**LESSON PLANS**

**OF**

**DEPARTMENT OF COMPUTER SCIENCE**

**UG/PG Courses**

**Odd Semester**



**2023-24**

**INDIRA GANDHI (PG) MAHILA MAHAVIDYALAYA**

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**INDIRA GANDHI MAHILA MAHAVIDYALAYA, KAITHAL**

**(2023– 2024)**

**Course Code- B23-CAP-101 Class – BCA**

**Subject – Problem Solving through C Sem. - 1st**

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| **Sr. No.** | **Date** | **Course content** |
| **1** | **24 July-29 July** | Overview of C: History, Importance, Structure of C Program |
| **2** | **31 July-5 Aug** | Character Set, Constants and Variables, Identifiers and Keywords |
| **3** | **7 Aug-12Aug** | Data Types, Assignment Statement, Symbolic Constant. Input/output: Formatted I/O |
| **4** | **14 Aug-19 Aug** | Function-, Input Functions viz. scanf(), getch(), getche(), getchar(), gets(), output functions viz. printf(), putch(), putchar(), puts(). |
| **5** | **21 Aug-26 Aug** | Operators & Expression: Arithmetic, Relational, Logical, Bitwise, Unary, Assignment, |
| **6** | **28Aug-2 Sep** | Conditional Operators and Special Operators Operator Hierarchy; |
| **7** | **4 Sep- 9 Sep** | Arithmetic Expressions, Evaluation of Arithmetic Expression, |
| **8** | **11 Sep – 16 Sep** | Type Casting and Conversion. Decision making with if statement |
| **9** | **18 Sep -23 Sep** | If else statement, nested if statement, else-if ladder, switch and break statement, goto statement |
| **10** | **25 Sep –30 Sep** | Looping Statements: for, while, and dowhile loop, jumps in loops. |
| **11** | **3 Oct-7 Oct** | Arrays: One Dimensional arrays - Declaration, Initialization and Memory representation; Two Dimensional. |
| **12** | **9 Oct -14 Oct** | Arrays -Declaration, Initialization and Memory representation |
| **13** | **16 Oct-21 Oct** | Functions: definition, prototype, function call, , |
| **14** | **23 Oct-28 Oct** | Passing arguments to a function: call by value; call by reference, |
| **15** | **30 Oct- 4 Nov** | Recursive functions. Strings: Declaration and Initialization |
| **16** | **6 Nov- 9 Nov** | String I/O, Array of Strings, String Manipulation Functions: String Length, Copy, Compare, Concatenate etc., Search for a Substring. |
| **17** | **17 Nov-18 Nov** | Pointers in C: Declaring and initializing pointers, accessing address and value of variables using pointers; Pointers and Arrays. |
| **18** | **20 Nov-25 Nov** | User defined data types: Structures - Definition, Advantages of Structure |
| **19** | **27 Nov- 2 Dec** | declaring structure variables, accessing structure members, Structure members initialization, |
| **20** | **4 Dec- 9 Dec** | Array of Structures; Unions - Union definition; difference between Structure and Union. |
| **21** | **11 Dec- 16 Dec** | Revision |
| **22** | **18 Dec- 23 Dec** | Revision |
| **23** | **25 Dec- 30 Dec** | Revision |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA, KAITHAL**

