COMPUTER NETWORKS(CS503PC)
B.Tech. III Year I Sem
COURSE PLANNER

I.COURSE PURPOSE:

At the end of the course the student should be in a position to
1.Describe communication protocols and layered network architectures.
2.Explain convention computer system interfacing standards and peer to peer data link communication protocols
3.Design basis network systems.
4.Analyze data communication technology.

II.PRE-REQUISITES:

It's expected to have basis knowledge of logic circuits and their applications in digital system.

III. COURSE OBJECTIVIES:

1.To introduce the fundamental various types of computer networks.
2.To demonstrate the TCP/IP and OSI models with merits and demerits.
3.To explore the various layers of OSI Model.
4.To introduce UDP and TCP Models.

IV.COURSE OUTCOMES:

S. No.	Course Outcomes	Bloom's Taxonomy Levels	PROGRAM OUTCOMES, PROGRAM SPECIFIC OUTCOMES
1.	understand and explore the basics of computer Networks	L2:Understand	PO1,PO2,PO3,PO4,PO 11,PO12,PSO1,PS O2,PSO3
2.	administrate a network and understand the concepts of network security , Mobile and adhoc networks	L2:Understand	PO1,PO2,PO3,PO4,PO 11,PO12,PSO1,PS O2,PSO3
3.	understand the concepts of different routing tables	L3:Analyzing	PO1,PO2,PO3,PO4,PO 11,PO12,PSO1,PS O2,PSO3
4	understand and implement the different types of protocols	L2:Understand	PO1,PO2,PO3,PO4,PO 11,PO12,PSO1,PS O2,PSO3
5	understand the World wide web Concepts.	L2:Understand	PO1,PO2,PO3,PO4,PO 11,PO12,PSO1,PS O2,PSO3

V. COURSE CONTENT:

UNIT – I

Network hardware, Network software, OSI, TCP/IP Reference models, Example Networks: ARPANET, Internet. Physical Layer: Guided Transmission media: twisted pairs, coaxial cable, fiber optics, Wireless transmission.

UNIT – II

Data link layer: Design issues, framing, Error detection and correction. Elementary data link protocols: simplex protocol, A simplex stop and wait protocol for an error-free channel, A simplex stop and wait protocol for noisy channel. Sliding Window protocols: A one-bit sliding window protocol, A protocol using Go-Back-N, A protocol using Selective Repeat, Example data link protocols. Medium Access sub layer: The channel allocation problem, Multiple access protocols: ALOHA, Carrier sense multiple access protocols, collision free protocols. Wireless LANs, Data link layer switching.

UNIT – III

Network Layer: Design issues, Routing algorithms: shortest path routing, Flooding, Hierarchical routing, Broadcast, Multicast, distance vector routing, Congestion Control Algorithms, Quality of Service, Internetworking, The Network layer in the internet.

UNIT – IV

Transport Layer: Transport Services, Elements of Transport protocols, Connection management, TCP and UDP protocols.

UNIT – V

Application Layer –Domain name system, SNMP, Electronic Mail; the World WEB, HTTP, Streaming audio and video.

TEXT BOOKS:

1. Computer Networks -- Andrew S Tanenbaum, David. j. Wetherall, 5th Edition. Pearson Education/PHI

REFERENCES:

1. An Engineering Approach to Computer Networks-S. Keshav, 2 nd Edition, Pearson Education
2. Data Communications and Networking – Behrouz A. Forouzan. Third Edition TMH

GATE SYLLABUS

Concept of layering. LAN technologies (Ethernet).flow and error control techniques,switching.IPV4/IPV6, routers and routing algorithums(distance vector, link state).TCP/UDP and sockets,congestion control. Application layer protocols (DNS, SMTP, POP, FTP, HTTP).Basics of Wi-Fi.

