**SARASWATI MAHILA MAHAVIDHYALAYA, PALWAL**

**LESSON-PLAN**

**Class: B.Sc (cs)2nd YEAR Semester: 3rd**

**Subject:** Data Communication and Networking ( **paper:3.1) Session: 2020-21**

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| **Lecture Number** | **Topic** |
| **1-3** | Introduction to Computer Communications and Networking Technologies |
| **4-10** | Uses of Computer Networks; Network Devices |
| **11-15** | Nodes, and Hosts; Types of Computer Networks and their Topologies |
| **16-25** | Network Architecture and the OSI Reference Model, TCP/IP reference model |
| **26-30** | Analog and Digital Communications Concepts: Concept of data, signal, channel, bid-rate |
| **27-29** | maximum data-rate of channel, Representing Data as Analog Signals |
| **30-32** | Representing Data as Digital Signals, Data Rate and Bandwidth, Capacity, Baud Rate |
| **33-40** | Asynchrous and synchrous transmission, data encoding techniques, Modulation techniques |
| **41-50** | Digital Carrier Systems; Guided and Wireless Transmission Media; Communication Satellites |
| **51-55** | Switching and Multiplexing; Dialup Networking; Analog Modem Concepts. |
| **56-60** | Data Link Layer: Framing, Flow Control, Error Control; Error Detection and Correction; |
| **61-65** | Sliding Window Protocols; Media Access Control: Random Access Protocols, Token Passing Protocols; Token Ring |
| **65-67** | Introduction to Ethernet, FDDI, Wireless LANs. Network Layer and Routing Concepts: |
| **67-72** | Virtual Circuits and Datagram’s; Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing; Internetworking. |
| **72-73** | Transport layer: Elements of Transport protocol: Addressing, Connection Establishmen |
| **74-76** | Flow Control, Buffering, Crash recovery. Internet Transport protocol: UDP: Introduction, Real time Transport protocol |
| **77** | Remote Procedure Call. Application Layer: Domain Name System |
| **78-80** | Electronic Mail, World Wide Web |

**Shweta**

**(Asst Prof. in CS)**