8	84	76	95.8	100	97.9	90	10	90	70	88.6	66.7	56.3	0	95.8	0
		Attainment Levels :	2	2	2	2	3	3	2	3	3	3	3	0	3	2	3	2	1	0	3	0
		Average of Attainment :	2.80																			

Note: Convert the score for 100

RANGE	Mark Attainment
Student scoring < 50	L
Student scoring above 50 and below 55	M
Student scoring above 55 and below 60	H
Student scoring above 60	

% of range of H level attainment	CO Attainment
H scoring % < 50	0
H scoring % between 50 and 59	1
H scoring % between 60 and below 75	2
H scoring % above 75	3

Department of Computer Science and Engineering

Batch: 2020 - 2024

Internal Attainment -MODEL EXAM

Faculty Name :Mrs.K.ANDAL

% Level of Attainment: 80 %

Year / Sem : III/ V

		Subject Name with Code :	CS T52-Computer Networks																				
		Blooms Taxonomy (K1, K2, K3, K4, K5, K6) :	K1	K2	K2	K3	K1	K2	K3	K3	K2	K3	K2	K1	K2	K4	K1	K3	K2	K2	K2	K5
		Question Mapped to which Course Outcomes (Cos) :	CO1	CO1	CO2	CO2	CO3	CO3	CO4	CO4	CO5	CO5	CO1	CO1	CO2	CO2	CO3	CO3	CO4	CO4	CO5	CO5
		No. of Student attempted count :	50	50	48	48	48	50	50	48	48	46	10	40	20	30	20	8	30	10	30	10
			H - Full Marks				M - Half Marks					L - Nil Marks										
S.No.	Reg. No.	Name of the Students	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17	Q18	Q19	Q20
1	19TD1513	KARMEL AJAY	H	H	H	H	H	H	L	H	H	L	L	M	L	H	L	H	L	L	H	L
2	20TD0801	ABIMANIU.M	H	H	L	H	H	H	H	H	H	H	H	M	H	L	M	L	H	H	L	H
3	20TD0802	ABISHEK.K	H	H	L	H	H	H	L	H	H	L	L	M	L	H	M	L	M	L	H	L
4	20TD0803	AJAY.S	H	H	H	H	M	H	L	M	M	L	L	M	H	L	H	L	M	L	H	L
5	20TD0804	APSAR ALI.A	H	H	L	M	M	H	H	H	H	H	H	L	L	H	H	L	H	H	L	H
6	20TD0805	ARUL JENIFER.A	H	H	H	M	M	H	L	H	H	L	L	M	H	L	L	H	L	L	H	L
7	20TD0806	ARULSELVI.P	H	H	L	L	M	H	H	H	H	H	L	M	H	L	M	L	H	L	H	L
8	20TD0807	ARUNTHATHI.S	H	H	L	M	M	H	H	H	H	M	H	L	L	H	M	L	H	L	H	L
9	20TD0808	BARATH.R	H	H	L	M	M	H	H	M	H	H	L	M	H	L	L	H	L	L	H	H
10	20TD0809	DAVIDRAJ DOMINIQUE.V	H	H	L	M	M	H	H	H	H	H	L	M	L	H	M	L	H	L	M	L
11	20TD0810	DEVSRI.S	H	H	L	H	H	H	H	H	M	H	M	M	L	H	M	L	H	L	M	L
12	20TD0811	DHIVYA SRI.N	H	H	L	H	H	H	H	H	H	H	M	L	H	L	H	L	H	L	M	L
13	20TD0812	EZHILARASAN.P	H	H	L	H	H	H	H	M	M	H	L	H	L	H	L	H	L	L	M	L
14	20TD0813	GOKILASRI.G	H	H	L	H	H	H	H	H	H	H	L	H	L	H	M	L	H	L	H	L
15	20TD0814	GOWTHAM.S	H	H	H	H	H	H	L	H	H	L	L	H	H	L	M	L	M	L	M	L
16	20TD0815	HARIKRISHNAN.B	H	H	L	H	H	H	H	H	H	H	L	H	L	H	M	L	H	L	H	L
17	20TD0816	HARI PRASATH .S	H	H	L	H	H	H	H	H	M	M	L	H	H	L	H	L	L	H	L	H
18	20TD0817	HEMALATHA.M	H	H	L	H	H	H	H	M	H	H	L	H	L	H	M	L	H	L	M	L
19	20TD0818	JAGAN.S	H	H	L	H	H	H	H	H	M	H	L	H	L	H	M	L	H	L	M	L
20	20TD0819	JAYABALAJI.L	H	H	L	H	H	H	H	H	H	H	L	H	L	H	H	L	M	L	M	L
21	20TD0820	JAYACHANDIRAN.R	H	H	L	H	H	H	H	H	H	M	L	H	H	L	M	L	H	L	H	L
22	20TD0821	KEERTHIGA.A	H	H	L	H	H	H	H	H	H	H	L	H	L	H	H	L	M	L	M	L
23	20TD0822	KIRTHIVERSHA.M	H	H	L	H	H	H	H	H	H	H	L	H	M	L	M	L	M	L	H	L
24	20TD0823	MURALI KRISHNAN. G	H	H	H	H	H	H	L	H	H	L	L	H	L	H	M	L	M	L	H	L
25	20TD0824	NISHANTHI.K	H	H	L	H	H	H	H	H	H	H	L	H	M	L	H	L	H	L	H	L
26	20TD0825	NITHYA SRI.V	H	H	H	H	H	H	L	H	H	L	L	H	L	H	L	H	L	L	H	L
27	20TD0826	PRATHAP.V	H	H	L	H	H	H	H	H	H	H	H	H	H	L	M	L	H	H	L	H
28	20TD0827	PRAVEENKUMAR.V	H	H	L	H	H	H	L	H	H	L	L	H	L	H	M	L	M	L	H	L
29	20TD0828	PREETHISHA.M	H	H	H	H	H	H	L	M	M	L	L	H	H	L	H	L	M	L	H	L
30	20TD0829	PRITHIPA	H	H	L	H	H	H	H	H	H	H	H	L	L	H	H	L	H	H	L	H
31	20TD0830	PRIYADHARSHINI.M	H	H	H	H	H	H	L	H	H	L	L	M	H	L	L	H	L	L	H	L
32	20TD0831	RAMANA.S	H	H	L	L	H	H	H	H	H	H	L	M	H	L	M	L	H	L	H	L
33	20TD0832	RAMYA.M	H	H	L	H	H	H	H	H	H	M	H	L	L	H	M	L	H	L	H	L
34	20TD0833	ROHITH.V.S	H	H	L	H	H	H	H	M	H	H	L	M	H	L	L	H	L	H	L	H
35	20TD0834	SAKTHIVEL.A	M	H	L	H	L	H	H	H	H	H	L	M	L	H	M	L	H	L	M	L
36	20TD0835	SAKTHIVEL.P	M	H	L	H	H	H	H	H	M	H	M	M	L	H	M	L	H	L	M	L
37	20TD0836	SANTHIYA.S	M	H	L	H	H	H	H	H	H	H	M	L	H	L	M	L	H	L	M	L
38	20TD0837	SARASWATHIDEVI.S	M	H	L	H	H	H	H	M	M	H	L	H	L	H	L	H	L	H	L	H
39	20TD0838	SARATHIRAM.K	M	H	L	H	H	H	H	H	H	H	L	H	L	H	M	L	H	L	H	L
40	20TD0839	SHIYAM.M	M	H	H	M	H	H	L	H	H	L	L	M	H	L	M	L	M	L	M	L
41	20TD0840	SIVAPRAKASAM.M	M	H	M	M	M	H	H	H	H	H	L	M	L	H	M	L	H	L	H	L
42	20TD0841	SIVARAJ.N	H	M	M	M	M	M	H	H	M	M	L	M	H	L	H	L	L	H	L	H
43	20TD0842	SOMAYA DEEPAKRAJU.M	H	M	M	M	M	M	H	M	H	H	L	M	L	H	M	L	H	L	M	L
44	20TD0844	SOUNDARYA.V	H	M	M	M	M	M	H	M	M	H	L	M	L	H	M	L	H	L	M	L
45	20TD0845	SOWMIYA.D	H	M	M	M	M	M	H	M	H	H	L	M	L	H	H	L	M	L	M	L
46	20TD0846	THAMIZHARASAN.D	H	M	M	M	M	M	H	M	H	M	L	M	H	L	M	L	H	L	H	L
47	20TD0847	THIRUVARASAN.M	H	M	M	H	M	H	H	M	H	H	L	M	L	H	H	L	M	L	H	L
48	20TD0848	VIGNESH.M	H	M	M	M	H	H	H	M	H	H	L	M	M	L	M	L	M	L	H	L
49	20TD0849	VISHNUPRIYA.K	H	M	H	M	M	M	L	M	H	L	L	M	L	H	M	L	M	L	H	L
50	20TD0850	YUVARAJ.K	H	H	L	M	M	M	M	M	M	H	L	M	M	L	H	L	H	L	H	L
51	20TD0512	P.MANOJ KUMAR	H	H	M	M	M	M	M	M	M	H	L	H	L	H	H	L	M	L	M	L
52	20TD0521	SATHISH.M	H	H	M	M	M	M	M	M	M	M	L	H	H	L	M	L	H	L	H	L
53	20TD0511	MANISHA.M	M	M	M	M	M	M	M	M	M	H	L	M	L	M	H	L	M	L	M	L
54	20TD0516	PARITOSH BISWAS	M	M	M	M	M	M	M	M	M	H	L	M	M	L	M	L	M	L	M	L
55	20TD0509	HRITIKA ROY	M	M	M	M	M	M	L	M	M	L	L	M	L	M	M	L	M	L	H	L
56	20TD0523	SINDUJA.M	H	M	L	M	M	M	H	M	M	H	L	M	M	L	H	L	H	L	M	L
57	20TD0524	SNEHA LAKRA	H	M	H	M	H	M	L	M	H	L	L	M	L	M	M	L	M	L	M	L
58	20TD0522	SHARON THANKACHEN	H	H	L	M	H	H	H	H	H	H	L	M	M	L	H	L	H	L	M	L
		Maximum Mark 'H' Count :	48	45	11	33	35	44	39	36	41	37	6	21	19	29	16	8	29	10	28	10
		Medium Mark 'M' Count :	10	13	13	23	22	13	5	22	17	7	4	31	7	3	34	0	19	0	20	0
		Nil Mark 'L' Count :	0	0	34	2	1	0	14	0	0	14	48	6	32	26	8	50	10	48	10	48
		% of Max Marks :	96	90	22.92	68.75	72.92	88	78	75	85.42	80.43	60	52.5	95	96.67	80	100	96.67	0	93.33	0
		Attainment Levels :	3	3	0	2	2	3	2	2	3	3	1	1	3	3	3	3	3	0	3	0
		Average of Attainment :	2.87																			