VI. LESSON PLAN:

S.NO	WEEK	TOPICS	Content to be covered under each topic	Link for PPT	Link for PDF	Course Learning Outcomes	Teaching methodologies	REFERENCES
UNIT-1								
1	**1**	OUTCOME BASED EDUCATION AWARENESS	College vision and mission Department vision and mission Subject course objectives Subject course outcomes Subject program outcomes Subject program specific outcomes Subject mapping CO with PO,PSO	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing	**UNDERSTAND:OUTCOME BASED EDUCATION AWARENESS**	**CHALK BOARD ,PPT PRESENTAION**	
2		Introduction of class	What is network Computer network Data communication and computer network What is the relation between system and networking Real time examples			**Understand: Introduction of class**		T1
3		Introduction of computer network				**Describe: COMPUTER NETWORK**		T1
4	**2**	Network hardware	Distributed processing Network hardware Physical structure Network model Categories of networks Internetworking Real time examples			**Define: Network hardware**		T1
5		Network software				**Understand: Network hardware**		T1
6		OSI	Structure of OSI model Types of OSI model Physical layer Dta link layer Network layer Transport layer Session layer Presentation layer Application layer Real time examples			**Describe: OSI**		T1

7	**3**	TCP/IP Reference models	Physical and datalink layer Network layer Transport layer Application layer Differences between OSI and TCP/IP Real time examples			**Describe: TCP/IP Reference models**		T1
8		Example Networks: ARPANET	Introduction to network ARPANET NSFNET Network model Network usage Real time examples			**Describe: Example Networks: ARPANET**		T1
9	**4**	Example Networks: Internet				**Define: Example Networks: Internet**		T1
10		Physical Layer: Guided Transmission media:twisted pairs, coaxial cable, fiber optics,Wireless transmission.	Define transmission media and mode Types of guided transmission mode Twisted pair cable Coaxial pair cable Fiber optic cable Real time examples• Types of unguided transmission mode Radio waves Micro waves Infrared waves			**Understand: Physical Layer: Guided Transmission media:twisted pairs, coaxial cable, fiber optics**		T1
11		**UNIT-1 GROUP PRESENTATION**						T1
12		***MOCK TEST-1***						
UNIT-2								
13	**5**	Data link layer: Design issues	Framing Flag byte with byte stuffing Flag byte with bit stuffing Physical violation Real time examples	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing	**Understand: Data link layer: Introduction, Framing**	**CHALK BOARD ,PPT PRESENTAION**	T1,T2
14		framing, Error detection and correction	Types of detection and correction techniques VRC LRC CRC CHECKSUM Hamming code for detection and correction Real time examples			**Understand: Error – Detection and Correction**		T1,T2

15		Elementary data link protocols: simplex protocol A simplex stop and wait protocol for an error-free channel	Simplest protocol Stop and wait protocol Real time examples			**Describe: Parity – Elementary data link protocols: simplex protocol**		T1,T2
16	**6**	Sliding Window protocols: A one-bit sliding window protocol A protocol using Go-Back-N, A protocol using Selective Repeat	Configuration and transfer mode Frames Control fields Real time examples			**Define: A simplex stop and wait protocol for an error-free channe**		T1,T2
17		Example data link protocols collision free protocols	Framing Transition phages Multiplexing Multilink PPP Real time examples• collision free protocols Standard protocol Real time examples			**Describe: Sliding Window protocols: A one-bit sliding window protocol**		T1,T2
18		Medium Access sub layer: The channel allocation problem	Types of Medium Access sub layer Real time examples FDMA TDMA CDMA Real time examples			**Describe: A protocol using Go-Back-N, A protocol using Selective Repeat**		T1,T2
19	**7**	Wireless LANs, Data link layer switching	IEEE 802.1 Architecture MAC sublayer Address mechanisum Physical layer Types of switching Circuit switching Packet switching Massage switching Real time examples			**Understand:Example data link protocols**		
20		**UNIT-2 GROUP PRESENTATION**						
MID 1 EXAMS								
UNIT-3								
21	**8**	Routing algorithms: shortest path routing, Flooding	Store and forward packet switching Service provided to transport layer Connection control: connection oriented Connection less services Real time examples			**Describe: Routing algorithms: shortest path routing, Flooding**	**CHALK BOARD ,PPT PRESENTAION**	T1,T2

			shortest path routing Flooding Hierarchical routing Broadcast Multicast distance vector routing examples Defination Steps Algorithums Examples Defination Steps Algorithums Examples Defination Steps Algorithums	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing			
22		Hierarchical routing, Broadcast	Defination Steps Algorithums Examples			**Describe: Hierarchical routing, Broadcast**		T1,T2
23		Multicast, distance vector routing,	Defination Steps Algorithums Examples			**Understand: Multicast, distance vector routing,**		T1,T2
24	**9**	Congestion Control Algorithms,	Types of congestion control Open loop congestion control Close loop congestion control			**Understand: Congestion Control Algorithms,**	**CHALK BOARD ,PPT PRESENTAION**	T1,T2
25		Quality of Service, Internetworking	Define quality of services Types of quality of services Leaky bucket algorithm Token bucket algorithm			**Describe: Quality of Service, Internetworking**		T1,T2
26		The Network layer in the internet	Definition IPV4 IPV6 Differences of IPV4 and IPV6 Tunneling Real time examples Define network layer Network vs internet			**Describe: The Network layer in the internet**		T1,T2
27	**10**	**UNIT-3 GROUP PRESENTATION**						T1,T2

