P.T.V.A.'s
M.L.Dahanukar College of Commerce

Teaching Plan: 2021– 22
Department: Information Technology

Class: F.Y.B.Sc.(I.T.) – Semester II

Subject: Object Oriented Programming

Name of the Faculty: Navneet Kaur Nagpal

Month	Topics to be Covered	Number of Lectures
January	Procedure oriented programming, Advantages, disadvantages, Object oriented programming, comparison(pop and oop), features of oop and pop, advantages of oop, applications of object oriented, object oriented development, oop paradigm basic concepts(objects, classes, inheritance, data abstraction and encapsulation, dynamic binding, polymorphism, message passing), Class declaration, access specifiers, Constructor, destructor, parameterized constructor, default constructor, copy constructor,	16
February	Static data members, static member functions, constant objects, pointers to objects, function overloading, overloading of assignment, increment , decrement, unary ,binary , arithmetic operator, friend functions, this pointer	16
March	Inheritance, protected visibility label, single, multiple, multilevel, hybrid, hierarchical inheritance, constructors in derived class, containership, virtual destructors, abstract classes, virtual functions, pure virtual functions , files, opening and closing, eof, file modes, file operations, file pointers and manipulation	16
April	Templates, function templates, class templates exception handling, try, catch, throw, multiple catch statements, rethrowing an exception	12

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M.L.Dhanukar College of Commerce

Teaching Plan: 2021 - 22

Department: B.Sc.IT **Semester: II**

Class: F.Y.BScIT

Subject: Microprocessor Architecture

Name of the Faculty: Ms.Shruti Save

Month	Topics to be Covered	Internal Assessment	Number of Lectures
JANUARY	**Unit I** **Microprocessor, microcomputers, and Assembly Language:** • Microprocessor, Microprocessor Instruction Set and Computer Languages • From Large Computers to Single-Chip Microcontrollers, Applications. **8085 Microprocessor Architecture and Memory Interface:** • 8085-Based Microcomputer • Memory Interfacing • Interfacing the 8155 Memory Segment • Illustrative Example: Designing Memory for the MCTS Project, Testing and Troubleshooting Memory Interfacing Circuit, 8085-Based Single-Board microcomputer **UNIT II** **Introduction to 8085 Assembly Language Programming:** • The 8085 Programming Model • Instruction Classification • Writing assembling and Execution of a simple program, Overview of 8085 Instruction Set • Writing and Assembling Program.		12
FEBRUARY	**UNIT II** **Introduction to 8085 Instructions:** • Data Transfer Operations		20

	• Arithmetic Operations, Logic Operation • Branch Operation • Writing Assembly Languages Programs **UNIT III** **Programming Techniques With Additional Instructions:** • Programming Techniques: Looping, Counting and Indexing • Additional Data Transfer and 16-Bit Arithmetic Instructions • Arithmetic Instruction Related to Memory, Logic Operations: Rotate, Logics Operations: Compare, Dynamic Debugging. **Counters and Time Delays:** • Counters and Time Delays, Illustrative Program: Hexadecimal Counter, Illustrative Program: zero-to-nine (Modulo Ten) Counter **Stacks and Sub-Routines:** Stack, Subroutine, Restart, Conditional Call, Return Instructions		
MARCH	**UNIT IV** **Code Conversion, BCD Arithmetic, and 16-Bit Data Operations:** • BCD-to-Binary Conversion, Binary-to-BCD Conversion Binary-to-ASCII and ASCII-to-Binary Code Conversion, BCD Addition, BCD Subtraction, Introduction To Advanced Instructions and Applications • Multiplication, Subtraction With Carry. **Software Development System and Assemblers:** • Microprocessors-Based Software Development system, Operating System and Programming Tools • Interrupts: The 8085 Interrupt, 8085 Vectored Interrupts, Restart as S/W Instructions, Additional I/O Concepts and processes **Unit I**		20

	Microprocessor Architecture and Microcomputer System: • Microprocessor Architecture and its operation's I/O Devices • Logic Devices and Interfacing • Microprocessor-Based System Application		
APRIL	**UNIT II** **Interfacing of I/O Devices** • Basic Interfacing concepts • Interfacing Output Displays • Interfacing Input Devices, Memory Mapped I/O **UNIT V** **The Pentium and Pentium Pro microprocessors:** • Introduction, Special Pentium registers, Memory management, Pentium instructions, Pentium Pro microprocessor, Special Pentium Pro features. • **Core 2 and later Microprocessors:** Introduction, Pentium II software changes, Pentium IV and Core 2, i3, i5 and i7. • **SUN SPARC Microprocessor:** Architecture, Register file, data types and instruction format		08