**(2023– 2024)**

**Course Code- B23-CAP-102 Class – BCA**

**Subject – Foundations of Computer Science Sem. - 1st**

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| **Sr. No.** | **Date** | **Course content** |
| **1** | **24 July-29 July** | Computer Fundamentals: Evolution of Computers through generations, |
| **2** | **31 July-5 Aug** | Characteristics of Computers, Strengths and Limitations of Computers, Classification of Computers, Functional Components of a Computer System |
| **3** | **7 Aug-12Aug** | Applications of computers in Various Fields. Types of Software: System software, Application software., |
| **4** | **14 Aug-19 Aug** | Utility Software, Shareware, Freeware, Firmware, Free Software. Memory Systems: Concept of bit, byte, word, nibble, storage locations and addresses, measuring units of storage capacity, access time, concept of memory hierarchy |
| **5** | **21 Aug-26 Aug** |  |
| **6** | **28Aug-2 Sep** | Primary Memory - RAM, ROM, PROM, EPROM. Secondary Memory - Types of storage devices, Magnetic Tape, Hard Disk, Optical Disk, Flash Memory |
| **7** | **4 Sep- 9 Sep** | I/O Devices: I/O Ports of a Desk Top Computer, Device Controller, Device Driver. Input Devices: classification and use, keyboard |
| **8** | **11 Sep – 16 Sep** | Pointing devices - mouse, touch pad and track ball, joystick, magnetic stripes, scanner, digital camera, and microphone |
| **9** | **18 Sep -23 Sep** | Output Devices: speaker, monitor, printers: classification, laser, ink jet, dot-matrix. Plotter |
| **10** | **25 Sep –30 Sep** | Introduction to Operating System: Definition, Functions, Features of Operating System |
| **11** | **3 Oct-7 Oct** | Icon, Folder, File, Start Button, Task Bar, Status Buttons, Folders, Shortcuts |
| **12** | **9 Oct -14 Oct** | Recycle Bin, Desktop, My Computer, My Documents, Windows Explorer, Control Panel.. |
| **13** | **16 Oct-21 Oct** | The Internet: Introduction to networks and internet, history, Internet |
| **14** | **23 Oct-28 Oct** | Intranet & Extranet, Working of Internet, Modes of Connecting to Internet |
| **15** | **30 Oct- 4 Nov** | Electronic Mail: Introduction, advantages and disadvantages, User Ids, Passwords |
| **16** | **6 Nov- 9 Nov** | E-mail addresses, message components, message composition, mailer features. Browsers and search engines |
| **17** | **17 Nov-18 Nov** | Threats: Physical & non-physical threats, Virus, Worm, Trojan |
| **18** | **20 Nov-25 Nov** | Spyware, Keylogers, Rootkits, Adware, Cookies, Phishing, Hacking, Cracking. |
| **19** | **27 Nov- 2 Dec** | Computer Security Fundamentals: Confidentiality, Integrity, Authentication, Non-Repudiation |
| **20** | **4 Dec- 9 Dec** | Security Mechanisms, Security Awareness, Security Policy, anti-virus software & Firewalls, backup & recovery. |
| **21** | **11 Dec- 16 Dec** | Revision |
| **22** | **18 Dec- 23 Dec** | Revision |
| **23** | **25 Dec- 30 Dec** | Revision |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA, KAITHAL**

