

**GOVT. DIGVIJAY AUTONOMOUS P.G. COLLEGE,
RAJNANDGAON (C.G.)**



TEACHING PLAN 2023-24

DEPARTMENT OF COMPUTER APPLICATIONS

Teaching-Plan 23-24

Class - ..BCA-Ist Semester..

Paper - ..Computer fundamental

Credits - ..04.....

Month	Unit & Topic	Credit allotted	Period/ Hours Required
July	Unit I :- Introduction to Computer Computer characteristics & capabilities Computer H/W & S/W, Block dia. Data processing, Types of Computer Number system, Logic gate	04 Credit	
August	Unit I :- Generation of Computer Compliment, codes - ASCII, Gray code, boolean Law, boolean expression. Unit II Introduction to I/P device, categorizing I/P Hardware, Scanning device.		
September	Keyboard Direct Entry Card Reader, scanning device - OMR, Character reader, Thumb Scanner MICR, Smart Card, voice I/P devices Pointing device - Mouse, light Pen, touch screen, OP fundamental Impact / Non Impact Printer, Plotter, Microfilm, CRT, Flat Screen, Projectors, speakers		
October	Microprocessor W, ALU, Register Buses Main memory, RAM, ROM, storage devices Storage fundamental, Primary & Secondary Data storage & Retrieval Method, Tap storage devices, characteristics & limitations, Direct access storage & Hard disk, disk cartridges, Direct access storage device.		
November	optical disk, CD-ROM, Sys softwares app software, Types of Sys. software Types of OS, boot loader, diagnostic Prog., BIOS, utility Prog. App soft Types of app soft, diff bet Prog. & package, comp lang. Types of lang, Assembler, Interpreter, compiler Linker & loader, Prog. construction		
December	Doubt classes of all unit		

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Teaching-Plan 23-24

Class - B.A. IIIrd Semester

Paper - Computer System Architecture

Credits - 04

Month	Unit & Topic	Credit allotted	Period/ Hours Required
July	Unit-I :- Data representation, data types, Number Systems, Fixed point representation, Complement Arithmetic Operations, Overflow, underflow, Codes, error correction & detection.	04 Credit	
August	Unit II :- Logic gate, boolean algebra, boolean laws, Map Simplification, SOP, POS, Combinational Circuit, Sequential Circuit, Adder, Subtractor, Flip flop shift register, RAM, ROM		
September	Unit III :- CPU Architecture, ALU, Control Circuit, arithmetic circuit Register, Types of register, Instruction format, Interfacing to micro-processor, Addressing mode, Types of CPU Organization, System Bus.		
October	UNIT III :- Prog. Counter, Block dia of Macro Comp. Sys., Microprocessor Microprocessor control signals, Mother board, Components of Mother board, SNPS		
November	I/O Organization, I/O interface, I/O devices, I/O Controller, isolated vs Memory Mapped I/O, Modes of data transfer, Types of data transfer, Synchronous, Asynchronous, Handshaking I/O Processor, virtual Mem; address space		
December	Memory, Auxiliary Memory, Magnetic drum, disk, Tape, semiconductor mem. Mem. hierarchy, Associative memory, Page table, Page replacement, cache		

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Teaching-Plan 23-24

Class - DCA-1st Semester

Paper - Essential in IT & OS

Credits -

Month	Unit & Topic	Credit allotted	Period/ Hours Required
August	Unit-I:- Introduction to Computer characteristics, Computer H/w & s/w, Block diagram of Computer, Types of Computer, generation of computer, XT & AT pentium PC's, Unit II - Introduction to I/p device.	09	
September	Introduction to o/p device. Keyboard, direct entry, Card Readers, Scanning device-OMR, character Reader, MICR, voice I/p device, Mouse, light pen, storage fundamental, RAM, ROM, floppy disk, Hard disk, optical disks, CD/DVD, Impact/non impact Printer, plotter, CRT, Flat screen.	Credit	
October	Ms-DOS History, Version, booting Process, System file, Internal & External Dos Command, Creating a Batch files, Additional Commands (Echo, prompt mode, edit, format, fdisk, backup, restore, more, sort).		
November	Windows concept, feature, structure desktop, Taskbar, start menu, My Computer, Recycle bin, Accessories, character map, Explorer, Creating folders & other facilities, Internet Explorer basic, Control panel.		
December	Open Source s/w concept & evolution of linux, feature & structure of linux, File system Directory structure, linux editors, editor command & linux command		

