**First Semester**

**Paper Name : PG 103 : Computers for Managers**

1. **Information Technology concepts: [4L]**

Data v. information, Classification of hardware and software: System software & Application software, open source software, Operating system concepts, IT resources, Review of case study.

1. **Systems concepts: [10L]**

Systems, components of a system, interfaces & boundaries, environment of a system, Types of Systems: Information system as a system, CBIS: Types of CBIS (brief descriptions and their interrelationships/hierarchies):Office Automation System(OAS), Transaction Processing System(TPS),Management Information System(MIS): Functional components of MIS, Decision Support Systems (DSS): Components of DSS, Executive Information System(EIS),Knowledge based system, Expert system. Systems Development Life cycle(SDLC): Life cycle models: Waterfall model, Prototyping model, Spiral model, Review of case study.

**3. Office Automation: [12P]**

Word Processing software (e.g. MS-Word/openoffice.org): Creating and editing documents. Mail merge. Spreadsheet application (e.g. MS-Excel/openoffice.org): Creating and editing spreadsheets. Drawing charts.

Using Functions: text, math & trig, statistical, date & time, database, financial, logical, information, Data analysis: sorting data, filtering data (AutoFilter , Advanced Filter),data validation, what-if analysis (using data tables/scenarios),Creating sub-totals and grand totals, pivot table/chart, goal seek/solver. Presentation software (e.g. MS-Powerpoint) Creating and editing presentations. Applying slide background, images etc. Adding slide transition effect, animation effects, slide timings. Email

**4. Data communication & Networking [4L]**

Need for computer networking, components of a data communication system, direction of data flow(simplex, half-duplex, full-duplex), Types of networks: LAN, MAN, WAN; concepts of Internet, Intranet, Extranet, WWW.

Network topology, transmission media. Applications of networking in business and society: email, social networking, telemedicine, etc, Review of case study.

1. **E-commerce / E-business [4L]**

Overview, Definitions, Advantages & Disadvantages of E-commerce, Business models of e-commerce: models based on transaction party (B2B, B2C,B2G, C2B, C2C, E-Governance), models based on revenue models, Risks of e-commerce and security measures, Review of case study.

1. **Threats to Computer systems and control measures [3L]**

Ethics, Privacy and security, Ethical issues, Threats to information security: Concepts of threats: Virus, hacking, phishing, spyware, spam, physical threats (fire, flood, earthquake, vandalism).Concepts of security measures: firewall, encryption, Review of case study.

1. **Real Time Application in Business: [3L]**

Types of Real Time Systems, Distinction between Real Time, on-line and Batch Processing System. Real Time Applicationsviz. Railway / Airway / Hotel Reservation System, ATMs, EDI Transactions - definition, advantages, examples;Electronic Fund Transfer (EFT), Review of case study.

* **TEXT BOOKS:** 
  + Rajaraman V., Systems Analysis and Design, PHI
  + Sommerville : Software Engineering-Pearson Education.
  + Tanenbaum : Computer Networks, Pearson Education
  + Taxali, R. K. : I.T. Tools & Applications , TMH
  + Rex Kelly Rainer, Efraim Turban, Richard E. Potter: Introduction to information systems: supporting and transforming business, Wiley
* **Reference Books:**
* Bharat, Bhaskar : Electronic Commerce - Technologies & Applications. TMH
* Forouzan : Data Communication & Networking, TMH.
* ISRD, Structured System Analysis and Design, Tata McGraw Hill
* Joseph, P.T. : E-commerce An Indian Perspective, PHI
* Pressman, Roger : Software Engineering - A Practitioner’s Approach , TMH