**(2023– 2024)**

**Course Code- B23-CAP-103 Class – BCA**

**Subject – Logical Organization of Computer Sem. - 1st**

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| **Sr. No.** | **Date** | **Course content** |
| **1** | **24 July-29 July** | Number Systems: Binary, Octal, Hexadecimal etc. Conversions from one number system to another, BCD Number System. |
| **2** | **31 July-5 Aug** | BCD Codes: Natural Binary Code, Weighted Code, Self Complimenting Code, Cyclic Code.. |
| **3** | **7 Aug-12Aug** | Error Detecting and Correcting Codes. Character representations: ASCII, EBCDIC and Unicode |
| **4** | **14 Aug-19 Aug** | Number Representations: Integer numbers - sign-magnitude, |
| **5** | **21 Aug-26 Aug** | 1’s &amp; 2’s complement representation. Real Numbers normalized floating point representations. |
| **6** | **28Aug-2 Sep** | Binary Arithmetic: Binary Addition, Binary Subtraction, Binary Multiplication. |
| **7** | **4 Sep- 9 Sep** | Addition and subtraction with BCD representations. |
| **8** | **11 Sep – 16 Sep** | Boolean Algebra: Boolean Algebra Postulates, basic Boolean Theorems, Boolean Expressions, Boolean Functions, Truth Tables |
| **9** | **18 Sep -23 Sep** | Canonical Representation of Boolean Expressions: SOP and POS |
| **10** | **25 Sep –30 Sep** | Simplification of Boolean Expressions using Boolean Postulates &amp; Theorems |
| **11** | **3 Oct-7 Oct** | Kaurnaugh-Maps (up to four variables), Handling Don’t Care conditions |
| **12** | **9 Oct -14 Oct** | Logic Gates: Basic Logic Gates – AND, OR, NOT |
| **13** | **16 Oct-21 Oct** | Universal Gates – NAND, NOR, Other Gates – XOR, XNOR etc. Their symbols, truth tables and Boolean expressions |
| **14** | **23 Oct-28 Oct** | Combinational Circuits: Design Procedures, Half Adder, Full Adder, Half Sub tractor, Full Sub tractor, Multiplexers, Demultiplexers |
| **15** | **30 Oct- 4 Nov** | Decoder, Encoder, Comparators, Code Converters. |
| **16** | **6 Nov- 9 Nov** | Sequential Circuits: Basic Flip- Flops and their working. Synchronous and Asynchronous Flip –Flops, Triggering of Flip- Flops, Clocked RS, D Type, JK, T type |
| **17** | **17 Nov-18 Nov** | Master-Slave Flip-Flops. State Table, State Diagram and State Equations. Flip-flops characteristics & Excitation Tables. |
| **18** | **20 Nov-25 Nov** | Sequential Circuits: Designing registers –Serial-In Serial-Out (SISO), Serial-In Parallel-Out (SIPO), |
| **19** | **27 Nov- 2 Dec** | Parallel-In Serial-Out (PISO) Parallel-In Parallel-Out (PIPO) and shift registers. |
| **20** | **4 Dec- 9 Dec** | Revision |
| **21** | **11 Dec- 16 Dec** | Revision |
| **22** | **18 Dec- 23 Dec** | Revision |
| **23** | **25 Dec- 30 Dec** | Revision |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA**

**(2023-24)**

**Course Code- B23-CAP-104 Class – BCA I**

**Subject – Mathematical Foundations for Computer Science-I Sem. - 1st**

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| **Sr.No** | **Date** | **Content** |
| 1 | 24 July-29 July | Sets and their representations, Empty set, Finite and infinite sets |
| 2 | 31 July-5 August | Subsets, Equal sets, Power sets, Universal set, Union and intersection of sets. |
| 3 | 7 August-12August | Difference of two sets, Complement of a set, Venn diagram, De-Morgan’s laws and their applications. Problems related to union, intersection, difference and complement of sets. Problems based on De Morgan’s Laws. |
| 4 | 14 August-19 August | An introduction to matrices and their types,Operations on matrices. Problems related to Venn diagrams. |
| 5 | 21 August-26 August | Symmetric and skew-symmetric matrices, Minors ,Co-factors. Problems to find inverse of a matrix. |
| 6 | 28August-2 September | Determinant of a square matrix, Adjoint and inverse of a square matrix.Problems to find determinant of a square matrix of order 3 |
| 7 | 4 September- 9 September | Solutions of a system of linear equations up to order 3. |
| 8 | 11 September – 16September | Quadratic equations, Solution of quadratic equations. |
| 9 | 18 September -23 September | Arithmetic progression |
| 10 | 25 September –30 September | Geometric progression, Harmonic progression. |
| 11 | 3 October-7 October | Problems to find nth term of A.P., G.P. and H.P. |
| 12 | 9 October -14 October | Arithmetic mean (A.M.), Geometric mean (G.M.), Harmonic mean (H.M.). |
| 13 | 16 October-21 October | Problems to find sum of n terms of A.P., G.P. and H.P. |
| 14 | 23 October-28 October | Relation between A.M., G.M. and H.M. |
| 15 | 30 October- 4 November | Problems to find A.M., G.M. and H.M. of given numbers. |
| 16 | 6 November- 9 November | The concept of differentiation, differentiation of simple functions. |
| 17 | 17 November-18 November | Use of differentiation for solving problems related to real-life situations. |
| 18 | 20 November-25 November | Problems involving formulation and solution of equations in one variable. |
| 19 | 27 November- 2 December | Differentiation of simple algebraic, trigonometric and exponential functions. |
| 20 | 4 December- 9 December | Problems to find first derivatives of functions. |
| 21 | 11 December- 16 December | Revision. |
| 22 | 18 December- 23 December | Revision. |
| 23 | 25 December- 30 December | Revision. |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-231 Class- BCA**

