**UNIT II**

**SESSION I**

|  |  |
| --- | --- |
| **Activity** | **Board Activity** |
| **Topic** | Recap: Link Level flow control |
|  | Definition, concept |
| **Activity** | Presentation |
| **Topic** | Medium Access |
|  | Definition, addressing mechanism |
| **Weblink** | http://en.wikipedia.org/wiki/Media\_Access\_Control |
| **Activity** | Questions and Answers |
| **Topic** | Conclusion |
|  | 1. What is the primary function of medium access? 2. Define medium access control. 3. Define MAC address. 4. Define channel access. 5. Define multiple access. 6. Define Ethernet. 7. Functions performed in the MAC Sub layer. 8. Define address resolution protocol. 9. Define wireless interference. |

**SESSION II**

|  |  |
| --- | --- |
| **Activity** | Writing Board |
| **Topic** | Recap : Medium Access |
|  | Definition and concepts |
| **Activity** | Writing Board |
| **Topic** | CSMA |
|  | Definition, CSMA with collision detection and avoidance |
| **WebLink** | http://en.wikipedia.org/wiki/Carrier\_sense\_multiple\_access |
| **Activity** | Show and tell activity |
| **Topic** | Conclusion |
|  | https://encrypted-tbn1.gstatic.com/images?q=tbn:ANd9GcSq6Zc8vLPILlQw7H1OkjBv5Ss2PoKuIDuwGFJbi6X4tV_btKvqCg  http://www.teco.edu/%7Ekrohn/csma.jpg |

**SESSION III**

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| **Activity** | Board activity |
| **Topic** | Recap: CSMA |
|  | Definition and concepts |
| **Activity** | Board activity |
| **Topic** | **Ethernet** |
|  | Definition, Three generations of Ethernet. |
| **WebLink** | <http://compnetworking.about.com/cs/ethernet1/g/bldef_ethernet.htm> |
| **Activity** | Board activity |
| **Topic** | Physical properties |
|  | concepts |
| **WebLink** | [**https://facultystaff.richmond.edu/~dszajda/classes/cs150/Fall\_2009/**](https://facultystaff.richmond.edu/~dszajda/classes/cs150/Fall_2009/)  **www/lectures/networking\_slides/EthernetSlides.pdf** |
| **Activity** | Word scramble |
| **Topic** | Conclusion |
|  | |  |  | | --- | --- | | atmrobcfee lret |  | | olocnlisi |  | | smca |  | | srnehtte efat |  | | aolah |  |   **Answer:**  Robert Metcalfe  Collision  Csma  Fast Ethernet  aloha |

**SESSION IV**

|  |  |
| --- | --- |
| **Activity** | Writing Board |
| **Topic** | Access Control Algorithm |
|  | MAC, concepts |
| **WebLink** | http://www.erg.abdn.ac.uk/~gorry/eg3561/lan-pages/mac.html |
| **Activity** | Writing Board |
| **Topic** | Frame format |
|  | Ethernet frame format |
| **WebLink** | <http://compnetworking.about.com/cs/ethernet1/g/bldef_ethernet.htm> |
| **Activity** | Quiz |
| **Topic** | Conclusion |
|  | https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcTX2FQxHw0iiYOWpTUZHDSBxoMHjGiaUrKocEaPJHBvUmCkbVfCaQ   1. Identify this above diagram. 2. Define Ethernet. 3. What is meant by fast Ethernet? 4. Define collision. 5. Define collision detection. 6. What is meant by 10Base2? 7. Define switched Ethernet. 8. State the different Data rate for Ethernet. 9. Define cabling. 10. Define the frame format for Ethernet. |

**SESSION V**

|  |  |
| --- | --- |
| **Activity** | Board activity |
| **Topic** | **Token Ring 802.5,** Physical properties |
|  | Definition, Concepts  https://encrypted-tbn2.gstatic.com/images?q=tbn:ANd9GcRS2s9AlIPIlJA0kE_ggxeHHEqQFJ4Y8SzTrQlhrgSxLJsBWZly |
| **WebLink** | [**http://pluto.ksi.edu/~cyh/cis370/ebook/ch03e.htm**](http://pluto.ksi.edu/~cyh/cis370/ebook/ch03e.htm) |
| **Activity** | Analogy |
| **Topic** | Token Ring Media Access Control |
|  | **Relay game**  In relay we are using stick, in similar manner in Token ring uses token to send one particular packet. |
| **WebLink** | <http://www.webopedia.com/TERM/T/token_ring_network.html>  http://www.textfiles.com/bitsavers/pdf/apollo/010005-00\_ Apollo\_Token\_Ring\_Media\_Access\_Control\_  Layer\_and\_Physical\_Layer\_Protocols\_Oct87.pdf |
| **Activity** | Board activity |
| **Topic** | Token ring maintenance, Frame Format |
|  | Concept, 802.5 token ring frame format |
| **WebLink** | <http://homepages.uel.ac.uk/u0306091/TOKEN_RING.htm> |
| **Activity** | Board activity |
| **Topic** | **Ubiquitous Networking (content beyond the syllabus)** |
|  | http://en.wikipedia.org/wiki/Ubiquitous\_computing |
| **WebLink** |  |