UNIT-4								
28	**10**	Transport Layer: Transport Services	Client server paradigm Multiplexing and demultiplexing Connectionless vs connection oriented services Reliable vs unreliable Real time examples	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing	**Understand: Transport Layer: Transport Services**	**CHALK BOARD ,PPT PRESENTAION,NPTEL**	T1,T2
29		Elements of Transport protocols	Transport <> Data Link. Addressing. Establishing a connection. Releasing a connection. Flow control and buffering. Multiplexing			**Describe: Elements of Transport protocols**		
30	**11**	Connection management	Definition of transport layer Model explanation How the networks are connected and managed Examples of ATM			**Describe: Elements of Transport protocols**		T1,T2
31		TCP and UDP protocols	TCP definition and working process explanation TCP services TCP features Segments TCP segments Flow control Error control Congestion control UDP definition and working process explanation Well known port of UDP User datagram Checksum UDP operation Use of UDP			**Describe: Congestion**		T1,T2
32		**UNIT-4 GROUP PRESENTATION**						
UNIT-5								
33	**12**	Application Layer – Domain name system	Definition and full form Name space Lable Domain name Domain DNS in internet Real time examples	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomH	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomH	**Describe: Application Layer – Domain name system**	**CHALK BOARD ,PPT PRESENTAION,ANIMATION VEDIOS**	T1,T2

34		SNMP	Definition Network management systems SNMP concepts SNMP management systems SNMP massages UDP concepts Real time examples	Ue9v?usp=sharing	Ue9v?usp=sharing	**Discus:SNMP**		T1,T2
35		Electronic Mail; the World WEB	Definition of electronic mail Architecture SMTP USER AGENT POP and IMAP Definition Architecture Web documents Real time examples			**Explain:electronic mail**		T1,T2
36		**MOCK TEST-2**						T1,T2
37	**13**	HTTP	Definition HTTP transaction Persistent vs nonresistant connection Proxy server Real time examples	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing	https://drive.google.com/drive/folders/1lEipwK-r40zsmmWpw5prUZ4foomHUe9v?usp=sharing	**Analyse:HTTP**		T1,T2
38	**14**	Streaming audio and video.*** SWITCHING(Content beyond syallabus)	Definition of multimedia concepts Digitizing audio and video concepts Audio and video compression Real time examples with different videos			**Analyse:Streaming audio and video.**		T1,T2
39		**UNIT-5 GROUP PRESENTATION**						
40	**15**	**UNIT-1 GROUP PRESENTATION**						
41		**UNIT-2 GROUP PRESENTATION**						
42		**UNIT-2 GROUP PRESENTATION**						
II MID EXAMINATIONS								

TEXT BOOKS:

2. Computer Networks -- Andrew S Tanenbaum, David. j. Wetherall, 5th Edition. Pearson Education/PHI

REFERENCES:

1. An Engineering Approach to Computer Networks-S. Keshav, 2 nd Edition, Pearson Education
2. Data Communications and Networking – Behrouz A. Forouzan. Third Edition TMH

VII.HOW PROGRAM OUTCOMES ARE ASSESSED:

Program Outcomes (PO)		Level	Proficiency assessed by
PO1	**gineering knowledge**: Apply the knowledge of mathematics, science, engineeringfundamentals, and an engineering specialization to the solution of complex engineering problems related to Computer Science and Engineering.	2.6	Mini Projects
PO2	**Problem analysis**: Identify, formulate, review research literature, and analyze complexengineering problems related to Computer Science and Engineering and reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.	1.4	Lectures, Assignments, Exams
PO3	**Design/development of solutions**: Design solutions for complex engineering problems related to Computer Science and Engineering anddesign 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.	2.4	Mini Projects
PO4	**Conduct investigations of complex problems**: Use research-based knowledge and researchmethods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.	2	--
PO5	**Modern tool usage**: Create, select, and apply appropriate techniques, resources, and modernengineering 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 assesssocietal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the Computer Science and Engineering professional engineering practice.	-	--
PO7	**Environment and sustainability**: Understand the impact of the Computer Science and Engineering professional engineering solutionsin societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.	-	Lectures, Assignments, Exams
PO8	**Ethics**: Apply ethical principles and commit to professional ethics and responsibilities and norms ofthe engineering practice.	-	
PO9	**Individual and team work**: Function effectively as an individual, and as a member or leader indiverse teams,	-	Mini Projects

Program Outcomes (PO)		Level	Proficiency assessed by
	and in multidisciplinary settings.		
PO10	**Communication**: Communicate effectively on complex engineering activities with the engineeringcommunity 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 theengineering 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.	2.2	Lectures, Assignments, Exams
PO12	**Life-long learning**: Recognize the need for, and have the preparation and ability to engage inindependent and life-long learning in the broadest context of technological change.	2.2	Lectures, Assignments, Exams

VIII.HOW PROGRAM SPECIFIC OUTCOMES ARE ASSESSED:

Program Specific Outcomes (PSO)		Level	Proficiency assessed by
PSO1	**Foundation of mathematical concepts:** To use mathematical methodologies to crack problem using suitable mathematical analysis, data structure and suitable algorithm.	2.4	Mini Project
PSO2	**Foundation of Computer System:** The ability to interpret the fundamental concepts and methodology of computer systems. Students can understand the functionality of hardware and software aspects of computer systems.	2.6	Lectures, Assignments, Exams
PSO3	**Foundations of Software development:** The ability to grasp the software development lifecycle and methodologies of software systems. Possess competent skills and knowledge of software design process. Familiarity and practical proficiency with a broad area of programming concepts and provide new ideas and innovations towards research.	2	Mini Project

MAPPING COURSE OUTCOMES LEADING TO THE ACHIEVEMENT OFPROGRAM OUTCOMES AND PROGRAM SPECIFICOUTCOMES:

Course	Program Outcomes												Program Specific Outcomes		
Outcome	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	1	2	2	-	-	-	-	-	-	2	3	2	3	2
2	2	2	3	2	-	-	-	-	-	-	3	3	3	2	2
3	3	1	2	2	-	-	-	-	-	-	3	2	2	3	2
4	3	2	3	2	-	-	-	-	-	-	2	2	3	3	2
5	2	1	2	2	-	-	-	-	-	-	1	1	2	2	2
AVG	2.6	1.4	2.4	2	-	-	-	-	-	-	2.2	2.2	2.4	2.6	2

DESCRIPTIVE QUESTIONS
UNIT-1

Short Answer Questions

QUESTIONS	Blooms taxonomy level	Course outcomes
1.Explain different type of networks?.	Understand	1
2.Describe why are protocols needed?.	Understand	1
3.Define redundancy?.	Knowledge	1
4.Describe an internet and intranet?.	Knowledge	1
5.List the different types of transmission media?.	Knowledge	1
6.Define network?.	Knowledge	1

Long Answer Questions

1.Explain how are OSI and ISO related to each other	Understand	1
2.Explain ISO/OSI reference model with neat diagram?.	Understand	1
3.Define topology and explain and explain the topologies of networks?.	Knowledge	1
4.Explain the Example Networks: ARPANETin details?.	Understand	1
5.Define and describe the transmission media in details?.	Knowledge	1
6.***Define Switching network in details?.	Knowledge	1

UNIT-2

Short Answer Questions

QUESTIONS	Blooms taxonomy level	Course outcomes
1.Define ALOHA?.	Knowledge	2
2.Define MAC?.	Knowledge	2
3.Definebridge,hub,router?.	Knowledge	2
4.List the network applications?.	Knowledge	2
5.Define VRC,LRC,CRC?.	Knowledge	2
6.Define checksum?.	Knowledge	2

Long Answer Questions

1.Describe data link layer:design issue in details?.	Knowledge	2

2.How performance is improved in CSMA/CD protocol compared to CSMA protocol?Explain?.	Understand	2
3.How CSMA/CA differ from CSMA/CD .explain in brief?.	Understand	2
4.DiscussElementary data link protocols: simplex protocol?.	Understand	2
5.ExplainA simplex stop and wait protocol for noisy channel?.	Understand	2
6.Describe switching in details?.	Knowledge	2