**Subject- : OBJECT ORIENTED PROGRAMMING USING ‘C++’ Sem.- 3rd**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Object oriented Programming: Object-Oriented programming features and benefits. Object-Oriented features of C++ |
| 2. | **31July- 5 Aug** | Class and Objects, Data Hiding & Encapsulation, Structures, Data members and Member functions |
| 3. | **7Aug - 12Aug** | Scope resolution operator and its significance, Static Data Members, Static member functions |
| 4. | **14Aug - 19Aug** | Nested and Local Class, Accessing Members of Class and Structure |
| 5. | **21Aug - 26 Aug** | Constructor, Initialization using constructor, types of constructor– Default, Parameterized & Copy Constructors |
| 6. | **28 Aug - 2Sep** | Constructor overloading, Default Values to Parameters, Destructors |
| 7. | **4Sep - 9Sep** | Console I/O: Hierarchy of Console Stream Classes, Unformatted and Formatted I/O Operations |
| 8. | **11 Sep - 16Sep** | Manipulators, Friend Function, Friend Class, Arrays, Array of Objects, Passing and Returning Objects to Functions |
| 9. | **18 Sep - 23Sep** | String Handling in C++, Dynamic Memory Management: Pointers, new and delete Operator |
| 10. | **25 Sep – 30 Sep** | Array of Pointers to Objects, this Pointer, Passing Parameters to Functions by Reference & pointers |
| 11. | **3 Oct - 7Oct** | Polymorphism: Operators in C++ |
| 12. | **9Oct - 14Oct** | Precedence and Associativity Rules, Operator Overloading |
| 13. | **16Oct - 21Oct** | Unary & Binary Operators Overloading |
| 14. | **23Oct - 28Oct** | Function Overloading, Inline Functions |
| 15. | **30Oct - 4 Nov** | Practicals |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-232 Class- BCA**

**Subject- : DATA STRUCTURES Sem.- 3rd**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Introduction: Elementary data organization, Data Structure definition, Data type vs. data structure |
| 2. | **31July- 5 Aug** | Categories of data structures, Data structure operations, Applications of data structures |
| 3. | **7Aug - 12Aug** | Algorithms complexity and time-space tradeoff, Big-O notation |
| 4. | **14Aug - 19Aug** | Strings: Introduction, String strings, String operations, Pattern matching algorithms. |
| 5. | **21Aug - 26 Aug** | Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal, Insertions |
| 6. | **28 Aug - 2Sep** | Deletion in an array, Multidimensional arrays, Parallel arrays, Sparce matrics |
| 7. | **4Sep - 9Sep** | Linked List: Introduction, Array vs. linked list, Representation of linked lists in memory, Traversal, Insertion, Deletion |
| 8. | **11 Sep - 16Sep** | Searching in a linked list, Header linked list, Circular linked list, Two-way linked list |
| 9. | **18 Sep - 23Sep** | Garbage collection, Applications of linked lists. Algorithms for Insertion, deletion in array, Single linked list |
| 10. | **25 Sep – 30 Sep** | Stack: Introduction, Array and linked representation of stacks, Operations on stacks |
| 11. | **3 Oct - 7Oct** | Applications of stacks: Polish notation, Recursion. Queues: Introduction |
| 12. | **9Oct - 14Oct** | Array and linked representation of queues, Operations on queues, Deques, Priority Queues, Applications of queues. |
| 13. | **16Oct - 21Oct** | Tree: Introduction, Definition, Representing Binary tree in memory, Traversing binary trees |
| 14. | **23Oct - 28Oct** | Traversal algorithms using stacks and using recursion. |
| 15. | **30Oct - 4 Nov** | Graph: Introduction, Graph theory terminology, Sequential and linked representation of graphs. |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-233 Class- BCA**

