

SOBTIS PUBLIC SCHOOL
GREEN PARK BAREILLY
ACADEMIC PLANNER (2020-21)

Teacher:-Prasoon Johri

Subject: Computer

Class: XII

Month	No. of working days	No. of periods	Topic
February	24	24	Structure of a network: Types of networks: local area and wide area (web and internet), new technologies such as cloud and IoT, public vs. private cloud, wired and wireless networks; concept of a client and server. Network devices such as a NIC, switch, hub, router, and access point.
March	25	25	Network stack: amplitude and frequency modulation, collision in wireless networks, error checking, and the notion of a MAC address, main idea of routing.
April	21	21	IP addresses: (v4 and v6), routing table, router, DNS, and web URLs, TCP: basic idea of retransmission, and rate modulation when there is congestion (analogy to a road network), Protocols: 2G, 3G, 4G, WiFi. What makes a protocol have a higher bandwidth?
May	25	25	Basic network tools: traceroute, ping, ipconfig, nslookup, whois, speed test. • Application layer:
July	27	27	HTTP (basic idea), working of email, secure communication: encryption and • certificates (HTTPS), network applications: remote desktop, remote login, HTTP, FTP, SCP, SSH, POP/IMAP, SMTP, VoIP, NFC.
August	23	23	Write a minimal Django based web application that parses a GET and POST request, and writes the fields to a file - flat file and CSV file.
September	11	11	Interface Python with an SQL database SQL commands: aggregation functions – having, group by, order by.
October	25	25	Intellectual property rights, plagiarism, digital rights management, and licensing (Creative Commons, GPL and Apache), open source, open data, privacy. Privacy laws, fraud; cyber-crime- phishing, illegal downloads, child pornography, scams; • cyber forensics, IT Act, 2000.
November	8	8	E-waste management: proper disposal of used electronic gadgets. Identity theft, unique ids, and biometrics. Gender and disability issues while teaching and using computers.