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M.L.Dhanukar College of Commerce

Teaching Plan: 2021 - 22

Department: BScIT **Semester: II**

Class: F.Y.BScIT Div: B

Subject: Microprocessor Architecture

Name of the Faculty: Mrs. Snehal Borade

Month	Topics to be Covered	Internal Assessment	Number of Lectures
January	**UNIT I** **Microprocessor, microcomputers, and Assembly Language:** Microprocessor, Microprocessor Instruction Set and Computer Languages, From Large Computers to Single-Chip Microcontrollers, Applications. **Microprocessor Architecture and Microcomputer System:** Microprocessor Architecture and its operation's, Memory, I/O Devices, Microcomputer System, Logic Devices and Interfacing, Microprocessor-Based System Application. **8085 Microprocessor Architecture and Memory Interface:** Introduction, 8085 Microprocessor unit, 8085-Based Microcomputer, Memory Interfacing, Interfacing the 8155 Memory Segment, Illustrative Example: Designing Memory for the MCTS Project, Testing and Troubleshooting Memory Interfacing Circuit, 8085-Based Single-Board microcomputer. **UNIT II** **Interfacing of I/O Devices** Basic Interfacing concepts, Interfacing Output Displays, Interfacing Input Devices, Memory Mapped I/O, Testing and Troubleshooting I/O Interfacing Circuits.		20

February	**Introduction to 8085 Assembly Language Programming:** The 8085 Programming Model, Instruction Classification, Instruction, Data and Storage, Writing assembling and Execution of a simple program, Overview of 8085 Instruction Set, Writing and Assembling Program. **Unit III** **Introduction to 8085 Instructions:** Data Transfer Operations, Arithmetic Operations, Logic Operation, Branch Operation, Writing Assembly Languages Programs, Debugging a Program. **Code Conversion, BCD Arithmetic, and 16-Bit Data Operations:** BCD-to-Binary Conversion, Binary-to-BCD Conversion, BCD-to-Seven-Segment-LED Code Conversion, Binary-to-ASCII and ASCII-to-Binary Code Conversion, **Programming Techniques With Additional Instructions:** Programming Techniques: Looping, Counting and Indexing, Additional Data Transfer and 16-Bit Arithmetic Instructions, Arithmetic Instruction Related to Memory, Logic Operations: Rotate, Logics Operations: Compare, Dynamic Debugging. **Unit IV** **Counters and Time Delays:** Counters and Time Delays, Illustrative Program: Hexadecimal Counter, Illustrative Program: zero-to-nine (Modulo Ten) Counter, Generating Pulse Waveforms, Debugging Counter and Time-Delay Programs. **Stacks and Sub-Routines:** Stack, Subroutine, Restart, Conditional Call, Return Instructions, Advanced Subroutine concepts.		22
	BCD Addition, BCD Subtraction, Introduction To Advanced Instructions		18

March	and Applications, Multiplication, Subtraction With Carry. **Software Development System and Assemblers:** Microprocessors-Based Software Development system, Operating System and Programming Tools, Assemblers and Cross-Assemblers, Writing Program Using Cross Assemblers. Interrupts: The 8085 Interrupt, 8085 Vectored Interrupts, Restart as S/W Instructions, Additional I/O Concepts and processes. **UNIT V** **The Pentium and Pentium Pro microprocessors:** Introduction, Special Pentium registers, Memory management, Pentium instructions, Pentium Pro microprocessor, Special Pentium Pro features. **Core 2 and later Microprocessors:** Introduction, Pentium II software changes, Pentium IV and Core 2, i3, i5 and i7. **SUN SPARC Microprocessor:** Architecture, Register file, data types and instruction format.		

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M.L.Dhanukar College of Commerce
Teaching Plan: 2021 - 22

Department: **Information Technology** **Semester: II**

Class**: F.Y.B.Sc.I.T.**

Subject**: Web Programming**

Name of the Faculty**: Archana Talekar**

Month	Topics to be Covered	Internal Assessment	Number of Lectures
January	**Unit I** • Introduction to HTML • HTML Lists, • Hyperlink • Style Sheets, CSS		10
February	**Unit II** • Page Layout and Navigation • Tables, Forms and Media **Unit III** • JavaScript - Introduction • Operators • Statements • Core JavaScript		20
March	**Unit III** • Document and its Associated Objects • Events and Event Handlers **Unit IV** • PHP		20
April	**Unit V** • Advanced PHP and MySQL **Unit I** • Internet and WWW		10

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M.L.Dahanukar College of Commerce

