

Prof Ananya Ganguly

Information Technology and its application to Business
Part II [Hons + Genl] [Paper: C21G]

Sl No	Topics Name	Module	No of Lecture	Period [Month]
1	Information Technology and Business – An Overview Concepts of data, information and computer based information system. impact of information technology on business (business data processing, intra-organisational and interorganisational communication by using network technology, business process and knowledge process outsourcing). Types of Information System - Transaction Processing System (TPS), Management Information System (MIS), Decision Support System (DSS), Knowledge Management System (KMS) - and their implementation at managerial levels(operational, tactical and strategic). Recent trends in information technology (brief ideas) – Enterprise computing, mobile communication, smart card.	I	8	Aug
2	Number System and Representation of Data in Computing System. Data representation – bits, bytes, KB, MB, GB, TB. Concept of Number systems [Decimal, Binary, Octal and Hexadecimal], Binary arithmetic [addition, subtraction using 1's & 2's complement method], Computer Codes – BCD, EBCDIC, ASCII.	I	5	Aug
3.	Fundamentals of Computer:- Components of digital computer and their functions (input unit, processing unit, output unit and storage unit). Basic concepts of hardware & software. Relationship between hardware and software. Types of software: System software – Operating systems [characteristics & functions, uses of GUI based O.S. – LINUX AND WINDOWS], Programming Languages Translator – Assembler, Compiler and Interpreter, Utilities. Application software (basic ideas and examples).	I	8	Aug- Sept
4	Introduction to GUI based operating system – WINDOWS/LINUX	II	1	Sept
5	Word Processor • Features of Word Processor. • Formatting- Font, Paragraph, Page. • Tables, Columns, Dropcap. • Tools-Language Checking Tools, Mail Merge, Autocorrect.	II	2	Sept
6	Electronic Spreadsheet Numerical Data Representation using formatting features for cell, Font, Column, Row, Work Sheet. • FUNCTIONS-Mathematical, Logical, Financial. • GRAPHS-LINE, BAR, AREA, PIE etc. • Linking data using Cell References. • Sheet Reference. • Goal Seek and Scenario.	II	3	Sept
7	Data organization and Data Base Management System:- (a) <i>Data organization:</i> Character, field, record, file and database. Types of Data Processing Systems [Serial, Batch, Real-time, Online, Centralized, Distributed], File Organizations [Sequential, Direct, Indexed-Sequential, Relative], Traditional file organization Vs. Database File organization. (b) <i>Data Base Management System:</i> Concept of Data Base Management System, Important terms of Database [including Entity, Attribute, Primary Key, Foreign Key, Candidate Key, Referential integrity, Table, Views, Data Dictionary]. Types of database [hierarchical, network and relational]. Basic ideas of Data Warehouse and Data mining.	I	10	Sept - Oct

8	Data Base Management System <ul style="list-style-type: none"> • Creation of Tables, Defining Primary key. • Multiple Table Handling – Defining Relationship, Foreign Key. • Generating simple and Conditional Queries. Types of queries [Update, Delete, Append] • Designing Forms and Reports 	II	12	Nov
9	(a) <i>Data Communication</i> : Concept of Data communications, Transmission Modes [Simplex, Half-Duplex, Full Duplex, Serial, Parallel, Synchronous, Asynchronous], Communication Media. Wireless and satellite communication, Wireless Broadband, WAP, Network components – Bridge, Switch, Router, Gateway (b) <i>Computer Networks</i> : Network Concept, Types: LAN, WAN, MAN, VAN, SAN. Various Topologies: Bus, Star, Ring, Mesh, Tree	I	8	Nov - Dec
10	Financial Accounting Package and its Implementation (TALLY / ACE)	II	9	Dec
11	Introduction to Internet Meaning of Internet. Concepts of Internet Intranet and Extranet, IP Address (IPv4, IPv6), URL, Domain name System. Internet Protocols - TCP/IP, UDP, FTP, TELNET,(brief ideas only). HTML, DHTML AND XML. (concepts only).	I	5	Jan
12	Security Issues Security threats - Virus, Trozan, Hacking, Spam. Security Measures - Firewall, Antivirus software, Digital Signature. Concept of data Encryption & Decryption. Symmetric and asymmetric encryption. Digital envelope.	I	6	Jan