Note: Convert the score for 100

RANGE	Mark Attainment
Student scoring < 50	L
Student scoring above 50 and below 55	M
Student scoring above 55 and below 60	H
Student scoring above 60	

% of range of H level attainment	CO Attainment
H scoring % < 50	0
H scoring % between 50 and 59	1
H scoring % between 60 and below 75	2
H scoring % above 75	3

srivenkateshwaraa college of Engineering & Technology

AIMING TO EXCEL

Department of Computer Science and Engineering

Batch: 2020 - 2024

External Attainment - University Exam

Faculty Name : Mrs.K.ANDAL

Year / Sem : III/ V

		Subject Name with Code :	CS T52-Computer Networks
S.No.	Reg. No.	Name of the Students	SUBJECT GRADE
1	19TD1513	KARMEL AJAY	C
2	20TD0801	ABIMANIU .M	B
3	20TD0802	ABISHEK.K	C
4	20TD0803	AJAY.S	B
5	20TD0804	APSAR ALI.A	C
6	20TD0805	ARUL JENIFER.A	A
7	20TD0806	ARULSELVI.P	C
8	20TD0807	ARUNTHATHI.S	B
9	20TD0808	BARATH.R	B
10	20TD0809	DAVIDRAJ DOMINIQUE.V	E
11	20TD0810	DEVSRI.S	A
12	20TD0811	DHIVYA SRI.N	B
13	20TD0812	EZHILARASAN.P	B
14	20TD0813	GOKILASRI.G	B
15	20TD0814	GOWTHAM.S	E
16	20TD0815	HARIKRISHNAN.B	A
17	20TD0816	HARI PRASATH .S	C
18	20TD0817	HEMALATHA.M	B
19	20TD0818	JAGAN.S	B
20	20TD0819	JAYABALAJI.L	C
21	20TD0820	JAYACHANDIRAN.R	F
22	20TD0821	KEERTHIGA.A	D
23	20TD0822	KIRTHIVERSHA.M	B
24	20TD0823	MURALI KRISHNAN. G	B
25	20TD0824	NISHANTHI.K	B
26	20TD0825	NITHYA SRI.V	B
27	20TD0826	PRATHAP.V	B
28	20TD0827	PRAVEENKUMAR.V	F
29	20TD0828	PREETHISHA.M	B
30	20TD0829	PRITHIPA	A
31	20TD0830	PRIYADHARSHINI.M	B
32	20TD0831	RAMANA.S	B
33	20TD0832	RAMYA. M	C
34	20TD0833	ROHITH.V.S	F
35	20TD0834	SAKTHIVEL.A	E
36	20TD0835	SAKTHIVEL.P	F
37	20TD0836	SANTHIYA.S	E
38	20TD0837	SARASWATHIDEVI.S.	C
39	20TD0838	SARATHRAM.K	C
40	20TD0839	SHIYAM.M	C
41	20TD0840	SIVAPRAKASAM.M	B
42	20TD0841	SIVARAJ.N	C
43	20TD0842	SOMAYA DEEPAKRAJU.M	C
44	20TD0844	SOUNDARYA.V	A
45	20TD0845	SOWMIYA.D	C
46	20TD0846	THAMIZHARASAN.D	C
47	20TD0847	THIRUVARASAN.M	C
48	20TD0848	VIGNESH.M	C
49	20TD0849	VISHNUPRIYA.K	B
50	20TD0850	YUVARAJ.K	A
51	20TD0512	P.MANOJ KUMAR	F
52	20TD0521	SATHISH.M	B
53	20TD0511	MANISHA.M	C
54	20TD0516	PARITOSH BISWAS	C
55	20TD0509	HRITIKA ROY	C
56	20TD0523	SINDUJA.M	B
57	20TD0524	SNEHA LAKRA	B
58	20TD0522	SHARON THANKACHEN	B
		Maximum Mark 'S, A, B,C' Count :	48
		Medium Mark 'D,E' Count :	5
		Nil Mark 'F' Count :	5
		% of Max Marks :	82.76
		Attainment Levels :	3

% of range of H level attainment	CO Attainment Level
H scoring % < 50	0
H scoring % between 50 and 59	1
H scoring % between 60 and below 7	2
H scoring % above 75	3

srivenkateshwaraa
College of Engineering & Technology
(Approved by AICTE, New Delhi & Affiliated to Pondicherry University, Puducherry)
13-A, Pondy - Villupuram Main Road, Ariyur, Puducherry - 605 102.
ASPIRE TO EXCEL
ISO 21001

Department of Computer Science and Engineering

Batch : 2020 - 2024

CO Attainments			
	Avg. Attainment		Total
Internal	0.75	2.80	2.10
External	0.25	3.00	0.75
Final CO Attainments			**2.85**
% CO Attainments			**95.00**