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Teaching-Plan 23-24

Class - PGDCA: 1st Semester

Paper - Software Organisation

Credits -

Month	Unit & Topic	Credit allotted	Period/ Hours Required
August	Unit I: - Computer Introduction, Comp. Syst. characteristics, development of computer, generation of computer Introduction to personal computer Use of PC's, component of PC's Architecture of Pentium, I/P. Op device.	04 Credit	
September	Unit II :- Computer Organization CPU, ALU, control unit- Register, Types of Register, working of signals, Instruction set, Processor speed, storage & its need, storage evaluation unit- Primary & Secondary Storage, data storage & Retrieval System, SIMM, DIMM, Type of storage Basic of software		
October	Needs & Types of software, free domain software, Open Source Software, compiler, Interpreter & Assembler, linker & loader, debugger, IDE, OS, Uses, func ⁿ of OS, booting process, types of reboot, booting devices Types OS, DOS		
November	Prog. lang. Comparison bet ⁿ human & Comp. lang; Prog: data, inf ⁿ knowledge, Types of programming lang. Generation of lang. Prog. development steps, oop, structured Prog. functional prog. Process Oriented Prog. Comm ⁿ , communication		
December	Comm ⁿ Types, protocols, Comm ⁿ channel Media, Network, Types of network, Topology NIC, Nos, bridge, HUB, Router, gateways Internet, growth of Internet, Internet service Provider, Anatomy Arpanet, www, FTP, Gopher, Telnet, App ^s of Internet		

Teaching-Plan 23-24

Class - PGDCA - IInd Semester

Paper - DBMS

Credits - 04

Month	Unit & Topic	Credit allotted	Period/ Hours Required
January	Unit-I - Data, info ⁿ & Knowledge DBMS, Advantage of DBMS Data independence, DBA, DBMS Architecture, different kind of DBMS users, Data dictionary, Contents & Types of data dictionary, Database log. Types of database log; Data Models.	04 credit	
February	Network, hierarchical, relational model, ODBC Concept. Entity Relationship Model, attribute Relationship, E-R diagram, Keys Types of Keys, ER Modelling Generalization Specialization Aggregation. Relational Model Structure of relational database Relational algebra, operations Relational Calculus.		
March	Relational database design - Pitfalls in RD design, Decomposition, functional dependencies, Normalization 1NF, 2NF, 3NF, BCNF, 4NF, SQL, Creating Table. Integrity Constraint.		
April	DPL, DML, DCL language, Commands Modify, Drop .Insert, delete, updating where clause, operators Order by, Group by, SQL fun ⁿ , Join, Subqueries. Views, create, drop, retrieving from views.		
May	Security, Management of users, Password changing, Granting Roles & Privileges.		

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Teaching-Plan 23-24

Class - BCA- IInd Sem.....

Paper - PC Package.....

Credits - 04.....

Month	Unit & Topic	Credit allotted	Period/ Hours Required
January	MS Word Introduction, word processing software, features. Creating new documents, saving, opening & printing. Home tab. Insert tab. Page layout tab.	04 Credits	
February	Review tab, View tab, Ms-Excel, Insert tab: Table, chart, header & footer, word cut. Introducing Excel, Use of Excel sheet, Creating New, Saving, opening & Printing. Insert - Table, chart, formula - logical, Math, trig. Data tab - sort & filter.		
March	MS Powerpoint, Use of PPT, Creating New slides, Saving, opening & printing. Design tab: - Page setup, slide orientation, themes background style & formatting. Animation Tab - custom animation, applying slide, slide show view tab.		
April	MS Access - Frontend & back end of application. DBMS, feature of dbms, blank db, data types, Home Tab - datasheet view, design, pivot table, sort & filter options. Create tab - Tables, reports, External data Tab - Importing data from Access.		
May	doubt class		

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Teaching-Plan 23-24

Class - BCA - IVth Sem

Paper - Computer Network

Credits - 04

Month	Unit & Topic	Credit allotted	Period/ Hours Required
January	Computer Network, Comp. Network, Data Comm, Network- distributed Processing, Network Criteria, App, Protocols & standards, standard Organization, Line configuration - Point to point, Multipoint;	04 Credit	
February	Topology - Mesh, star, Tree, bus, Ring, Hybrid, Transmission mode, Conf. of Network - LAN, MAN, WAN, Internetworks. Transmission of digital data - Analog, digital data transmission, parallel & serial transmission, DTE-DEE interface Modems, Transmission rate, Modem standard.		
March	OSI Model, Iso Organization, Model-layered Architecture, 7 layers (Physical, data link, Network, Transport, Session, Presentation, Application). The TCP/IP system Model, Comparison of TCP/IP internet, Intranet, Architecture of Internet, client Server Model, IP address class, Protocol - IP, HTTP, TCP, FTP, ARP.		
April	Network Security - Introduction of Network Security & its importance, Cryptography, Symmetric key, Traditional Ciphers, Simple Modern cipher Asymmetric Key Cryptography RSA, security service, Digital Signature.		
May	doubt class		