**Subject- : COMPUTER ARCHITECTURE Sem.- 3rd**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Basic Computer Organisation and Design: Instruction Codes, Computer registers |
| 2. | **31July- 5 Aug** | Computer Instructions, Timing and Control, Instruction Cycle, Memory reference instructions |
| 3. | **7Aug - 12Aug** | Input-Output and Interrupt, Design of Basic computer, Design of accumulator logic |
| 4. | **14Aug - 19Aug** | Register Transfer and Microoperations: Register Transfer Language (RTL), register transfer |
| 5. | **21Aug - 26 Aug** | Bus and Memory Transfers, Arithmetic Microoperations, Logic Microoperations, Shift Microoperations |
| 6. | **28 Aug - 2Sep** | Arithmetic Logic Shift Unit, Microprogrammed Control: Control memory; address sequencing |
| 7. | **4Sep - 9Sep** | microprogram sequencer, Design of Control Unit |
| 8. | **11 Sep - 16Sep** | Central Processing Unit: General registers Organization, Stack Organization, Instruction formats |
| 9. | **18 Sep - 23Sep** | Addressing Modes, Data Transfer and Manipulation |
| 10. | **25 Sep – 30 Sep** | Program Control, Program Interrupt, RISC, CISC. |
| 11. | **3 Oct - 7Oct** | Memory Organization: Memory hierarchy, Auxiliary Memory, Associative Memory, Interleaved memory |
| 12. | **9Oct - 14Oct** | Cache memory, Virtual Memory, Memory Management Hardware |
| 13. | **16Oct - 21Oct** | Input Output Organization : Peripheral devices , Input-Output Interface |
| 14. | **23Oct - 28Oct** | Asynchronous data transfer, Modes of Transfer, Priority Interrupt |
| 15. | **30Oct - 4 Nov** | Direct Memory Access(DMA),Input-Output Processor(IOP) |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code- BCA-234 Class- BCA**

**Subject- : SOFTWARE ENGINEERING Sem.- 3rd**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Introduction: Program vs. Software, Software Engineering, Programming paradigms |
| 2. | **31July- 5 Aug** | Software Crisis – problem and causes, Phases in Software development |
| 3. | **7Aug - 12Aug** | Requirement Analysis, Software Design, Coding, Testing, Maintenance, Software Development Process Models |
| 4. | **14Aug - 19Aug** | Waterfall, Prototype, Evolutionary and Spiral models, Role of Metrics |
| 5. | **21Aug - 26 Aug** | Feasibility Study, Software Requirement Analysis and Specifications: SRS, Need for SRS |
| 6. | **28 Aug - 2Sep** | Characteristics of an SRS, Components of an SRS, Problem Analysis, Information gathering tools |
| 7. | **4Sep - 9Sep** | Organizing and structuring information, Requirement specification, validation and Verification. . SCM |
| 8. | **11 Sep - 16Sep** | Structured Analysis and Tools: Data Flow Diagram, Data Dictionary, Decision table, Decision tress |
| 9. | **18 Sep - 23Sep** | Structured English, Entity-Relationship diagrams, Cohesion and Coupling |
| 10. | **25 Sep – 30 Sep** | Gantt chart, PERT Chart, Software Maintenance: Type of maintenance, Management of Maintenance |
| 11. | **3 Oct - 7Oct** | Maintenance Process, maintenance characteristics. |
| 12. | **9Oct - 14Oct** | Software Project Planning: Cost estimation: COCOMO model, Project scheduling |
| 13. | **16Oct - 21Oct** | Staffing and personnel planning, team structure, Software configuration management, Quality assurance plans |
| 14. | **23Oct - 28Oct** | Project monitoring plans, Risk Management |
| 15. | **30Oct - 4 Nov** | Software testing strategies: unit testing, integration testing, Validation testing, System testing, Alpha and Beta testing. |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-235 Class- BCA**

