**PG.GOVT COLLEGE FOR GIRLS, SECTOR-42, CHANDIGARH**

**Teaching Plan Session Odd Semester**

**(2018-19)**

**Class: PGDCA(Ist Sem) Name of the Teacher: Sarbjit Kaur and Sheenam**

**Subject: Data Communications and Networks** **Period : 2ND (3-4) 4th (3-4) 5TH (5) 6TH (6)**

**Paper : PGD-1104 Room No : 202,205,101,202**

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| **S. No** | **Date From** | | **Date Upto** | **Topics to be covered** |
| Week 1 | **(For ongoing classes)** | | | Network Structure and  Architecture, Network Hardware and |
| July 24, 2018 | | July 28, 2018 |
| Week 2 | July 30, 2018 | August 4, 2018 | | Software (protocol hierarchies, design i  ssues for  layers |
| Week 3 | August 6, 2018 | August 11, 2018 | | interfaces and services: connection oriented and connection less), |
| Week 4 | August 13, 2018 | August 18, 2018 | | Network  structure and architecture-point to point, multicast, broadcast, |
| Week 5 | August 20, 2018 | August 25, 2018 | | Classification of  networks on the basis of Geographical Span (PAN, LAN, MAN and WAN) |
| Week 6 | August 27, 2018 | September 1, 2018 | | topologies (Bus, Ring, Star, Mesh, Tree and Hybrid). |
| Week 7 | September 3, 2018 | September 8, 2018 | | Network Connecting  Devices:  Repeaters, Hubs, Bridges, Routers, Gateways and Switches, Network  Reference  models |
| Week 8 | September 10, 2018 | September 15, 2018 | | OSI model, TCP / IP model. Comparison between OSI and TCP/IP. |
| Week 9 | September 17, 2018 | September 22, 2018 | | Analog Signal, Digital Signal, Analog vs Digital  Communication;;  and |
| Week 10 | September 24, 2018 | September 29, 2018 | | Band Width Limitation, Data rate of a channel Physical  Layer: Transmission media: Guided (Twisted-pair, Coaxial and Opt  ical fiber) |
| Week 11 | October 1, 2018 | October 8, 2018 | | Unguided (Radio, Microwave and infrared), Switching: Circuit switch  ing, Packet  Switching, Message Switching, Telephone system, modems. |
| **MID SEMESTER EXAMINATION (October 11, 2018 to October 17, 2018)** | | | | |
| Week 12 | October 20, 2018 | October 27, 2018 | | Modulation t  echniques:  AM, PM, FM; Multiplexing Techniques- FDM, WDM, and TDM |
| Week 13 | October 29, 2018 | November 3, 2018 | | Elementary Data Link Protocols:  Simplex. Stop and Wait Protocol, Sliding Windows Protocol: one Bit sli  ding |
| Week 14 | November 5, 2018 | November 10, 2018 | | windows protocol, go back n, selective repeat, HDLC: High Level Data Link Protocol.  Design Issues, Error Detection and Correction |
| Week 15 | November 12, 2018 | November 17, 2018 | | Nature of errors,Parity Check, CRC, Hamming Code,Design Issues, |
| Week 16 | November 19, 2018 | November 22, 2018 | | Routing Algorithms (Shortest Path, Flooding,  FlowBased, Distance Vector, Link State, Broadcast, Hierarchical Rout  ing), |
| Week 17 | November 26, 2018 | December 1, 2018 | | Congestion Control Algorithms and their general principles (Leaky Bu  cket, Token  Bucket); Internetworking: tunneling, Internet Routing, fragmentation. |