INTERNET AND ITS APPLICATIONS

CERTIFICATE COURSE FOR B.A ,B.COM and B.Sc.

Department of Computer Science and Applications

Internet architecture: Internet overview, evolution of internet. Internet components – Local Area Networks, Access Networks, Core Networks, Routers, Transmission infrastructure, ISPs. Packet switching fundamentals-Packet Switching versus Circuit Switching, Connectionless packet switching (IP). Internet Standards: Standards bodies and the standards process.

Networking protocols: Network Protocol Overview: What are networking protocols, and what do they do? Key protocol architectures. IP Network Overview: What are the key IP network capabilities? How will these capabilities adapt to future network? IP protocol operation. IP addressing: IP address classes. Why are IP addresses under pressure, and what fixes are in place? TCP Fundamentals: How does TCP shield end users from IP network problems? TCP protocol operation and capabilities. TCP/IP: routing

Access Methods and Internet working: Access Network Architectures: Access network characteristics. Differences between Access Networks, Local Area Networks and Wide Area Networks. Access Technologies: Why there is an upper limit on modem speeds. Voice grade modems, ADSL, Cable Modems, Frame Relay. DNS: Domain Names. Resolving Domain Names to IP addresses (DNS operation). Registering Domain Names and solving Domain name disputes

Internet applications: FTP, Telnet, Email, Chat. World Wide Web: HTTP protocol. Search Engines. E-Commerce and security issues including symmetric and asymmetric key, encryption and digital signature, and authentication. Emerging trends, Internet telephony, virtual reality over the web, etc. Intranet and extranet, firewall.Facebook, Whatsup, Telegram, instagram, Imo, Snapchat ctc.

Books:

- 1. Data & Computer Communications, By William Stallings
- 2. Computer Networks, A system approach By Larry L.Peterson, Bruce S. Davie
- 3. Internetworking with TCP / IP, Principles, Protocols & Architecture, By Douglas E.Comer
- . 4. TCP / IP clearly Explained by Pete Loshin, Morgan Kaufmann Publishers.
- 5. TCP / IP Network Administration by Craig Hunt, Shroff Publishers & Distributors Pvt.Ltd.

6. The Internet and its protocols – A Comparative Approach, by A.Farrel I Elseviers, (Morgan Kaufmann Publishers).

