**UNIT III**

**SESSION I**

|  |  |
| --- | --- |
| **Activity** | Animated Video, Presentation |
| **Topic** | **Circuit switching Vs Packet switching,** Datagrams, Virtual circuit switching,  Source routing |
|  | Definition, concept |
| **Weblink** | [**http://www.computerworld.com/s/article/41904/Packet\_Switched\_ vs.\_Circuit\_Switched\_Networks**](http://www.computerworld.com/s/article/41904/Packet_Switched_%20vs._Circuit_Switched_Networks) |
| **Activity** | Presentation |
| **Topic** | IP Service Model , Global Address |
|  | Definition, concepts |
| **Weblink** | http://www.cs.bu.edu/~dm/course/comp3621/w00/ip/img5.htm |
| **Activity** | Questions and Answers |
| **Topic** | Conclusion |
|  | 1. Define circuit switched network. 2. Define packet switched network. 3. Give example for circuit switched network 4. Give example for packet switched network. 5. Define datagram. 6. Define virtual circuit. 7. State about IP addressing. 8. What is meant by global address |

**SESSION II**

|  |  |
| --- | --- |
| **Activity** | Presentation |
| **Topic** | Packet Switched Networks |
|  | Definition and concepts |
| **WebLink** | <http://searchnetworking.techtarget.com/definition/packet-switched> |
| **Activity** | Presentation |
| **Topic** | IP |
|  | Definition, |
| **WebLink** | <http://en.wikipedia.org/wiki/Internet_Protocol> |
| **Activity** | Show and tell activity |
| **Topic** | Conclusion |
|  |  |

**SESSION III**

|  |  |
| --- | --- |
| **Activity** | Presentation |
| **Topic** | Recap : IP |
|  | Definition and concepts |
| **Activity** | **Animated Video** |
| **Topic** | ARP |
|  | Definition, |
| **WebLink** | <http://www.erg.abdn.ac.uk/~gorry/eg3561/inet-pages/arp.html>  <http://compnetworking.about.com/od/networkprotocols/g/bldef_arp.htm> |
| **Activity** | **Presentation** |
| **Topic** | RARP |
|  | concepts |
| **WebLink** | <http://searchnetworking.techtarget.com/definition/Reverse-Address-Resolution-Protocol>  <http://www.slideshare.net/PeterREgli/rarp-bootp-dhcp> |
| **Activity** | Word **puzzle** |
| **Topic** | Conclusion |
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**SESSION IV**

|  |  |
| --- | --- |
| **Activity** | Animated Video |
| **Topic** | DHCP |
|  | http://www.youtube.com/watch?v=g7mroO\_BLD0 |
| **WebLink** | <http://searchunifiedcommunications.techtarget.com/definition/DHCP>  <http://compnetworking.about.com/cs/protocolsdhcp/g/bldef_dhcp.htm> |
| **Activity** | Presentation |
| **Topic** | ICMP |
|  | Frame format and concepts |
| **WebLink** | <http://www.erg.abdn.ac.uk/~gorry/eg3567/inet-pages/icmp.html>  <http://en.wikipedia.org/wiki/Internet_Control_Message_Protocol> |
| **Activity** | Presentation |
| **Topic** | Conclusion |
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transmits at single frequency | | 2. | used with both analog and digital signal | | |
|  | **Answer:**  TDMA / a digital wireless telephony transmission techniques"  "CDMA / a digital wireless technology that uses spread-spectrum techniques"  "data rates / ability to carry 64 kbps to 120 Mbps data"  "frequency channal / in fdma all users simultaneously but each user transmits at single frequency"  "fdma / channel access method"  fdma / used with both analog and digital signal" |

**SESSION V**

|  |  |
| --- | --- |
| **Activity** | Board activity |
| **Topic** | Queuing Discipline |
|  | Definition, FIFO, Fair Queuing |
| **WebLink** | **http://www.bituh.com/2012/09/21/14bii-compare-fifo-and-fair-queuing-disciplines-used-in-routers/** |
| **Activity** | Analogy |
| **Topic** | FIFO |
|  | Printing a jobs  Ticket reservation |
| **WebLink** | http://www.softwareopal.com/qos/default.php?p=whyqos-2421 |
| **Activity** | Board activity |
| **Topic** | Fair Queuing |
|  | Fair Queuing at a router |
| **WebLink** | http://ulam2.cs.luc.edu/ebook/html/queuing.html |
| **Activity** | Board activity |
| **Topic** | **ATM (content beyond the syllabus)** |
|  | Automated teller machine |
| **WebLink** | http://en.wikipedia.org/wiki/Automated\_teller\_machine |