**Subject- : FUNDAMENTALS OF DATABASE SYSTEM Sem.- 3rd**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Basic Concepts – Data, Information, Records and files. Traditional file – based Systems |
| 2. | **31July- 5 Aug** | File Based Approach-Limitations of File Based Approach, Database Approach-Characteristics of Database Approach |
| 3. | **7Aug - 12Aug** | Database Management System (DBMS), Components of DBMS Environment |
| 4. | **14Aug - 19Aug** | DBMS Functions and Components, Advantages and Disadvantages of DBMS |
| 5. | **21Aug - 26 Aug** | Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users. |
| 6. | **28 Aug - 2Sep** | Database System Architecture – Three Levels of Architecture, External, Conceptual and Internal Levels |
| 7. | **4Sep - 9Sep** | Schemas, Mappings and Instances, Data Independence – Logical and Physical Data Independence |
| 8. | **11 Sep - 16Sep** | Classification of Database Management System, Centralized and Client Server architecture to DBMS |
| 9. | **18 Sep - 23Sep** | Data Models: Records- based Data Models, Object-based Data Models, Physical Data Models and Conceptual Modeling |
| 10. | **25 Sep – 30 Sep** | Entity-Relationship Model – Entity Types, Entity Sets |
| 11. | **3 Oct - 7Oct** | Attributes Relationship Types, Relationship Instances and ER Diagrams |
| 12. | **9Oct - 14Oct** | Relational Data Model:-Brief History, Terminology in Relational Data Structure |
| 13. | **16Oct - 21Oct** | Relations, Properties of Relations, Keys, Domains, Integrity Constraints over Relations |
| 14. | **23Oct - 28Oct** | Base Tables and Views, Basic Concepts of Hierarchica |
| 15. | **30Oct - 4 Nov** | Network Data Model |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-351 Class- BCA**

**Subject- Web Designing Fundamentals Sem.- 5th**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Introduction to Internet and World Wide Web; Evolution and History of World Wide Web; Basic Features; Web Browsers; Web Servers |
| 2. | **31July- 5 Aug** | Hypertext Transfer Protocol; URLs |
| 3. | **7Aug - 12Aug** | Searching and Web- Casting Techniques; Search Engines and Search Tools |
| 4. | **14Aug - 19Aug** | Steps for Developing Website; Choosing the Contents |
| 5. | **21Aug - 26 Aug** | Home Page; Domain Names; Internet Service Provider |
| 6. | **28 Aug - 2Sep** | Planning and Designing Web Site |
| 7. | **4Sep - 9Sep** | Creating a Website; Web Publishing: Hosting Site |
| 8. | **11 Sep - 16Sep** | Introduction to HTML; Hypertext and HTML; HTML Document Features |
| 9. | **18 Sep - 23Sep** | HTML Tags; Header, Title, Body, Paragraph, Ordered/Unordered Line, Creating Links; Headers; Text Styles |
| 10. | **25 Sep – 30 Sep** | Text Structuring; Text Colors and Background; Formatting Text |
| 11. | **3 Oct - 7Oct** | Page layouts; Insertion of Text, Movement of Text |
| 12. | **9Oct - 14Oct** | Images: Types of Images, Insertion of Image, Movement of Image |
| 13. | **16Oct - 21Oct** | Ordered and Unordered lists; Inserting Graphics; Table Handling Functions like Columns |
| 14. | **23Oct - 28Oct** | , Rows, Width, Colours; Frame Creation and Layouts; Working with Forms and Menus; |
| 15. | **30Oct - 4 Nov** | Working with Buttons like Radio, Check Box |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-352 Class- BCA**