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13-A, Pondy Villipuram Main Road, Ariyur, Puducherry – 605102
Phone: 0413-2644426, Fax: 2644424

Faculty Assessment Record

Name of the Staff : Mrs. K. ANDAL

Department : Computer Science & Engineering

Designation : Assistant Professor

Sub Code / Subject : C.S.T.52 / Computer Networks

Semester / Branch : V / CSE

Academic Year : 2022 - 2023

FACULTY ASSESSMENT RECORD

sri venkateshwaraa

College of Engineering & Technology

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University, Pondicherry)
13-A, Pondy Villipuram Main Road, Ariyur, Puducherry – 605102
Phone: 0413-2644426, Fax: 2644424

Faculty Assessment Record

Name of the Faculty : Mrs. K. ANDAL

Department : Computer Science & Engineering

Designation : Assistant professor

Sub Code / Subject : CST52 / Computer Networks

Semester / Branch : V / CSE

Academic Year : 2022 - 2023

Workload	Unit - I	Unit - II	Unit - III	Unit - IV	Unit - V	End of the semester
Proposed period	12	12	12	12	12	60
Handled periods	12	12	12	12	12	60
Staff in charge	27/10/22	25/11	7/12/22	27/12/22	5/1/23	5/1/23
HOD	27/10/22	25/11	5/12/22	27/12/22	5/1/23	5/1/23
Principal						

FACULTY ASSESSMENT RECORD

TIME TABLE

Period/Time	1	2	TEA BREAK	3	4	LUNCH BREAK	5	6	TEA BREAK	8	9
Day order											
I	PT										
II	CN						PT				
III	PT	CN		PT			PLACEMENT			PLACEMENT	
IV					CN		PT	← CN	LAB	→	→
V		CN					PT	← PT LAB		→	
VI											

STAFF INDIVIDUAL WORK LOAD

WORK LOAD	Department	Year/sem	Sub.Name	Sub.Code	No.of periods
Lab-I	CSE	III / V	CN	CSP52	3
Lab-II	CSE	IV / VII	PT	CSP73	3
Lab-III	CSE	III / VI	PLACEMENT		3
Lab-IV					
Other Activity					
Month-1					
Month-2					
Month-3					
Month-4					
Month-5					
Month-6					

SUBJECT HANDLER HOD 28/9/17 DEAN PRINCIPAL

SRI VENKATESHWARAA
COLLEGE OF ENGINEERING & TECHNOLOGY
(Approved by AICTE, New Delhi & Affiliated to Pondicherry University, Pondicherry)
13-A, Pondy Villipuram Main Road, Ariyur, Puducherry – 605102
Phone: 0413-2644426, Fax: 2644424/ Website : WWW.sweetpondy.com

Department Vision

To achieve academic excellence in Computer Science and Engineering by imparting in depth knowledge to the students, facilitating research activities and cater to the ever changing industrial demands and societal needs.

Department Mission

To provide exposure to students to the latest tools and technologies in the area of computer hardware and software.
To establish industry institute interaction to make students ready for the industrial environment.
To provide quality engineering education to the students through state of art education
To promote research based project/activities in the emerging areas of technology convergence and serve the needs of industry, government, society and the scientific community
To develop human potential to its fullest extent so that intellectually capable and optimistic leaders can emerge in range of professions.

Programme Educational Objectives (PEOs

Practice as computing professionals (appropriate to the description of the Computer Science and Engineering program described above), conducting research and/or leading, designing, developing, or maintaining projects in various technical areas

Apply the ethical and social aspects of modern computing technology to the design, development, and usage of computing artifacts

Enhance their skills and embrace new computing technologies through self-directed professional development and post-graduate training or education.

Programme Outcomes (POs)

PO1 - Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2 - Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3 - Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4 - Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5 - Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6 - The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7 - Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8 - Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9 - Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10 - Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions

PO11 - Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12 - Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

Programme Outcomes (POs)	
PS01	An ability to analyze a problem, and identify and define the computing requirements appropriate to solution
PS02	An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in
PS03	~~An ability to apply design and development principles in the construction of software systems of varying complexity~~

Course Outcomes (COs)

Units	Course Outcome	Bloom's Taxonomy Knowledge Level (K1-K6)
Unit I	ANALYZE REQ. OF VARIOUS H/W COMPONENTS	K4
Unit II	ANALYZE WORKING CONDITION OF N/W DATA LINK PROTOCOLS	K4
Unit III	ROUTING PROTOCOLS STUDY & UNDERSTAND	K2 & K3
Unit IV	UNDERSTAND LOAD CHAR. AND N/W TRAFFIC COND. DECIDE TRANSPORT PROTOCOLS	K2
Unit V	SECURITY PROTOCOLS STUDY	K3

POs Mapping with COs:

Course Outcomes	Programme Outcomes (POs)												PSO (1-5)		
CO-1	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO-2	H	M	N	H	H	M	M	H	H	H	H	H	H	M	M
CO-3	H	H	H	M	L	M	M	M	L	H	H	H	H	M	H
CO-4	N	M	M	H	H	M	M	H	L	H	H	L	L	H	H
CO-5	M	H	M	N	H	H	M	M	H	H	M	L	H	H	L
CO-6	H	H	N	H	M	N	H	H	H	M	M	N	H	H	M
CO-7															
CO-8															
CO-9															
CO-10															

N-No ContributionL – Low Contribution M – Medium Contribution H – High Contribution

SYLLABUS

Subject Code	Subject Name	Lectures (Periods)	Tutorial (Periods)	Practical (Periods)
CS T52	COMPUTER NETWORKS	3	1	-

UNIT – I

Introduction – Uses – Network hardware – software – reference models – example networks – Theoretical basis for communication – transmission media – wireless transmission – Communication satellites

UNIT – II

Data link layer – design issues – Services - Framing - Error Control - Flow Control - Error detection and correction codes - data link layer protocols -Simplex Protocol – Sliding window Protocols - Medium Access control sublayer – Channel allocation problem – Multiple Access protocols – ALOHA – CSMA Protocols - Collision-Free Protocols - Limited-Contention Protocols - Wireless LANs - 802.11 Architecture - 802.16 Architecture – Data link layer Switching - Uses of Bridges - Learning Bridges - Spanning Tree Bridges - Repeaters, Hubs, Bridges, Switches, Routers, and Gateways - Virtual LANs.

UNIT – III

Network layer – design issues – Routing algorithms - The Optimality Principle - Shortest Path Algorithm – Flooding - Distance Vector Routing - Link State Routing - Hierarchical Routing - Broadcast Routing - Multicast Routing Congestion Control – Approaches - Traffic-Aware Routing - Admission Control - Traffic Throttling - Load Shedding – Internetworking - Tunneling - Internetwork Routing - Packet Fragmentation - IP v4 - IP Addresses – IPv6 - Internet Control Protocols – OSPF - BGP

UNIT – IV

Transport layer - Services - Berkeley Sockets -Example – Elements of Transport protocols – Addressing - Connection Establishment - Connection Release - Flow Control and Buffering – Multiplexing – Congestion Control - Bandwidth Allocation - Regulating the Sending Rate –UDP- RPC – TCP - TCP Segment Header - Connection Establishment - Connection Release - Transmission Policy - TCP Timer Management - TCP Congestion Control

UNIT – V

Application Layer – DNS – Name space – Resource records – name servers – e-mail - Architecture and Services - The User Agent - Message Formats - Message Transfer - Final Delivery – WWW – Architecture - Static Web Pages - Dynamic Web Pages and Web Applications - HTTP – Network Security - Introduction to Cryptography - Substitution Ciphers - Transposition Ciphers – Public key algorithms – RSA – Authentication Protocols - Authentication Using Kerberos.