UNIT-3

Short Answer Questions

QUESTIONS	Blooms taxonomy level	Course outcomes
1.Explain design issues of network layer?.	Understand	3
2.Illustrate shortest path?.	Apply	3
3.Define flooding?.	Knowledge	3
4.Explain congestion control?.	Understand	3
5.Define virtual circuit?.	Knowledge	3
6.State circuit switching?.	Knowledge	3

Long Answer Questions

1.Explainnetwork layer design issue in detail?.	Understand	3
2.Illusrtrate internetworking and tunneling?.	Knowledg	3
3.Explain in details of ICMP,IGMP?	Understand	3
4.Explain Broadcast routing protocols in details?.	Understand	3
5.Explain congestion control in details?.	Understand	3
6.Discuss quality of service in detail?.	Understand	3
7.Illustrate internetworking in detail?.	Knowledg	3

UNIT-4

Short Answer Questions

QUESTIONS	Blooms taxonomy level	Course outcomes
1.List out functions of transport layer?.	Knowledge	4
2.List out duties of the transport layer?.	Knowledge	4
3.Define quality of services?.	Knowledge	4
4.Explain how checksum is calculated in tcp?.	Understand	4
5.Explain about transport layer services?.	Understand	4

Long Answer Questions

1.Explain in detail about process to process delivery?.	Understand	4
2.Diffrence between UDP and TCP protocols?.	Knowledg	4
3.Illustrate the congestion management in details?.	Understand	4
4.Explain data traffic congestion in detail?.	Understand	4

UNIT-5

Short Answer Questions

QUESTIONS	Blooms taxonomy level	Course outcomes
1.State advantages of stateless server of HTTP?.	Knowledge	5
2.Diffrence between FTP&HTTP?.	APPLY	5
3.Explain DNS name space?.	Knowledge	5
4.Define SMTP?.	Understand	5
5.Define FTP?.	Understand	5

Long Answer Questions

1.Explain in details of domain name space?.	Understand	5
2.Explain in details of electronic mails?.	Understand	5
3.Explain in details of SMTP?.	Understand	5
4.Explain in details of WWW?.	Understand	5
5.Explain in details of SNMP?.	Understand	5
6.Dicuss streaming audio and vedio in detail?.	Understand	5

UNIT-1

1.Protocols are?

(a)Agreements on how communication components and DTE's are to communicate
(b)Logical communication channels for transferring data
(c)Physical communication channels sued for transferring data
(d)None of above

ANS:A

2.Computer Networkis

A. Collection of hardware components andcomputers
B. Interconnected by communicationchannels
C. Sharing of resources andinformation
D. All of theAbove

3.What is a Firewall in ComputerNetwork?

A. The physical boundary ofNetwork
B. An operating System of ComputerNetwork
C. A system designed to prevent unauthorizedaccess
D. A web browsingSoftware

4.How many layers does OSI Reference Modelhas?

A. 4
B. 5
C. 6
D. 7

5.DHCP is the abbreviationof

A. Dynamic Host ControlProtocol
B. Dynamic Host Configuration Protocol
C. Dynamic Hyper ControlProtocol
D. Dynamic Hyper Configuration Protocol

6.IPV4 Addressis

A. 8bit
B. 16bit
C. 32bit
D. 64bit

7.DNS is the abbreviationof

A. Dynamic NameSystem
B. Dynamic NetworkSystem
C. Domain NameSystem
D. Domain NetworkService

8.What is the meaning of Bandwidth inNetwork?

A. Transmission capacity of a communicationchannels
B. Connected Computers in theNetwork
C. Class of IP used inNetwork
D. None ofAbove

9.ADSL is the abbreviationof

A. Asymmetric Dual SubscriberLine
B. Asymmetric Digital SystemLine
C. Asymmetric Dual SystemLine
D. Asymmetric Digital SubscriberLine

10.What is the use of Bridge inNetwork?

A. to connectLANs
B. to separateLANs
C. to control NetworkSpeed
D. All of theabove

11.Router operates in which layer of OSI Reference Model?

