M.L. Dahanukar College of Commerce

Teaching Plan: 2021 - 22

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

Subject: Imperative Programming

Name of the Faculty: Srushty Padte

Month	Topics to be Covered	Internal Assessment	Number of Lectures
September	Unit1- Introduction, History, Features and application, simple program logic, sdlc , flowchart and pseducode, introduction to C. Structure of program, compilation and execution, Identifiers, keywords, data types, constants , variables, arrays ,expressions. Unit 2- Operator and expressions, data input and output. Unit 3- Introduction, Decision making, conditions, logical connectives if, if else, nested if, else if ladder, while loop, do while, for loop. Function definition, accessing a function		22
October	Unit 3- passing argument, function prototype , recursion, standard library of c, call by value and call by reference. Unit 4- Program structure, storage class, automatic variables, static variables, multiple programs, pre-processor directives, arrays definition , passing parameters to arrays, multidimensional arrays, arrays and strings.		30
November	Unit 5- Pointers ,declaration, operator, pointer type, assignment, pointer initialization, pointer arithmetic, pointer and functions, pointer arrays , structure and unions		8

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M.L.Dhanukar College of Commerce

Teaching Plan: 2021 - 22

Department: I.T   **Class: F.Y.BSc(I.T)**   **Semester: I**

Subject: Digital Electronics

Name of the Faculty: MS. Shruti Save

Month	Topics to be Covered	Internal Assessment	Number of Lectures
September	**UNIT I** **Number System** • Analog System, digital system • binary number system, octal number system, hexadecimal number system conversion from one number system to another • weighted codes binary coded decimal non-weighted codes Excess – 3 code, Gray code, Alphanumeric codes – ASCII Code, EBCDIC, Hollerith Code, Morse Code, Teletypewriter (TTY), Error detection and correction, Code conversion. **Binary Arithmetic** • Binary addition • Binary subtraction • Negative number representation • Subtraction using 1's complement and 2's complement • Binary multiplication and division • Arithmetic in octal number system, Arithmetic in hexadecimal number system, BCD and Excess – 3 arithmetic **UNIT II** **Boolean Algebra and Logic Gates** • Introduction, Logic (AND OR NOT) • Boolean theorems, Boolean Laws, De Morgan's Theorem		22

October	**UNIT II** **Boolean Algebra and Logic Gates** • Reduction of Logic expression using Boolean Algebra • Deriving Boolean expression from given circuit • exclusive OR and Exclusive NOR gates Universal Logic gates, Implementation of other gates using universal gates • Input bubbled logic **Minterm, Maxterm and Karnaugh Maps:** • Introduction, minterms and sum of minterm form, maxterm and Product of maxterm form. • Reduction technique using Karnaugh maps – 2/3/4/5/6 variable K-maps. • Grouping of variables in K-maps, K-maps for product of sum form, minimize Boolean expression using K-map and obtain K-map from Boolean expression. • Quine Mc- Cluskey Method. **UNIT III** **Combinational Logic Circuits:** • Introduction, Multi-input, multi-output Combinational circuits • Code converters design and implementations **Arithmetic Circuits:** • Introduction, Adder, BCD Adder, Excess – 3 Adder • Binary Subtractors, BCD Subtractor, Multiplier, Comparator. **UNIT IV** **Multiplexer, Demultiplexer, ALU, Encoder and Decoder:** • Introduction, Multiplexer, Demultiplexer, Decoder, ALU, Encoders.		30

			14
November	**Sequential Circuits: Flip-Flop:** • Introduction, Terminologies used, S-R flip-flop, D flip-fop, JK flip-flop, Race-around condition, Master – slave JK flip-flop, T flip-flop, • Application of flip-flop **UNIT V** **Counters:** • Introduction, Asynchronous counter, Terms related to counters, IC 7493 (4-bit binary counter) • Synchronous counter, Type T Design, Type JK Design • Presettable counter, IC 7490, IC 7492, Synchronous counter ICs **Shift Register:** • Introduction, parallel and shift registers, serial shifting, serial–in serial–out, serial–in parallel–out , parallel–in parallel–out • Ring counter, Johnson counter, • Applications of shift registers, Pseudo-random binary sequence generator, IC7495, Seven Segment displays, analysis of shift-register		

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M.L. Dahanukar College of Commerce

Teaching Plan: 2020 - 21

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

Subject: Digital Electronics

Name of the Faculty: Shailja Shah

Month	Topics to be Covered	Internal Assessment	Number of Lectures
September	Number Systems, Binary Arithmetic, ,Boolean Algebra and Logic gates, Minterm, Maxterm and Karnaugh Maps Practicals - Study of Logic gates and their ICs and universal gates	Number System, Binary Arithmetic, Boolean Algebra	22
October	Combinational Logic Circuits, Arithmetic Circuits, Multiplexer, Demultiplexer, ALU and Decoder, Sequential Circuits: Flip – Flop Practicals – Boolean Expression using min number of gates, Combinational Circuits, Code Converter	Combinational Logic Circuits, Multiplexer and Demultiplexer	20
November	Counters Practicals – Adder and Subtractor, Arithmetic Circuits, Encoder, Decoder, Multiplexer and Demultiplexer	Counters	10
December	Shift Register Practicals - Study of Flip Flop and Counters, Counter ICs and Designing Mod-N counter, Design of Shift Register and Shift Register Counters	Shift Register	8

Shailja

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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: I**

Subject: Discrete Mathematics

Name of the Faculty: Ganesh Bhagwat

Month	Topics to be Covered	Internal Assessment	Number of Lectures
September	**UNIT I** Introduction: Set Theory: The Logic of Compound Statements		18
October	**UNIT II** Quantified Statements: Elementary Number Theory and Method of proof: **UNIT III** Sequences, Mathematical Induction and Recursion:		24
November	**UNIT III cont...** Sequences, Mathematical Induction and Recursion: Functions: **UNIT IV** **Relations:**		10
December	**UNIT IV cont...** Graph and Trees: **UNIT V** Counting and Probability		12

Bhagwat

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M.L.Dahanukar College of Commerce

Teaching Plan: 2021 - 22

Department: BSc IT Semester: I

Class: FYBScIT

Subject: Communication Skill

Name of the Faculty: Manasi Mule

Month	Topics to be Covered	Internal Assessment	Number of Lectures
September	The Seven C's of Communication, Introduction to Communication, Cross-Cultural Communication, Technology Enabled Communication, Business Writing Non- Verbal Communication , persuasive strategy in communication		20(Approx)
October	Resume, Graphics in presentation, Listening, Reports and Proposals ,Presentation, Mind map, concept maps, Ethics in communication, Nature and scope of presentation, Instructions		20 (Approx)
November	Team presentations, Business communication aids, Team Briefing, Career building, Public speaking.		10 (Approx)
December	Communication across functional areas, Presentation skills, Conversation, Speaking skills, Interviews		10 (Approx)

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