TOTAL PERIODS: 60

Text Books:

1. Tanenbaum,A.S. and David J. Wetherall "Computer Networks", 5th ed., Prentice Hall, 2011,

Reference Books:

1. Larry L. Peterson and Bruce S. Davie, "Computer Networks- A system approach", 5th edition, ELSEVIER, 2012
2. Stallings, W., 'Data and Computer Communications', 10th Ed., Prentice Hall Int. Ed., 2013
3. James F. Kurose and Keith W. Ross, "Computer Networking: A Top-Down Approach Featuring the Internet", Pearson Education, Third edition, 2006.

Website:

1. http://depa.usst.edu.cn/chenjq/www2/wl/ComputerNetworksTanenbaum.htm
2. http://booksite.mkp.com/9780123850591/lec.php
3. http://williamstallings.com/DataComm/DCC10e-Student/

SUBJECT INCHARGE HOD DEAN PRINCIPAL

Course Plan: **Course Code:** **Course Title:**

S.No.	Proposed Date	Hours	Unit	Topic(s)	COs	Mode of Delivery	Actual Date of Topic Covered	Reason for Deviation (if any)	Staff Sign
1.		3	I	UNIT-I Introduction : Uses		BB	8-10-2022		
2.		3	I	Network hardware		BB	10-10-2022		
3.		6	II	Software		BB	10-10-2022		
4.		2	I	Refrence models example networks		BB	12-10-2022		
5.		4	I	TUTORIAL - I		PPT	13-10-2022		
6.		2	I	Theoretical basis for com.		BB	14-10-2022		
7.		3	I	Transmission media		BB	17-10-2022		
8.		4	I	TUTORIAL - II		BB	20-10-2022		
9.		2	I	wireless transmission		PPT	21/10/2022		
10.		2	I	communication Satellites		BB	25/10/22		
11.		2	I	Reference models example networks		BB	27/10/22		
12.		4	I	TUTORIAL - III		PPT	27/10/22		

1.	-	2	III	UNIT-II Data link layer: designissues	K4	BB	28/10/22		cdy
2.		2	II	services, Framing	K4	BB	29/10/22		cdy
3.		1	II	TUTORIAL - I		PPT	2/11/22		cdy
4.		4	II	ERROR CONTROL FLOW CONTROL	K2	BB	3/11/22.		cdy
5.		3	II	Error detection and correction	K4	BB.	14/11/22		cdy
6.		2	II	TUTORIAL - II		PPT	16/11/22		cdy
7.		4	II	Data link layer protocol Simplex protocol	K4	BB	17/11/22		cdy
8		2	II	Sliding window protocol, medium access control sublayer channel allocation problem	K4	BB	18/11/22		cdy
9.		4	II	Multiple access protocols ALOHA, CSMA protocols	K4	BB	21/11/22		cdy
10.		1	II	collision-free protocols, limited contention protocol, wireless LANS	K4	BB	22/11/22		cdy
11.		2	II	802.16 architecture, data link layer, switching, Routers hubs, bridge, switches, Router	K4	BB	23/11/22		cdy
12.		2	II	uses of bridge, learning bridges, spanning tree bridges, virtual LANs	K4	PPT	25/11/22		cdy
			II						

				UNIT-III					
1.		2	III	Network layer: design issues Routing algorithms	K4	BB	26/11/22		CH 26/11
2.		3	III	The optimality principle shortest path algorithm Flooding	K4	BB	28/11/22		CH 26/11
3.		1	III	Distance Vector Routing Link State Routing	K4	BB	29/11/22		CH 29/11
4.		2		TUTORIAL - I		PPT	30/11/22		CH 30/11
5.		4	III	Hierarchical Routing Broadcast Routing	K4	BB	1/12/22		CH 1/12
6.		2	III	Multicast Routing Congestion control approach Traffic - aware Routing	K5	BB	2/12/22		CH 2/12
7.		3	III	admission control Traffic Throttling Load Shedding	K2	PPT	5/12/22		CH 5/12
8.		5		TUTORIAL - II		BB	5/12/22		CH 5/12
9.		1	III	Internetworking Traffic Tunneling, Routing	K4	PPT	6/12/22		CH 6/12
10.		4	III	Packet Fragmentation IP v4, IP address, IPv6	K4	BB	6/12/22		CH 6/12
11.		5	III	Internet control protocol OSPF, BGP	K4	BB	6/12/22		CH 6/12
12.		4	III	TUTORIAL - III		PPT	7/12/22		CH 7/12

7/12/22

				UNIT – IV					
1.	4	4	IV	Transport layer Services Berkley sockets	K2	BB	31/12/22		
2.		1	IV	Example, Elements of Transport protocols, addressing	K2	BB	17/12/22		
3.		2		TUTORIAL-I		PPT	17/12/22		
4.		3	IV	Connection Establishment connection Release, flow control	K3	BB	20/12/22		
5.		4	IV	Multiplexing Congestion control	K2	PPT	20/12/22		
6.		5		TUTORIAL-II		BB	20/12/22		
7.		6	IV	Bandwidth allocation Regulating the sending rate	K3	BB	20/12/22		
8.		7	IV	UDP, RPC, TCP TCP segment header	K3	PPT	20/12/22		
9.		8	IV	Connection establishment connection Release, Transmission policy	K3	PPT	20/12/22		
10.		5	IV	TCP Timer management	K2	BB	27/12/22		
11.		6	IV	TCP congestion control	K2	BB	27/12/22		
12.		7		TUTORIAL-III		PPT	27/12/22		

				UNIT - V					
1.		8	V	Application layer: DNS name-space	K3	BB	27/12/22		
2.		1	V	Name servers, e-mail Resource records	K3	BB	31/12/22		
3.		5	V	Architecture and services The user agent, Message formats	K3	BB	4/1/23		
4.		6	V	Message transfer Final delivery WWW Architecture	K4	BB	4/1/23		
5.		7		TUTORIAL-I		PPT	4/1/23		
6.		8	V	Static web pages dynamic web page and web applications HTTP	K3	BB	4/1/23		
7.		5	V	Network security. Intro to cryptography substitution ciphers	K2	BB	5/1/23		
8.		5		TUTORIAL - II		PPT	5/1/23		
9.		6	V	Public key algorithms RSA	K3	BB	5/1/23		
10.		7	V	Authentication protocol Authentication using kerberos	K3	BB	5/1/23		
11.		8	V	Architecture and services	K3	BB	5/1/23		
12		8		TUTORIAL - III		PPT	5/1/23		