A. Layer 1 (PhysicalLayer)
B. Layer 3 (NetworkLayer)
C. Layer 4 (Transport Layer)
D. Layer 7 (ApplicationLayer)

Click Here for Answers

1 – D / 2 – C / 3 – D / 4 – B / 5 – C / 6 – C / 7 – A / 8 – D / 9 – A / 10 – B

UNIT-2

1.Each IP packet mustcontain

A. Only Sourceaddress
B. Only Destinationaddress
C. Source and Destinationaddress
D. Source or Destinationaddress

2.Bridge works in which layer of the OSImodel?

A. Applicationlayer
B. Transportlayer
C. Networklayer
D. Datalinklayer

3. provides a connection-oriented reliable service for sendingmessages

A. TCP
B. IP
C. UDP
D. All of the above

4.Which layers of the OSI model are host-to-host layers?

A. Transport, Session, Presentation, Application
B. Network, Transport, Session,Presentation
C. Data link, Network, Transport,Session
D. Physical, Data link, Network,Transport

5.Which of the following IP address class isMulticast

A. Class A
B. ClassB
C. Class C
d.Class D

6.Which of the following is correct regarding Class B Address of IPaddress

A. Network bit – 14, Host bit –16
B. Network bit – 16, Host bit –14
C. Network bit – 18, Host bit –16
D. Network bit – 12, Host bit –14

7.The last address of IP addressrepresents

A. Unicastaddress
B. Networkaddress
C. Broadcastaddress
D. None ofabove

8.How many bits are there in the Ethernetaddress?

A. 64bits
B. 48bits
C. 32bits
D. 16bits

9.How many layers are in the TCP/IP model?

A. 4layers
B. 5layers
C. 6layers
D. 7layers

10.Which of the following layer of OSI model also called end-to-endlayer?

A. Presentationlayer
B. Networklayer
C. Sessionlayer
D. Transportlayer

Click Here for Answers

1 – C / 2 – D / 3 – A / 4 – A / 5 – D / 6 – A / 7 – C / 8 – B / 9 – A / 10 – D

UNIT-3

3-1. Why IP Protocol is considered as unreliable?

A. A packet may belost
B. Packets may arrive out oforder
C. Duplicate packets may begenerated
D. All of theabove

3-2. What is the minimum header size of an IP packet?

A. 16bytes
B. 10bytes
C. 20bytes
D. 32bytes

3-3. Which of following provides reliable communication?

A. TCP
B. IP
C. UDP
D. All of theabove

3-4. What is the address size of IPv6 ?

A. 32bit
B. 64bit
C. 128bit
D. 256bit

3-5. What is the size of Network bits & Host bits of Class A of IP address?

A. Network bits 7, Host bits24
B. Network bits 8, Host bits24
C. Network bits 7, Host bits23
D. Network bits 8, Host bits23

3-6. What does Router do in a network?

A. Forwards a packet to all outgoinglinks
B. Forwards a packet to the next free outgoinglink
C. Determines on which outing link a packet is to beforwarded
D. Forwards a packet to all outgoing links except the originatedlink

3-7. The Internet is an example of

A. Cell switchednetwork
B. circuit switchednetwork
C. Packet switchednetwork
D. All ofabove

3-8. What does protocol defines?

A. Protocol defines what data iscommunicated.
B. Protocol defines how data iscommunicated.
C. Protocol defines when data iscommunicated.
D. All ofabove

3-9. What is the uses of sub netting?

A. It divides one large network into several smaller ones
B. It divides network into networkclasses
C. It speeds up the speed ofnetwork
D. None ofabove

3-10. Repeater operates in which layer of the OSI model?

A. Physicallayer
B. Data linklayer

C. Networklayer
D. Transportlayer

Click Here for Answers

1 – D / 2 – C / 3 – A / 4 – C / 5 – A / 6 – C / 7 – C / 8 – D / 9 – A / 10 – A

UNIT-4

4-1. What is the benefit of the Networking?

A. FileSharing
B. Easier access toResources
C. EasierBackups
D. All of theAbove

4-2. Which of the following is not the Networking Devices?

A. Gateways
B. Linux
C. Routers
D. Firewalls

4-3. What is the size of MAC Address?

A. 16-bits
B. 32-bits
C. 48-bits
D. 64-bits

4-4. Which of the following can be Software?

A. Routers
B. Firewalls
C. Gateway
D. Modems

4-5. What is the use of Ping command?