**SESSION VI**

|  |  |
| --- | --- |
| **Activity** | Presentation, Board activity |
| **Topic** | Recap : Queuing Discipline |
|  | Definition and concepts |
| **Activity** | Board activity |
| **Topic** | Routing Algorithm - RIP |
|  | Distance vector, RIP packet format |
| **WebLink** | <http://www.cse.iitk.ac.in/users/dheeraj/cs425/lec12.html/>  <http://en.wikipedia.org/wiki/Routing_Information_Protocol> |
| **Activity** | Quiz |
| **Topic** | Conclusion |
|  | 1. **Define FIFO.** 2. **Define fair queuing.** 3. **Define tail drop.** 4. **State about scheduling discipline.** 5. **State about drop policy.** 6. **Define RIP.** 7. **What is meant by nexthop?** 8. **Define convergence.** 9. **Define triggered.** 10. **Expand BSD.** |

**SESSION VII**

|  |  |
| --- | --- |
| **Activity** | Board activity |
| **Topic** | Routing Algorithm -OSPF |
|  | Concepts and OSPF header format |
| **WebLink** | <http://en.wikipedia.org/wiki/Open_Shortest_Path_First> |
| **Activity** | Board activity |
| **Topic** | **Subnetting- CIDR** |
|  | Subnet addressing, a eg. of subnetting, classless routing |
| **WebLink** | <http://en.wikipedia.org/wiki/Subnetwork>  <http://en.wikipedia.org/wiki/Classless_Inter-Domain_Routing>  <http://www.cidr.jhmi.edu/> |
| **Activity** | Recall by keywords |
| **Topic** | Conclusion |
|  | 1. Shortest path 2. Authentication 3. Link state 4. Advertising router 5. Subnet mask 6. Subnet number 7. cider |

**SESSION VIII**

|  |  |
| --- | --- |
| **Activity** | Presentation |
| **Topic** | **Inter domain routing, BGP** |
|  | Autonomous system, multibackbone network, eg.network running BGP |
| **WebLink** | http://en.wikipedia.org/wiki/Classless\_Inter-Domain\_Routing  [http://www.enterprisenetworkingplanet.com/netsp/article.php/3615896/ Networking-101-Understanding-BGP-Routing.htm](http://www.enterprisenetworkingplanet.com/netsp/article.php/3615896/%20Networking-101-Understanding-BGP-Routing.htm) |
| **Activity** | Presentation |
| **Topic** | **Ipv6 - Multicasting** |
|  | Addresses and routing, address notation, address space allocation and packet format  Link state multicast and distance vector multicast |
| **WebLink** | <http://en.wikipedia.org/wiki/IPv6>  http://en.wikipedia.org/wiki/Multicast |
| **Activity** | Word Search puzzle |
| **Topic** | Conclusion |
|  | **Answer Key:**  (E11, N) autonomous  (B9, E) system (C3, E) stub (K3, SW) transit (L4, W) borderrouter  ABCDEFGHIJKL  1nasbmtiseutm 2oaoosotnrbet 3btstuboatdtm 4retuorredrob 5eneamttramnt 6umttotanosbo 7obbonmsoanob 8bnnooimreood 9ssystemiiabo 10orntusrdtmou 11mattautrnrre 12isatusensbot |

**SESSION IX**

|  |  |
| --- | --- |
| **Activity** | Presentation |
| **Topic** | Recap: Multicasting |
|  | Distance vector multicast, RPB, RPM |
| **Activity** | Presentation |
| **Topic** | Congestion Avoidance in Network Layer |
|  | Definition and concepts |
| **WebLink** | <http://odonnell-wiki.cs.uchicago.edu/index.php/Congestion_Avoidance_with_Transport_Layer> |
| **Activity** | Word scramble |
| **Topic** | Conclusion |
|  | ogotincesn  iumatclst  aeddrss  nektwor  eaiconvad  answer key:  ogotincesn congestion  iumatclst multicast  aeddrss address  nektwor network  eaiconvad avoidance |