**Subject- Operating System-I Sem.- 5th**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Operating System: Definition, Characteristics, Components, Functions, Examples; Types of Operating System: Single User/Multi User |
| 2. | **31July- 5 Aug** | Classification of Operating System: Batch, Multiprogrammed, Timesharing, Multiprocessing, Parallel, Distributed |
| 3. | **7Aug - 12Aug** | Real Time; System Calls and System Programs: Process Control, File Manipulation, Device Manipulation, Information Maintenance, Communications |
| 4. | **14Aug - 19Aug** | Process Management: Process concept, Process states and Process Control Block; Process Scheduling: Scheduling Queues |
| 5. | **21Aug - 26 Aug** | Schedulers, Context Switch; Operation on Processes: Process Creation, Process Termination; Cooperating Processes |
| 6. | **28 Aug - 2Sep** | Introduction to Threads, Inter-process Communication; CPU Scheduling: Basic Concepts, Scheduling Criteria |
| 7. | **4Sep - 9Sep** | Scheduling Algorithms: FCFS, SJF, Priority, Round-Robin, Multilevel Queue, Multilevel Feedback Queue Scheduling |
| 8. | **11 Sep - 16Sep** | Deadlocks: System Model, Deadlock Characterization, Methods of Handling Deadlocks, Deadlock Prevention |
| 9. | **18 Sep - 23Sep** | Deadlock Avoidance, Deadlock Detection and Recovery |
| 10. | **25 Sep – 30 Sep** | Memory Management: Introduction, Swapping, Contiguous Allocation: Single-Partition/Multiple Partition Allocation |
| 11. | **3 Oct - 7Oct** | External/Internal Fragmentation; Paging: Basic Method, Hardware, Implementation of Page table |
| 12. | **9Oct - 14Oct** | Segmentation: Basic Method, Hardware, Implementation of Segment Table, Advantages/Disadvantages of Paging/Segmentation |
| 13. | **16Oct - 21Oct** | Virtual Memory: Introduction, Demand Paging, Page Replacement, Page Replacement Algorithms: FIFO, Optima |
| 14. | **23Oct - 28Oct** | Introduction, Demand Paging, Page Replacement, Page Replacement Algorithms: FIFO, Optimal, LRU, Counting; Thrashing and its cause; File Management: File Concepts, File Attributes |
| 15. | **30Oct - 4 Nov** | File Operations, File Types, File Access/Allocation Methods, File Protection, File Recovery |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-353 Class- BCA**

**Subject- Artificial Intelligence Sem.- 5th**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Artificial Intelligence : Intelligence, AI Concepts, Various definitions of AI, Knowledge, Knowledge Pyramid |
| 2. | **31July- 5 Aug** | People and Computers: What computers can do better that people, what people can do better than computers |
| 3. | **7Aug - 12Aug** | Characteristics of AI Problems, Problem Representation in AI, Components of AI, AI Evolution, Application Areas of AI |
| 4. | **14Aug - 19Aug** | History of AI, The Turing Test, The Revised Turing Test |
| 5. | **21Aug - 26 Aug** | Expert System: Components of Expert System: Knowledge Base, Inference Engine, User Interface, Features of Expert System |
| 6. | **28 Aug - 2Sep** | Expert System Life Cycle, Categories of Expert System, Rule Based vs. Model Based Expert Systems |
| 7. | **4Sep - 9Sep** | Advantages/Limitations of Expert System, Developing an Expert System: Identification, Conceptualization |
| 8. | **11 Sep - 16Sep** | Formalization, Implementation, Testing, Using an Expert System, Application Areas of Expert System |
| 9. | **18 Sep - 23Sep** | AI and Search Process: Brute Force Search – Depth First/Breadth First Search, Heuristic Search: Hill Climbing |
| 10. | **25 Sep – 30 Sep** | Constraint Satisfaction, Mean End Analysis, Best First Search |
| 11. | **3 Oct - 7Oct** | A\* Algorithm, AO\* Algorithm, Beam Search |
| 12. | **9Oct - 14Oct** | Natural Language Processing: Introduction, Need, Goal, Fundamental Problems in Natural Language Understanding |
| 13. | **16Oct - 21Oct** | How People overcome Natural Language Problems, Speech Recognition: Introduction, Advantages and Approaches |
| 14. | **23Oct - 28Oct** | Introduction to Robotics: Parts of a Robot |
| 15. | **30Oct - 4 Nov** | Controlling a Robot, Intelligent Robots, Mobile Robots |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-354 Class- BCA**