A. To test a device on the network isreachable
B. To test a hard diskfault
C. To test a bug in aApplication
D. To test a PinterQuality

4-6. MAC Address is the example of

A. TransportLayer
B. Data LinkLayer
C. ApplicationLayer
D. PhysicalLayer

4-7. Routing tables of a router keeps track of

A. MAC AddressAssignments
B. Port Assignments to networkdevices
C. Distribute IP address to networkdevices
D. Routes to use for forwarding data to itsdestination

4-8. Layer-2 Switch is also called

A. Multiport Hub
B. MultiportSwitch
C. MultiportBridge
D. Multiport NIC

4-9. Difference between T568A and T568B is

A. Difference in wirecolor
B. Difference in number ofwires

C. Just different length ofwires
D. Just different manufacturer standards

4-10. The meaning of Straight-through Cable is

A. Four wire pairs connect to the same pin on eachend
B. The cable Which Directly connects Computer toComputer
C. Four wire pairs not twisted with eachother
D. The cable which is nottwisted

Click Here for Answers

1 – D / 2 – B / 3 – C / 4 – B / 5 – A / 6 – B / 7 – D / 8 – C / 9 – D / 10 – A

UNIT-5

1.Which of the following is not the External SecurityThreats?

A. Front-doorThreats
B. Back-doorThreats
C. UndergroundThreats
D. Denial of Services

2.What is the DemilitarizedZone?

A. The area between firewall & connection to an externalnetwork
B. The area between ISP to Militaryarea
C. The area surrounded by securedservers
D. The area surrounded by theMilitary

3.What is the full form of RAID?

A. Redundant Array of IndependentDisks
B. Redundant Array of ImportantDisks
C. Random Access of IndependentDisks
D. Random Access of ImportantDisks

4.What is the maximum header size of an IPpacket?

A. 32bytes
B. 64bytes
C. 30bytes
D. 60bytes

5.What is the size of Host bits in Class B of IPaddress?

A. 04
B. 08
C. 16
D. 32

6.What is the usable size of Network bits in Class B of IPaddress?

A. 04
B. 08
C. 14
D. 16

7.In which type of RAID, data is mirrored between twodisks.

A. RAID0
B. RAID1
C. RAID2
D. RAID3

8.What do you mean by broadcasting inNetworking?

A. It means addressing a packet to all machine

B. It means addressing a packet to somemachine
C. It means addressing a packet to a particularmachine
D. It means addressing a packet to except a particularmachine

9.Which of the following is/are Protocols ofApplication?

A. FTP
B. DNS
C. Telnet
D. All ofabove

10.Which of the following protocol is/are defined in Transportlayer?

A. FTP
B. TCP
C. UDP
D. B &C

Click Here for Answers
1 – C / 2 – A / 3 – A / 4 – D / 5 – C / 6 – C / 7 – B / 8 – A / 9 – D / 10 – D

Fill in the blanks:

1. ---------- bridge operates in promiscuous mode
2. Source routing bridges in the same LANs must have --------- bridge number
3. To create a ---------- , combine crossbar switches in stages.
4. Local cable TV Network is an example for ----------
5. ----------transmission has more suitable for indoor wireless LANs.
6. The physical layer of Novell Netware consists of---------- protocol.
7. The connection oriented transport protocol in Novell Netware is----------
8. When packets are small and all are equal sized then they are called---------.
9. Accounting functions are responsibility of ---------- Layer.
10. ----------layer contains network

WEBSITES:

1.WWW.acm.org/sigcomm/sos.html.
2.WWW.ietf.org/
3.WWW.osi.org/
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5.WWW.saketsoft.in/learn/computer networks.aspx
6.www.wikipedia.com
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JOURNALS:

- 1.ELSEVER.COM(INTERNATIONAL JOURNAL OF COMPUTER AND COMMUNICATION
- NETWORKING)
    - IAENG (International Association of Engineers)
- www.iaeng.org

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LIST OF THE SEMINAR TOPICS:

1. Internet
2. Network security
3. www and http
4. network management system
5. Organization of networks
6. Wireless Wans: Cellular Telephone and virtual networks.
7. SONET
8. Layered architectures(OSI and TCP/IP)
9. Multiple acess techniques in networks
10. Wireless Lans.
11. Network models
12. Ethernet
13. Switching
14. HTTP
15. FTP
16. Satellite networks
17. SNMP
18. Global systems for mobile applications
19. Application layer
20. Transport layer