Teaching Plan: 2021 - 22

Department: I.T. **Class:F.Y.B.Sc.(I.T.)** **Semester: II**

Subject: Numerical and statistical methods

Name of the Faculty: Ganesh Bhagwat

Month	Topics to be Covered	Internal Assessment	Number of Lectures
JAN	UNIT 1 1. Mathematical Modelling and Engineering Problem Solving 2. Approximations and Round-Off Errors 3. Truncation Errors and the Taylor Series		16
FEB	UNIT 2 1. Solutions of Algebraic and Transcendental Equations 2. Interpolation UNIT 3 1. Solution of simultaneous algebraic equations (linear) using iterative methods 1. Numerical differentiation and Integration 2. Numerical solution of 1st and 2nd order differential equations		24
MARCH	UNIT 4 1. Least-Squares Regression 2. Linear Programming UNIT 5 3. Random variables 4. Distributions		20

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M.L. Dahanukar College of Commerce

Teaching Plan: 2021 - 22

Department: I.T. **Class: F.Y.B.Sc.(I.T.)** **Semester:II**

Subject: Green Computing

Name of the Faculty: Srushty Padte

Month	Topics to be Covered	Internal Assessment	Number of Lectures
January	**Problems:** Toxins, Power Consumption, Equipment Disposal, Company's Carbon Footprint: Measuring Details. **Reasons to bother,Plan for the Future,** **Cost Savings:** Hardware, Power. **Global Initiatives**: United Nations, Basel Action Network, Basel.		10
February	**North America:** The United States, Canada, Australia, Europe, WEEE Directive, RoHS, National Adoption, Asia: Japan, China, Korea,Power Problems, Monitoring Power Usage, Servers, Low-Cost Options. Reducing Power Use, Data De-Duplication, Virtualization, Management, Bigger Drives, Involving the Utility Company, LowPower Computers, PCs, Linux, Components, Servers, Computer Settings, Storage, Monitors, Power Supplies, Wireless Devices, Software. Cooling Costs, Power Cost, Causes of Cost, Calculating Cooling Needs, Reducing Cooling Costs, Economizers, On-Demand Cooling, HP's Solution, Optimizing Airflow, Hot Aisle/Cold Aisle Raised Floors, Cable Management, Vapour Seal, Prevent Recirculation of Equipment Exhaust, Supply Air Directly to Heat Sources, Fans, Humidity, Adding Cooling, Fluid Considerations, System Design, Datacentre Design, Centralized Control, Design for Your Needs, Put Everything Together.		20

March	Old Behaviours, starting at the Top, Process Reengineering with Green in Mind, Analysing the Global Impact of Local Actions, Steps: Water, Recycling, Energy, Pollutants, Teleworkers and Outsourcing, Telecommuting, Outsourcing, how to Outsource, Paper Problems, The Environment **Costs**: Paper and Office, Practicality, Storage, Destruction, Going Paperless, Organizational Realities, Changing Over, Paperless Billing, Handheld Computers vs. the Clipboard, Unified Communications, Intranets, What to Include, Building an Intranet, Microsoft Office SharePoint Server 2007, Electronic Data Interchange (EDI), Nuts and Bolts, Value Added Networks, Advantages, Obstacles. Problems, China, Africa, Materials, Means of Disposal, Recycling, Refurbishing, Make the Decision, Life Cycle, from beginning to end, Life, Cost, Green Design, Recycling Companies, Finding the Best One, Checklist, Certifications, Hard Drive Recycling, Consequences, cleaning a Hard Drive, Pros and cons of each method, CDs and DVDs, good and bad about CD and DVDs disposal, Change the mind-set, David vs. America Online		20
April	Certification Programs, EPEAT, RoHS, Energy Star, Computers, Monitors, Printers, Scanners, All-in-Ones, Thin Clients, Servers, Blade Servers, Consolidation, Products, Hardware Considerations, Planned Obsolescence, Packaging, Toxins, Other Factors, Remote Desktop, Using Remote Desktop, Establishing a Connection. Initial Improvement Calculations, Selecting Metrics, Tracking Progress, Change Business Processes, Customer Interaction,		10

	Paper Reduction, Green Supply Chain, Improve Technology Infrastructure, Reduce PCs and Servers, Shared Services, Hardware Costs, Cooling Organizational Check-ups, Chief Green Officer, Evolution, Sell the CEO, SMART Goals, Equipment Check-ups, Gather Data, Tracking the data, Baseline Data, Benchmarking, Analyse Data, Conduct Audits, Certifications, Benefits, Realities, Helpful Organizations.		

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