5/1/23

S. No.	Name of the Student with Reg. No.	Month	October										
		Date	8/10	10/10	11/10	12/10	13/10	14/10	17/10	18/10	20/10	21/10	HT
		Hour	3	3&4	1	2	4	2	3	1	4	2	
1	Karmel Ajay		a	a	a	a	a	a	a	a	a	/	
2	Abimanju	.M	/	/	/	/	a	/	/	/	a	/	
3	Abishek	.K	a	a	a	/	a	a	a	a	a	/	
4	Ajay	.S	OD	/	/	/	/	/	/	/	a	/	
5	Akbar Ali		/	/	/	/	a	a	a	/	/	/	
6	Arul jenifer	.A	/	/	/	/	/	/	/	/	a	/	
7	Arulselvi	.P	/	a	a	/	/	/	a	/	/	/	
8	Aruunthathi	.S	/	/	/	/	a	/	/	/	/	/	
9	Barath	.R	/	/	/	/	/	/	/	a	/	/	
10	Davidraj Dominique	.V	a	a	a	a	a	a	a	a	a	/	
11	Devsri	S	/	/	/	/	/	/	/	/	/	/	
12	Dhivyasri	.N	a	/	/	/	/	a	/	/	/	/	
13	Ezhilarasan	.P	/	/	/	/	/	/	/	/	a	/	
14	Gokulasri	.G	/	/	/	/	/	/	/	/	a	/	
15	Gowtham	.S	a	/	/	/	/	/	/	/	/	/	
16	Harikrishnan	.B	/	/	/	/	/	/	/	/	a	/	
17	Hari Prasath	.S	a	/	/	/	/	/	/	/	a	/	
18	Hemalatha	.M	a	/	/	/	/	/	/	/	a	/	
19	Jagan	.S	a	/	/	/	/	/	/	/	a	/	
20	Jayabalaji	.L	a	/	/	/	/	a	/	/	/	/	
21	Keerthika	.A	a	a	a	a	a	a	a	a	a	/	
22	Kiruthiversha	.M	/	/	/	/	/	/	/	/	/	/	
23	Murali Krishnan	.G	/	/	/	/	/	/	/	/	a	/	
24	Nishanthi	.K	/	/	/	/	a	a	/	/	a	/	
25	Nithiyasri	.V	/	/	/	/	/	/	/	/	/	/	
26	Prathap	.V	a	/	/	/	a	/	/	/	/	/	
27	Praveen Kumar	.V	a	a	/	/	a	a	a	a	a	/	
28	Preethisha	.M	a	a	a	a	a	a	a	a	a	/	
29	Prithipa	.A	/	/	/	/	/	a	/	/	/	/	
30	Priyadharshini	.M	/	/	a	/	/	/	/	/	/	/	
31	Ramana	.S	/	/	a	/	/	a	/	/	/	/	
32	Ramya	.M	/	/	a	/	/	/	/	/	/	/	
NO OF PRESENT													
NO OF ABSENT													
SIGN OF THE STAFF													

							CIA I Exam		
26/10	27/10	27/10	28/10	29/10	2/11	3/11	8/11	14/11	16/11
2	2	4	2	2	1	4		5	2
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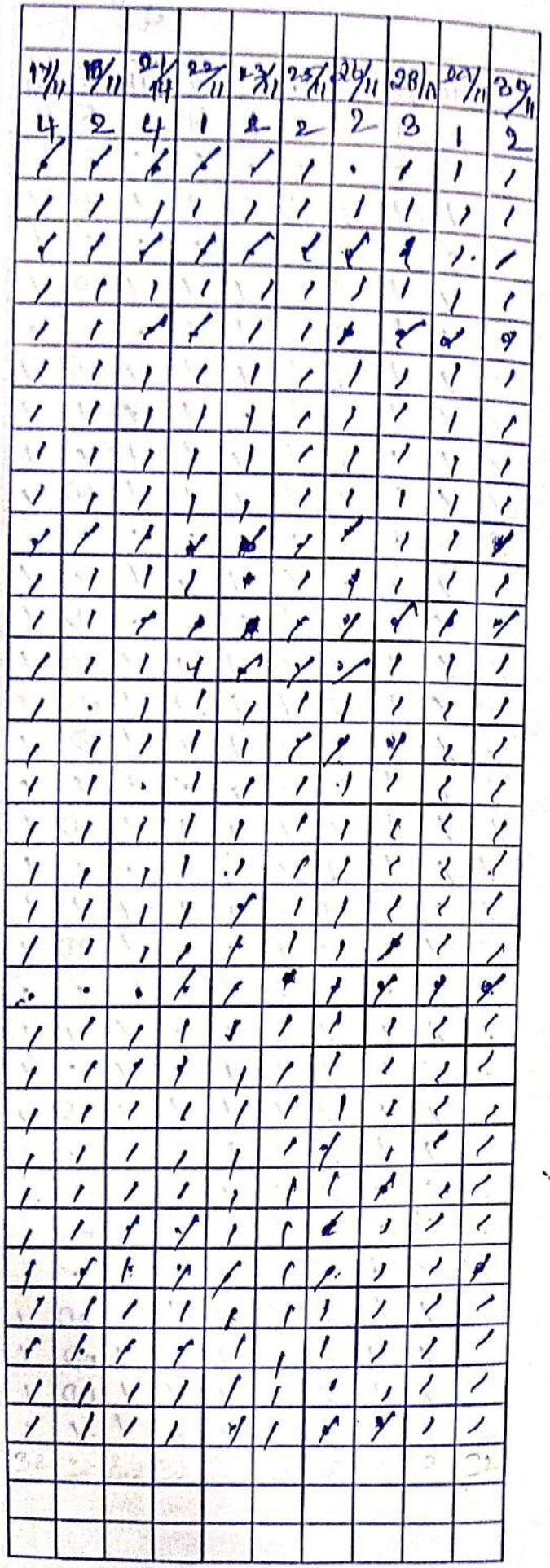
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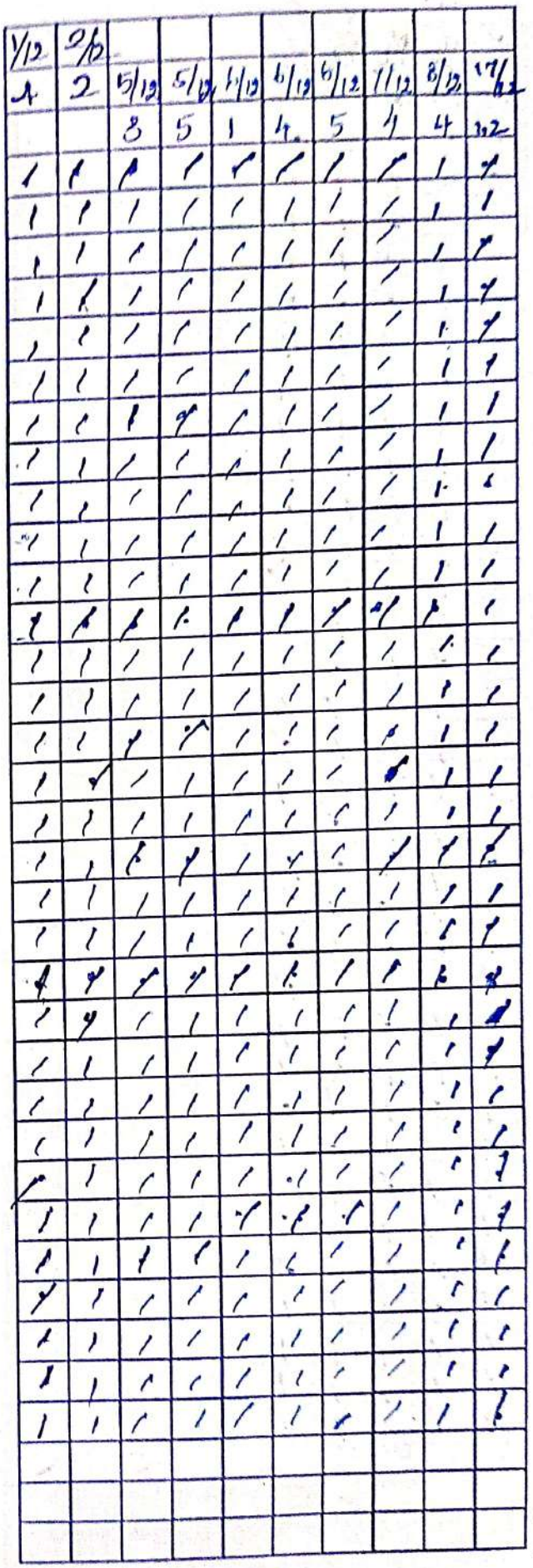
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S. No.	Name of the Student with Reg. No.	Month	OCTOBER										
		Date	8/10	9/10	11/10	12/10	13/10	14/10	17/10	18/10	20/10	21/10	
		Hour	3	3,6	1	2	4	2	3	1	4	2	
33	Rohith .V.S		a	a	a	a	a	a	a	a	a	✓	
34	Sakthivel .A		/	/	/	/	/	/	a	a	a	✓	
35	Sakthivel .P		a	a	a	a	a	a	/	/	a	✓	
36	Santhiya .S		a	a	a	a	a	a	a	a	a	✓	
37	Saraswathidevi .S		a	/	/	/	/	/	/	/	/	✓	
38	Sarathkam .K		/	/	a	/	/	/	/	/	/	✓	
39	Shijam .M		OD	/	/	/	a	/	/	/	a	/	
40	Sivaprakasam .M		a	a	/	/	a	/	/	/	a	✓	
41	Suraj .N		a	a	a	a	a	a	a	a	a	✓	
42	Somaya Deepak Raju .M		a	/	/	/	/	/	/	/	/	/	
43	Soundarya .V		/	/	/	/	/	/	/	/	a	✓	
44	Sowmiya .D		/	/	/	a	/	/	/	/	/	✓	
45	Thamizharasan .D		/	/	/	/	/	/	/	/	/	✓	
46	Thirumarasan .M		/	/	/	a	a	/	/	/	a	/	
47	Vignesh .M		/	/	/	/	/	/	/	/	/	/	
48	Vishnu priya .K		/	/	/	a	/	/	/	/	/	✓	
49	Yuvaraj .K		a	/	/	/	/	/	/	/	a	/	
50	Jayachandran .L		a	a	a	/	/	a	/	/	/	✓	
51	Hrithika Ray		/	/	/	/	/	/	/	/	/	/	
52	Manisha		/	/	/	/	/	/	/	/	/	/	
53	Manoj kumar		/	/	/	/	/	/	/	/	/	/	
54	Paritosh Biswas		/	/	/	/	/	/	/	/	/	/	
55	Sathish		/	/	/	/	/	/	/	/	/	/	
56	Sharon M. Thomachen		/	/	/	/	/	/	/	/	/	/	
57	Sindhuja		/	/	/	/	/	/	/	/	/	/	
58	Sneha Lavva		/	/	/	/	/	/	/	/	/	/	
59													
60													
61													
62													
63													
64													
NO OF PRESENT			36	46	36	43	40	42	48	47	31	58	
NO OF ABSENT			22	12	18	15	18	16	13	11	27		
SIGN OF THE STAFF													

