



MUTHAYAMMAL ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi, Accredited by NAAC & Affiliated to Anna University)

Rasipuram - 637 408, Namakkal Dist., Tamil Nadu.

Department of Electronics and Communication Engineering Question Bank - Academic Year (2021-22)

Course Code & Course Name : 19ECC13 & COMPUTER NETWORKS
Name of the Faculty : Ms.K.Shenbagadevi,AP/ECE
Year/Sem/Sec : III/V/A,B,C

Unit-I: FUNDAMENTALS AND CONCEPT OF LAYERING

Part-A (2 Marks)

1. Describe Internetworking and Intranetworking.
2. Name the parameters used to measure the network performance.
3. Summarize the salient features of packet switching.
4. Distinguish between peer-to-peer relationship and a primary-secondary relationship.
5. What is topology?
6. What is the need for layering?
7. What are the main features of Internet Architecture?
8. Define Bandwidth and Latency.
9. Define Error detection and correction.
10. What are the issues in data link layer?

Part-B (16 Marks)

1. Show the various performance metrics of network with examples. (16)
2. Explain how network software is implemented in networks (16)
3. Describe briefly the various layers and functions of TCP/IP Model. (16)
4. Describe briefly the various layers and functions of OSI model and compare OSI Model with Internet model. (16)
5. With a neat diagram describe in detail about the Network architecture. (16)

Unit-II : MEDIA ACCESS

Part-A (2 Marks)

1. What are the functions of MAC?
2. What is CSMA?. List the protocols used with CSMA
3. Define the term carrier sense in CSMA/CD?
4. Define Ethernet
5. What is the access method used by wireless LAN?

6. What is a hidden node and exposed node?
7. What is a Bluetooth?
8. What is the use of switches?
9. Compare datagram approach and virtual circuit approach.
10. Define CIDR

Part-B (16 Marks)

1. Discuss about physical properties of Ethernet 802.3 with necessary diagram of Ethernet transceiver, adapter and algorithm. (16)
- 2.(i) Explain the following (8)
ICMP
- (ii) DHCP (8)
3. Explain the functioning of wireless LAN in detail (16)
4. Explain bridges and switches in brief. (16)
5. Explain CSMA and protocols with Collision detection and Avoidance (16)

Unit-III : ROUTING

Part-A (2 Marks)

1. What is routing area in global Internet?
2. How does a net id differ from a network address?
3. Mention the limitations of distance vector routing.
4. Prove that the adaptive routing is superior to non-adaptive routing.
5. Define RIP
6. Elaborate Global Routing Algorithms.
7. Propose Source Specific Multicast
8. Discuss about default router.
9. How is the delay of a packet calculated?
10. Classify the two main classes of routing protocols

Part-B (16 Marks)

1. Define multicasting and explain the detail about multicast address (16)
- 2.(i) Recall the Distance Vector Routing Algorithm. (8)
- (ii) List the limitations of Distance Vector Routing Algorithm (8)
3. Rephrase the different Datagram approach. Also show the advantages of LSR over DVR. List the limitations of Link State Routing Algorithm. (16)
4. Discuss the shortest path algorithm with suitable illustrations. (16)
- 5.(i) With neat diagram explain distance vector routing protocol. (8)
- (ii) Explain the working of Protocol Independent Multicast (PIM) in detail. (8)

Unit-IV : TRANSPORT LAYER

Part-A (2 Marks)

1. What do you mean by slow start in TCP congestion?
2. Analyse the difference between congestion control and flow control.
3. How transport layer performs Duplication control?
4. State RED protocol for congestion avoidance.
5. Draw a neat diagram of TCP header format
6. Express about Congestion Control.
7. Define TCP and UDP.
8. Interpret the three ways of handshake?
9. Specify why non-real time application is called Elastic?
10. Mention the importance of all the flag fields used in a TCP connection

Part-B (16 Marks)

1. Describe the working principle of TCP congestion control. (16)
- 2.(i) Explain the three way handshake protocol to establish the transport level connection. (8)
 - (ii) List the various congestion control mechanisms. Explain any one in detail. (8)
- 3.(i) Illustrate in detail about the Quality of Service (QoS) and its related parameters. (8)
 - (ii) Summarize the application requirements in Quality of Service (QoS), with a clear example. (8)
- 4.(i) Differentiate between UDP and TCP. (8)
 - (ii) Compose the different Queueing Discipline in detail (8)
5. Analyzing about UDP with neat sketch on it. (16)

Unit-V : APPLICATION LAYER

Part-A (2 Marks)

1. What are the responsibilities of Application Layer?
2. Compare HTTP with persistent and Non-persistent Connection.
3. Demonstrate the hierarchy of name server.
4. Name the two parts of addressing system in SMTP.
5. Why DNS Resolver bootstrap the domain name lookup process?
6. How does MIME enhance SMTP?
7. Define URL. Write down the three parts of the URL.
8. Explain Web catching /Proxy server.
9. Contrast between a user agent and a mail transfer agent.
10. Expand POP3 and IMAP4.

Part-B (16 Marks)

1. (i) How would you explain the message transfer using Simple Mail Transfer Protocol. (8)
 - (ii) Explain the final delivery of email to the end user using POP3. (8)

2. (i) Write short notes on Web services (8)
- (ii) SNMP (8)
3. (i) Demonstrate how SMTP Protocol is used in E-mail applications. (8)
- (ii) How would you elaborate Hypertext Transfer Protocol with an example? (8)
4. Construct the web service architecture and explain why SOAP is used as a protocol for accessing a web service? (16)
- 5.(i). Identify the following terms; SMTP, HTTP, DNS, SNMP (8)
- (ii) Examine about WSDL in web services. (8)

Course Faculty

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