**Post Graduate Govt. College for Girls, Sector-42, Chandigarh**

**Teaching Plan for Bachelors (First Semester)**

**Session (2020-2021)**

**Class: BCA 5TH semester Name of the Teacher: Sudhir Kumar Sharma**

**Subject: Computer Networks Paper: BCA-16-501**

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| **S. No** | **Dates** | **Topics to be Covered** |
| Week 1 | 01/09/2020-05/09/2020 | Computer Network: Network Hardware and Software, Network Topologies, Uses of Computer Networks,  OSI Reference Model, TCP/IP reference model, |
| Week 2 | 07/09/2020-12/09/2020 | Comparison of OSI with TCP/IP model. |
| Week 3 | 14/09/2020-19/09/2020 | Physical Layer: Transmission media: Twisted pair, Coaxial cable, Fiber optics, Wireless Transmission (Radio, Microwave, and Infrared), |
| Week 4 | 21/09/2020-26/09/2020 | Switching: Circuit Switching, Message Switching, Packet Switching & their comparisons. ISDN and its services, |
| Week 5 | 28/09/2020-03/10/2020 | Multiplexing: Frequency Division, Time Division, Wave Length Division, MODEMS. |
| Week 6 | 05/10/2020-10/10/2020 | Data Link Layer: Design Issue, Framing, Errors Detection and Correction Code: Check sum, CRC, Hamming code, |
| Week 7 | 12/10/2020-16/10/2020 | Data Link Protocols for noisy and noiseless channels, Sliding Window Protocol: Stop and Wait ARQ, Go-back-N ARQ, Selective Repeat ARQ. |
| Week 8 | 19/10/2020-24/10/2020 | Medium Access Sub-Layer: Introduction to Static and Dynamic channel allocation, IEEE standards 802.3. |
| Week 9 | 27/10/2020-30/10/2020 | Network Layer: Design Issues, network layer addressing, network layer datagram, IP addressed Classes. |
| Week 10 | 03/11/2020 – 07/11/2020 | Sub netting-Sub network, Subnet mask, Routing Algorithm: |
| Week 11 | 09/11/2020 – 12/11/2020 | Shortest Path Routing, Flooding, Broadcast and Multicast routing. |
| Week 12 | 16/11/2020 – 21/11/2020 | Congestion control: Principles of Congestion Control. |
| Week 13 | 23/11/2020 – 28/11/2020 | Congestion prevention policies. Leaky bucket and token bucket algorithms. |
| Week 14 | 01/12/2020 – 05/12/2020 | Application Layer: Domain Name system (DNS), DNS name space, DNS Servers, World Wide Web, HTTP, e-mail: |
| Week 15 | 07/12/2020 – 12/12/2020 | Architecture and Services, Message Component, Multipurpose Internet Mail Extensions (MIME) |
| Week 16 | 14/12/2020 – 18/12/2020 | Simple Mail Transfer Protocol (SMTP), Post Office Protocol (POP), |
| Week 17 | 21/12/2020 – 26/12/2020 | Remote Login and File transfer protocol, Introduction to Network Security. |