26/10	27/10	27/10	28/10	29/10	2/11	3/11	8/11	14/11	15/11
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58	58	58	58	58	58	58	58	58	58

						% Of Attendance

S. No.	Name of the Student with Reg.
33	Rohith
34	Sakthivel
35	Sakthivel
36	Santhiya
37	Saraswathidevi
38	Sarathram
39	Shiyam
40	Sivaprakasam
41	Sivaraj
42	Somaiya Deepak Ra
43	Soundarya
44	Soumiya
45	Thamizharasan
46	Thiruvarasan
47	Vignesh.
48	Vishnu priya
49	Yuvaraj
50	Jayachandran
51	Hrithika Ray
52	Manisha
53	Manoj kumar
54	Paritosh Biswas
55	Sathish
56	Sharon M. Thenkachen
57	Sindya
58	Sneha Lavra
59	
60	
61	
62	
63	
64	
NO OF PRESENT	
NO OF ABSENT	
SIGN OF THE STAFF	

CIA2 2 marks model.

20/12	27/12	31/12	4/1	5/1					
3-8	5-8	1	5-8	5-8					
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58	58	58	58	58					

SEMINAR FOR THE STUDENT

REG. NO	NAME OF THE STUDENT	Date	SEMINAR TOPIC	MARKS
1.	Kaxmel Ajay	08/10/22	Network defi types.	9
2.	Abimanin .M	8/10/22	Network def & types	9
3.	Abishek .K	8/10/22	Network def & types	9
4.	Ajay .S	10/10/22	Network topology	9
5.	Asar Ali	10/10/22	Network topology	9
6.	Arul jenifer .A	10/10/22	Network topology	9
7.	Arul selvi .P	13/10/22	Network devices	9
8.	Arunbathi .S	13/10/22	Network devices	9
9.	Barath .R	13/10/22	Network devices	9
10.	Davidraj Dominquev	17/10/22	Network protocol	9
11.	Devasri .S	17/10/22	Network protocols	9
12.	Dhivyasri .N	17/10/22	Network protocols	9
13.	Ehilarasan .P	20/10/22	Network Architech.	9
14.	Gokilasri .G	20/10/22	Network Architectures	9
15.	Gowtham .S	20/10/22	Network Architectures	9
16.	Hari Krishnan .B	27/10/22	Network threads	9
17.	Hari Prasath .S	27/10/22	Network threats	9
18.	Hemalatha .M	27/10/22	Network threats	9
19.	Jagan .S	29/10/22	Network security	8
20.	Jayabalaji .L	29/10/22	Network security	8
21.	Kavithika .A	29/10/22	Network Security	8
22.	Kirthiversha .M	3/11/22	Access control	9
23.	Murali Krishnan	3/11/22	Access control	9
24.	Nishanthi .K	3/11/22	Access control	9
25.	Nithiyasri .V	14/11/22	Wirless Networking	8
26.	Prathap .V	14/11/22	Wirless Networking	8
27.	Praveen Kumar .V	14/11/22	Wirless Networking	8
28.	Preethisha .M	17/11/22	Wireless security	9
29.	Prithiga .A	17/11/22	Wireless Security	9
30.	Priya dharshini M	17/11/23	Wirless security	9
31.	Ramana .S	21/11/22	Wirless configuration	8
32.	Ramya .M	21/11/22	Wireless Configuration	8
33.	Rohith .V.S	21/11/22	Wireless Configuration	8

FACULTY INCHARGE HOD PRINCIPAL

SEMINAR FOR THE STUDENT

REG. NO	NAME OF THE STUDENT	Date	SEMINAR TOPIC	MARKS
34.	Sakthiivel · A	23/11/22	Virtual Private Netwo	9
35.	Sakthiivel · P	23/11/22	Virtual Private Network	9
36.	Santhiya · S	23/11/22	Virtual Private Network	9
37.	Sarasiwathidur · S	26/11/22	cloud computing	10
38.	Sarathkiram · K	26/11/22	cloud computing	10
39.	Shijam · M	26/11/22	cloud computing	10
40.	Sivaprakasam · M	29/11/22	cloud Networking	7
41.	Sivaraj · N	29/11/22	cloud Networking	9
42.	Sowmaya deepak raju	29/11/22	Cloud Networking	9
43.	Soundarya · V	1/12/22	software definedNet	8
44.	Sowmiya · D	1/12/22	software defined Net	8
45.	Thamizharasan · D	1/12/22	software defined Net	8
46.	Thiruvarasan · M	5/12/22	Network function	9
47.	Vignesh · M	5/12/22	Network function	9
48.	Vishnu Priya · K	7/12/22	Network performance	10
49.	Yuvaraj · K	7/12/22	Network performan	10
50.	Jayachandran	7/12/22	Network performance	10
51.	Hrithika Ray	17/12/22	communication Protocols	9
52.	Manisha	17/12/22	communication protocols	9
53.	Manoj kumar	20/12/22	Transmission Media	8
54.	Paritosh Srivas	20/12/22	Transmission Media	8
55.	Sathish	27/12/22	Internetworking Concepts	9
56.	Shaurya M. Thapkachen	27/12/22	Internetworking concepts	9
57.	Sindiya	31/12/22	Network Devices	8
58.	Sneha Lakra	31/12/22	Network devices	8
59.				
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FACULTY INCHARGE HOD PRINCIPAL

