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

Teaching Plan: 2018 – 19
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
December	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)	10
January	Class declaration, access specifiers, Constructor, destructor, parameterized constructor, default constructor, copy constructor, constant objects, pointers to objects, function overloading, overloading of assignment, increment , decrement, unary ,binary , arithmetic operator, friend functions, this pointer	20
Februray	Static data members, static member functions, Inheritance, protected visibility label, single, multiple, multilevel, hybrid, hierarchical inheritance, constructors in derived class, containership, virtual destructors, abstract classes, virtual functions, pure virtual functions	15
March	files, opening and closing, eof, file modes, file operations, file pointers and manipulation, templates, class templates, function templates, exception handling, rethrowing an exception, multiple catch statements	20

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M.L.Dhanukar College of Commerce

Teaching Plan: 2018 - 19

Department: BScIT **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
December	**Unit I** **Microprocessor, microcomputers, and Assembly Language:** • Microprocessor, Microprocessor Instruction Set and Computer Languages • From Large Computers to Single-Chip Microcontrollers, Applications.		06
December	**Unit I** **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		16

	• Writing and Assembling Program. **Introduction to 8085 Instructions:** • Data Transfer Operations • Arithmetic Operations, Logic Operation • Branch Operation • Writing Assembly Languages Programs		
January	**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,		24
February	**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	Class Test	12

	• Interrupts: The 8085 Interrupt, 8085 Vectored Interrupts, Restart as S/W Instructions, Additional I/O Concepts and processes		
March	**Unit I** **Microprocessor Architecture and Microcomputer System:** • Microprocessor Architecture and its operation's I/O Devices • Logic Devices and Interfacing • Microprocessor-Based System Application. **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		12

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M.L.Dhanukar College of Commerce

Teaching Plan: 2018 - 19

Department: IT **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
December	**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.		10
January	**UNIT II** **Interfacing of I/O Devices** Basic Interfacing concepts, Interfacing Output Displays, Interfacing Input Devices,		16

	Memory Mapped I/O, Testing and Troubleshooting I/O Interfacing Circuits. **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. **Introduction to 8085 Instructions:** Data Transfer Operations, Arithmetic Operations, Logic Operation, Branch Operation, Writing Assembly Languages Programs, Debugging a Program.		
February	**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, Generating Pulse Waveforms, Debugging Counter and Time-Delay Programs. **Stacks and Sub-Routines:** Stack, Subroutine, Restart, Conditional Call, Return Instructions, Advanced Subroutine concepts. **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	CLASS TEST	16
March	BCD Addition, BCD Subtraction, Introduction To Advanced Instructions and Applications, Multiplication, Subtraction With Carry. **Software Development System and**		18

	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: 2018 - 19

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
December	**Unit I** • Introduction to HTML, HTML Lists, Hyperlink		05
January	**Unit I** • Style Sheets, CSS **Unit II** • Page Layout and Navigation • Tables, Forms and Media **Unit III** • JavaScript - Introduction • Operators • Statements • Core JavaScript (Array, Date)		20
February	**Unit III** • Core JavaScript (ctd) • Document and its Associated Objects • Events and Event Handlers **Unit IV** • PHP	Class Test	18
March	**Unit IV** • PHP (ctd) **Unit V** • Advanced PHP and MySQL **Unit I** • Internet and WWW		17

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M.L. Dahanukar College of Commerce

Teaching Plan: 2018 - 19

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

Subject: Numerical and Statistical Methods

Name of the Faculty: T.K. Khatijatul Kubra

Month	Topics to be Covered	Internal Assessment	Number of Lectures
December	Mathematical Modeling and Engineering Problem Solving: A Simple Mathematical Model, Conservation Laws and Engineering Problems Approximations and Round-Off Errors: Significant Figures, Accuracy and Precision, Error Definitions, Round-Off Errors Truncation Errors and the Taylor Series: The Taylor Series, Error Propagation, Total Numerical Errors, Formulation Errors and Data Uncertainty		12 lectures
January	Solutions of Algebraic and Transcendental Equations: The Bisection Method, The Newton-Raphson Method, The Regula-falsi method, The Secant Method. Interpolation: Forward Difference, Backward Difference, Newton's Forward Difference Interpolation, Newton's Backward Difference Interpolation, Lagrange's Interpolation.		15 lectures
February	Solution of simultaneous algebraic equations (linear) using iterative methods: Gauss-Jordan Method, Gauss-Seidel Method. Numerical differentiation and Integration: Numberical differentiation, Numerical integration using Trapezoidal Rule, Simpson's 1/3rd and 3/8th rules. Numerical solution of 1st and 2nd order differential equations: Taylor series, Euler's Method, Modified Euler's Method, Runge-Kutta Method for 1st and 2 nd Order Differential Equations.		20 lectures
March	Least-Squares Regression: Linear Regression, Polynomial Regression,		15 lectures

	Multiple Linear Regression, General Linear Least Squares, Nonlinear Regression Linear Programming: Linear optimization problem, Formulation and Graphical solution, Basic solution and Feasible solution.		
April	Random variables: Discrete and Continuous random variables, Probability density function, Probability distribution of random variables, Expected value, Variance. Distributions: Discrete distributions: Uniform, Binomial, Poisson, Bernoulli, Continuous distributions: uniform distributions, exponential, (derivation of mean and variance only and state other properties and discuss their applications) Normal distribution state all the properties and its applications.		20 lectures

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M.L. Dahanukar College of Commerce

Teaching Plan: 2018 - 19

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

Subject: Green Computing

Name of the Faculty: Amit Bane

Month	Topics to be Covered	Internal Assessment	Number of Lectures
November	1. Problems: Toxins, Power Consumption, Equipment Disposal,Company's Carbon Footprint: Measuring, Details, reasons to bother,Plan for the Future, Cost Savings: Hardware, Power. 2. Global Initiatives: United Nations, Basel Action Network, Basel Convention, North America: The United States, Canada, Australia,Europe, WEEE Directive, RoHS, National Adoption, Asia: Japan, China, Korea.		12
December	1. Power Problems, Monitoring Power Usage, Servers, Low-Cost Options, Reducing Power Use, Data De-Duplication, Virtualization, Management, Bigger Drives, Involving the Utility Company, Low-Power Computers, PCs, Linux,Components, Servers, Computer Settings, Storage, Monitors, Power Supplies, Wireless Devices, Software. 2.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,		12

	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.		
January	1. 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. 2. 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.		12
February	1. 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 2. Certification Programs, EPEAT, RoHS, Energy Star, Computers, Monitors, Printers, Scanners, All-in-Ones, Thin Clients, Servers, Blade Servers, Consolidation, Products, Hardware Considerations, Planned	Internal test (20)	12

	Obsolescence, Packaging, Toxins, Other Factors, Remote Desktop, Using Remote Desktop, Establishing a Connection, In Practice		
March	1. Initial Improvement Calculations, Selecting Metrics, Tracking Progress, Change Business Processes, Customer Interaction, Paper Reduction, Green Supply Chain, Improve Technology Infrastructure, Reduce PCs and Servers, Shared Services, Hardware Costs, Cooling. 2. 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.		12

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