http://www.textfiles.com/bitsavers/pdf/apollo/010005-00\_ Apollo\_Token\_Ring\_Media\_Access\_Control\_

Layer\_and\_Physical\_Layer\_Protocols\_Oct87.pdf

**SESSION VI**

|  |  |
| --- | --- |
| **Activity** | Board activity |
| **Topic** | Recap : Token Ring 802.5 |
|  | Frame format, concepts |
| **Activity** | Board activity |
| **Topic** | **FDDI** Physical properties |
|  | Dual fiber ring a) normal operation b) Failure of the primary ring. |
| **WebLink** | <http://en.wikipedia.org/wiki/Fiber_Distributed_Data_Interface> |
| **Activity** | Board activity |
| **Topic** | Timed Token Algorithm, Token Maintenance, Frame Format |
|  | TRT- Token Rotation Time, TTRT- Target Token Rotation time, FDDI frame format |
| **WebLink** | https://www.google.co.in/search?sclient=psy-ab&q=Wi-Fi&oq=Wi-Fi&gs\_l=hp.3...206370.206370.10.207249.1.1.0.0.0.0.0.0..0.0....0...1c.. 26.hp..58.5.24.wghNyrkVGJ0&bav=on.2,or.r\_qf.&bvm=bv.52164340,  d.bmk&biw=1280&bih=696&dpr=1&emsg=NCSR&noj=1&ei=  zng1UveqDYOMrQei14H4BA |

**SESSION VII**

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| --- | --- |
| **Activity** | Presentation, Board activity |
| **Topic** | Wireless LAN |
|  | Wireless 802.11 physical properties, example wireless network |
| **WebLink** | <http://simple.wikipedia.org/wiki/Wireless_LAN> |
| **Activity** | Analogy |
| **Topic** | Bluetooth Technologies |
|  | Data transfer using cell phones |
| **WebLink** | <http://www.cisco.com/web/IN/solutions/en/wireless_lan/index.html> |
| **Activity** | Presentation, Board activity |
| **Topic** | Wi-Fi |
|  | **http://en.wikipedia.org/wiki/Wi-Fi** |
| **Activity** | Recall by keywords |
| **Topic** | Conclusion |
|  | 1. Frequency hopping 2. Infrared signals 3. Wireless 4. Bluetooth 5. Wireless fidelity 6. Direct sequence |

**SESSION VIII**

|  |  |
| --- | --- |
| **Activity** | Presentation |
| **Topic** | **Bridges and Switches,** Learning Bridges, Spanning Tree Algorithm |
|  | Definition and concepts |
| **WebLink** | <http://jpkc.ncwu.edu.cn/jsjwl/net/kurose/ethernet/transparent_bridges.htm> |
| **Activity** | Presentation |
| **Topic** | Broadcast and Multicast  Limitations of Bridges |
|  | Types of addressing schemes |
| **WebLink** | http://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=5&cad= rja&ved=0CEcQFjAE&url=http%3A%2F%2Fwww.comptechdoc.org%2 Findependent%2Fnetworking%2Fguide%2Fnetbroadcasting.html&ei= uXw1Up3lIMSGrgf8yoHwCQ&usg=AFQjCNGKsUz0F8IIaCuWjuDiuU1G8  fiexg&bvm=bv.52164340,d.bmk |
| **Activity** | Show and tell |
| **Topic** | Conclusion |
|  |  |

**SESSION IX**

|  |  |
| --- | --- |
| **Activity** | Presentation |
| **Topic** | Recap: Bridges and Switches |
|  | concepts |
| **Activity** | Presentation |
| **Topic** | Cell Switching (ATM) |
|  | Cells, cell format, segmentation and reassembly |
| **WebLink** | http://en.wikipedia.org/wiki/Asynchronous\_Transfer\_Mode |
| **Activity** | Word scramble |
| **Topic** | Conclusion |
|  | nnasooucrhsy  rsftrane  omed  igdrbe  LAeNdd txnee  **Answer Key:**  nnasooucrhsy asynchronous  rsftrane transfer  omed mode  igdrbe bridge  LAeNdd txnee extended LAN |