REG. NO	NAME	PRACTICE TEST							ASSIGNMENT				
		1	2	3	4	5	6	7	1	2	3	4	5
		11/10	18/10										
1.	Karmeh Ajay	AB	AB						9	9	9	10	9
2.	Abimanue .M	12	12						10	10	10	9	9
3.	Abishek .K	AB	-						9	10	9	10	9
4.	Ajay .S	11½	12						10	10	10	9	9
5.	Apsar Ali	11	13						9	10	10	9	10
6.	Arul jenifer .A	11	15						10	10	10	9	10
7.	Arul Selvi .P	10	11						9	9	9	10	8
8.	Aruntbathi .S	10	13½						10	9	9	8	10
9.	Barath .R	13½	15						10	10	10	10	9
10	Davidraj Dominique.V	.	.						9	10	8	9	8
11	Dsusri .S	14	15						10	10	10	9	9
12	Dhivyasri .N	7	14						10	9	10	9	8
13	Ezhilarasan .P	12	12						8	9	8	8	9
14	Gokilasri .G	9½	14						10	9	10	9	10
15	Gowtham .S	8	12						5	10	8	9	8
16	Harikrishnan .B	11	16						10	9	9	10	9
17	Hariprasath .S	AB	11						9	9	8	8	9
18	Hemalatha .M	10	12						9	10	10	9	9
19	Jagan .S	13	14						8	10	8	10	9
20	Jayabalaji .L	12	11						9	10	9	8	10
21	Keerthika .A	.	.						9	9	9	8	9
22	Kirthiversha .M	13	14						10	9	10	9	8
23	Murali Krishnan .G	10	12						9	9	8	9	9
24	Nishanthi .K	11½	14						10	9	8	9	10
25	Nithyasri .V	13	10						10	10	10	10	9
26	Prathap .V	11	12						10	9	9	8	9
27	Praveen Kumar .V	10	11						9	9	8	9	8
28	Preethisha .M	.	.						9	9	9	8	8
29	Prithipa .A	10	14						09	9	10	9	9
30	Priyadharshini .M	12	11						9	9	8	8	9
31	Ramana .S	13½	11						9	9	8	9	9

REG. NO	NAME	PRACTICE TEST							ASSIGNMENT				
		1	2	3	4	5	6	7	1	2	3	4	5
		11/10	18/10										
32	Ramya .M	7	11						9	9	10	9	10
33	Rohith .V.S.	.	.						9	9	10	9	8
34	Sakthivel .A	6	7						9	10	9	10	8
35	Sakthivel .P	.	.						9	9	8	10	9
36	Santhiya .S	.	.						9	9	10	9	8
37	Saraswathidur .S	8	13						10	9	8	9	10
38	Sarathkram .K	10	10						9	10	9	9	10
39	Shiyam .M	10	11						9	9	8	10	9
40	Sivaprakasam .M	14	12						9	9	10	8	9
41	Sivaraj .N	10	8						9	9	9	8	10
42	Sowraya dupaknaju .M	6	9						9	9	10	8	9
43	Soudarya .V	14	15						9	9	8	10	9
44	Sowmiya .D	14½	17						10	9	10	8	9
45	Thamizharasan .D	14	13						10	9	8	9	10
46	Thiruvarasan .M	8	10						9	10	10	9	8
47	Vignesh .M	13½	11						10	9	10	9	8
48	VishnuPriya .K	14	12						9	9	10	8	9
49	Yuvaraj .K	12	11						8	9	10	9	8
50	Jayachandiran	.	.						9	9	10	9	8

REG. NO	NAME	CIA-1	CIA-1 RETEST	CIA-2	CIA-2 RETEST	CYCLIC TEST -1	CYCLIC TEST-2	CYCLIC TEST-3	MODEL%	ATTINTERNAL
1.	Kamal Ajay	AB	AA	AB	A2		59	A0	AB	38
2.	Abimanu .M	55		50			58		49	
3.	Abishek .S	AB	A7	39			59		45	
4.	Ajay .S	5A		55			60		5A	
5.	Apsar Ali	AB	38	39			AB		38	
6.	Arul Jenifer .A	58		58			72		55	
7.	Arulselvi .P	31	9/10	AB	63		56		AB	50
8.	Arunthathi .S	50		49			71		49	
9.	Barath .R	52		50			69		44	
10.	Dasideraj Dominigue.V	AB	51	38			49		AB	48
11.	Devsri .S	A8		A7			72		49	
12.	Dhivya Sri .N	AB	38	40			AB	38	A0	
13.	Ezhilarasan .P	A1		40			55		44	
14.	Gokilasri .G	51		AB	59		AB	48	50	
15.	Gowtham .S	34		21			50		38	
16.	Hari Krishnan .B	52		45			AB	46	51	
17.	Hari Prasath .S	34		38			51		46	
18.	Hemalatha .M	AB	54	43			62		43	
19.	Jagan .S	38		AB	38		59		AB	A0
20.	Jayabalaji .L	38		40			AB	58	AB	49
21.	Jayachandran .R	AB	A1	AB	38		AB		AB	
22.	Keerthika .A	AB	45	AB	A2		AB		AB	42
23.	Kiruthikeesha .M	56		53			72		51	
24.	Murali Krishnan.G	A2		33	9/10		51		A1	
25.	Nishanthi .K	46		AB	50		76		AB	35
26.	Nithyasri .V	53		50			66		45	
27.	Pranathap .V	45		42			62		52	
28.	Praveen kumar .V	43		43			40		AB	42
29.	Preethisha .M	AB	40	40			43		AB	43
30.	Prithipa .A	49		AB	46		58		50	
31.	Priyadharshini .M	46		48			55		45	
32.	Ramana .S	38		44			65		AB	47

REG. NO	NAME	CIA-1	CIA-1 RETEST	CIA-2	CIA-2 RETEST	CYCLIC TEST -1	CYCLIC TEST-2	CYCLIC TEST-3	MODEL %	ATTINTERNAL
33.	Ramya .M	AB	A1	AB	56		63		A7	
34.	Rohith .V.S	AB	A8	AB	A1		AB	41	AB	
35.	Sakthivel .A	2A		34			AB	39	AB	38
36.	Sakthivel .P	AB	38	AB			AB		AB	
37.	Sauthiya .S	AB	40	AB	53		AB	60	AB	60
38.	Saraswathidevi .S	A8		53			64		46	
39.	Sarathiram .K	43		AB	50		52		50	
40.	Shijan .M	45		52			63		39	
41.	Shivaprakasam .M	50		52			72		A5	
42.	Sivaraj .N	AB	38	AB	A3		AB	40	AB	50
43.	Somaya Deepakeeja .M	A5		38			62		39	
44.	Sowndaeya .V	57		AB	57		75	53	AB	54
45.	Sowmiya .D	52		5A			78		5A	
46.	Thamizharasan .D	A7		AB	38		59		44	
47.	Thiruvarasan .M	AB	A5	A0			53		43	
48.	Vignesh .M	54		A5			68		A8	
49.	Vishnupriya .K	55		55			71		50	
50.	Yuvaraj .K	40		AB	38		60		AB	38
51.										
52.	Manisha. .M	51		55			65	50	AB	A2
53.	Hrithika Roy	45		46			AB	A9	50	
54.	Satheesh .M	40		40			65		A8	
55.	Paritosh Biswas	39		56			60		53	
56.	Manoj kumar .P	A1		52			59		52	
57.	Sinduja .M	53		52			65		55	
58.	Shaha Lakra	43		55			70		52	
59.	Ghanah .M	42		50			AB	A2	54	
60.										
61.										
62.										
63										
64.										

Exam	Test - 1	Test - 2	Test - 3	Test - 4	Test - 5	Test - 6	Test - 7	CIA-1	CIA-2	CYCLE TEST-1	CYCLE TEST-2	CYCLE TEST-3	MODEL EXAM
Portion Covered								Ist unit	II & III units	1 to 5 units			1 to 5 units
Proposed Date of Exam								8/11/22	27/12/22	4/1/23			5/1/23
Actual Date of Exam								8/11/22	27/12/22	4/1/23			5/1/23
Date of return of corrected Answer Books								9/11/22	28/12/22	5/1/23			6/1/23
Strength								58.	58	59			58
Attended								38	41	39			42
Absent								15	17	19			16
% Pass								89.47	90.2	100			72
% Fail								7.2	9.7	-			27
Sub. In charge SIGN													
HoD SIGN													
PRINCIPAL SIGN													

LIST OF EXPERIMENTS

Subject Code	Subject Name	Lectures (Periods)	Tutorial (Periods)	Practical (Periods)
CS P52	COMPUTER NETWORKS LABORATORY	-	-	3

LIST OF EXPERIMENTS

1. Implementation of a socket program for Echo/Ping/Talk commands.
2. Creation of a socket between two computers and enable file transfer between them. Using (a.) TCP (b.) UDP
3. Implementation of a program for Remote Command Execution (Two M/Cs may be used).
4. Implementation of a program for CRC and Hamming code for error handling.
5. Writing a code for simulating Sliding Window Protocols.
6. Create a socket for HTTP for web page upload & Download.
7. Write a program for TCP module Implementation.(TCP services).
8. Write a program to implement RCP (Remote Capture Screen).
9. Implementation (using NS2/Glomosim) and Performance evaluation of the following routing protocols:

a. Shortest path routing
b. Flooding
c. Link State
d. Hierarchical

10. Broadcast /Multicast routing.
11. Implementation of ARP.
12. Throughput comparison between 802.3 and 802.11.
13. Study of Key distribution and Certification schemes.
14. Design of an E-Mail system
15. Implementation of Security Compromise on a Node using NS2 / Glomosim
16. Implementation of Various Traffic Sources using NS2 / Glomosim

SUBJECT INCHARGE HOD DEAN PRINCIPAL

DATE		EXPERIMENT	SIGNATURE
BATCH – I	BATCH – II		
1.	13/10/22	Implementation of a Socket program for Echo/ping/ Talk Commands	13/10/22
2.	13/10/22	creation of a Socket b/w two computers and enable file transfer b/w them using TCP & UDP	20/10/22
3.	20/10/22	Implementation of a program for Remote command	27/10/22
4.	20/10/22 & 22/10/22	Implementation of a program for CRC-8/Hamming code.	27/10/22
5.	27/10/22 & 29/10/22	writing a code for simulating Sliding window	24/11/22
6.	27/10/22	create a Socket for HTTP for web model page uploads Download	

HOD

PRINCIPAL

DATE		EXPERIMENT	SIGNATURE
BATCH – I	BATCH – II		
7.	3/11/22	write a program for TCP module implementation	
8.	3/11/22	write a programs to implement RIP	
9.	10/11/22	i) Shortest path routing ii) Flooding routing iii) Link State routing iv) Hierarchical routing implementation	
10.	10/11/22	Broadcast / multicast routing	
11.	17/11/22	implementation of ARP	
12.	17/11/22	Throughput comparison b/w 802.3 and 802.11	
13.	24/11/22	Study of pay distribution and certificate schemes	
14.	24/11/22	Design of an E-mail System	
15.	8/12/22	implementation of security compromise on a node using NS2	
16.	8/12/22	implementation of various traffic using NS2	

HOD

PRINCIPAL

S. No.	Name of the Student with Reg. No.	Month / Date / Hour	13/10	20/10	27/10	3/11	10/11	17/11	24/11	8/12	
1	Karmel Vijay		a	a	/	/	/	/	/	/	
2	Abimanju	.M	a	a	/	/	/	/	/	/	
3	Abishek	.K	a	a	/	/	/	/	/	/	
4	Ajay	.S	/	a	/	/	/	/	/	/	
5	Apsar Ali		a	/	/	/	/	/	/	/	
6	Arul jinifer	.A	/	a	/	/	/	/	/	/	
7	Arulselvi	.P	/	/	/	/	/	/	/	/	
8	Aruvathi	.S	a	/	/	/	/	/	/	/	
9	Barath	.R	/	/	/	/	/	/	/	/	
10	Davidraj Dominique	.V	a	a	/	/	/	/	/	/	
11	Durai	.S	/	/	/	/	/	/	/	/	
12	Dhiviyasri	.N	/	/	/	/	/	/	/	/	
13	Dhilibrasan	.P	/	a	/	/	/	/	/	/	
14	Gokilasri	.G	/	a	/	/	/	/	/	/	
15	Gowtham	.S	/	/	/	/	/	/	/	/	
16	Hari Krishnan	.B	/	a	/	/	/	/	/	/	
17	Hari Prasath	.S	/	a	/	/	/	/	/	/	
18	Hemalatha	.M	/	a	/	/	/	/	/	/	
19	Jagan	.S	/	a	/	/	/	/	/	/	
20	Jayabalaji	.L	/	/	/	/	/	/	/	/	
21	Jayachandran	.R	/	/	/	/	/	/	/	/	
22	Kavithika	.A	a	a	/	/	/	/	/	/	
23	Kiruthiveesha	.M	/	/	/	/	/	/	/	/	
24	Murali Krishnan	.G	/	a	/	/	/	/	/	/	
25	Nisanthi	.K	a	a	/	/	/	/	/	/	
26	Nithiyasri	.V	/	/	/	/	/	/	/	/	
27	Prathap	.V	a	/	/	/	/	/	/	/	
28	Praveen Kumar	.V	a	a	/	/	/	/	/	/	
29	Pruthisha	.M	a	a	/	/	/	/	/	/	
30	Prithipa	.A	/	/	/	/	/	/	/	/	
31	Priyadharshini	.M	/	/	/	/	/	/	/	/	
32	Ramana	.S	/	/	/	/	/	/	/	/	
NO OF PRESENT											
NO OF ABSENT											
SIGN OF THE STAFF											

S. No.	Name of the Student with Reg. No.	Month / Date / Hour	13/10	20/10	27/10	3/11	10/11	17/11	24/11	8/12
33	Ramya	M	/	/	/	/	/	/	/	/
34	Rohith	V.S	a	a	/	/	/	/	/	/
35	Sakthivel	A	/	a	/	/	/	/	/	/
36	Sakthivel	P	a	a	/	/	/	/	/	/
37	Santhiya	S	a	a	/	/	/	/	/	/
38	Saraswathidevi	S	/	/	/	/	/	/	/	/
39	Sarathkumar	K	/	/	/	/	/	/	/	/
40	Shiyam	M	a	a	/	/	/	/	/	/
41	Shivaprakasam	M	a	a	/	/	/	/	/	/
42	Sivaraj	N	a	a	/	/	/	/	/	/
43	Somaya Deepakraju	M	/	/	/	/	/	/	/	/
44	Soundarya	V	/	a	/	/	/	/	/	/
45	Sowmiya	D	/	/	/	/	/	/	/	/
46	Tamizharasan	D	/	/	/	/	/	/	/	/
47	Thiruvarasan	M	a	a	/	/	/	/	/	/
48	Vignesh	M	/	/	/	/	/	/	/	/
49	Vishnu Priya	K	/	/	/	/	/	/	/	/
50	Yuvaraj	K	/	a	/	/	/	/	/	/
51.	Hrithika Roy		/	/	/	/	/	/	/	/
52.	Manisha		/	/	/	/	/	/	/	/
53.	Manoj kumar		/	/	/	/	/	/	/	/
54.	Parithosh Biswas		/	/	/	/	/	/	/	/
55.	Satish		/	/	/	/	/	/	/	/
56	Sharon M		/	/	/	/	/	/	/	/
57	Sindhya		/	/	/	/	/	/	/	/
58	Sneha Lakra		/	/	/	/	/	/	/	/
	NO OF PRESENT									
	NO OF ABSENT									
	SIGN OF THE STAFF									