**Subject- Computer Networks Sem.- 5th**

|  |  |  |
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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Introduction to Data Communication and Computer Networks; Uses of Computer Networks; Types of Computer Networks and their Topologies |
| 2. | **31July- 5 Aug** | Network Hardware Components: Connectors, Transceivers, Repeaters, Hubs, Network Interface Cards and PC Cards |
| 3. | **7Aug - 12Aug** | Bridges, Switches, Routers, Gateways; Network Software: Network Design issues and Protocols; Connection-Oriented and Connectionless Services; OSI Reference Model |
| 4. | **14Aug - 19Aug** | Networking Models: Distributed Systems, Client/Server Model, Peer-to-Peer Model, Web-Based Model and Emerging File-Sharing Model |
| 5. | **21Aug - 26 Aug** | Analog and Digital data and signals; Bandwidth and Data Rate, Capacity, Baud Rate; Transmission Impairment; Data Rate Limits |
| 6. | **28 Aug - 2Sep** | Guided Transmission Media; Wireless Transmission ; Communication Satellites; Switching and Multiplexing |
| 7. | **4Sep - 9Sep** | Modems and Modulation techniques; ADSL and Cable Modems |
| 8. | **11 Sep - 16Sep** | Data Link Layer Design issues; Error Detection and Correction; Sliding Window Protocols: One-bit, Go Back N and Selective Repeat |
| 9. | **18 Sep - 23Sep** | Media Access Control: ALOHA, Slotted ALOHA, CSMA, Collision free protocols; Introduction to LAN technologies |
| 10. | **25 Sep – 30 Sep** | Ethernet, Switched Ethernet, Fast Ethernet, Gigabit Ethernet; Token Ring; Introduction to Wireless LANs and Bluetooth; VLANs |
| 11. | **3 Oct - 7Oct** | Routing Algorithms: Flooding, Shortest Path Routing, Distance Vector Routing; Link State Routing, Hierarchical Routing |
| 12. | **9Oct - 14Oct** | Congestion Control; Traffic shaping; Choke packets; Load shedding; Elements of Transport Protocols |
| 13. | **16Oct - 21Oct** | Network Security Issues: Security attacks; |
| 14. | **23Oct - 28Oct** | Encryption methods; Digital Signature; Digital Certificate |
| 15. | **30Oct - 4 Nov** | REVISION |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-355 Class- BCA**

**Subject- : Programming Using Visual Basic Sem.- 5th**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Introduction to VB: Visual & Non-Visual programming, Procedural, Object-Oriented, Object-Based and Event-Driven Programming Languages |
| 2. | **31July- 5 Aug** | VB as Even-Driven and Object-Based Language, VBEnvironment: Menu bar, Toolbar, Project explorer |
| 3. | **7Aug - 12Aug** | Toolbox, Properties Window, Form Designer, Form Layout, Immediate window |
| 4. | **14Aug - 19Aug** | Default Controls in Tool Box Visual Development and Event Driven programming |
| 5. | **21Aug - 26 Aug** | Basics of Programming: Variables: Declaring Variables, Types of variables, Converting Variables Types |
| 6. | **28 Aug - 2Sep** | User Defined Data Types, Forcing Variable Declaration, Scope & Lifetime of Variables. Constants: Named & Intrinsic |
| 7. | **4Sep - 9Sep** | Operators: Arithmetic, Relational & Logical operators, Input/output in VB: Various Controls for I/O, Message box, Input Box, Print statement. |
| 8. | **11 Sep - 16Sep** | Decision Statements in VB - if statement, if-then-else, select-case |
| 9. | **18 Sep - 23Sep** | Looping Statements in VB: do-loop, for-next, while-wend; Exit statement |
| 10. | **25 Sep – 30 Sep** | Nested Control Structure; Arrays: Declaring and using Arrays, One-dimensional, Two-dimensiona |
| 11. | **3 Oct - 7Oct** | Multi-dimensional Arrays, Static and Dynamic arrays, Array of Arrays |
| 12. | **9Oct - 14Oct** | Procedures: General & Event Procedures, Subroutines, Functions, Calling Procedures, Arguments - Passing Mechanisms |
| 13. | **16Oct - 21Oct** | Optional Arguments, Named Arguments, Functions Returning Custom Data Types |
| 14. | **23Oct - 28Oct** | Simple Program Development in VB such as Sum of Numbers, Greatest among Numbers, Checking Even/Odd Number |
| 15. | **30Oct - 4 Nov** | HCF of Two Numbers, Generate Prime Numbers, Generate Fibonacci Series, Factorial of a Number, Searching, Sorting, etc |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code: BCA-356 Class- BCA**

**Subject- : Multimedia Tools Sem.- 5th**

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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Multimedia: Basic Concept, Definition, Components & Applications of Multimedia; Hypermedia and Multimedia |
| 2. | **31July- 5 Aug** | Multimedia Hardware and Software; Multimedia Software Tools; Presentation Tools; Multimedia Authoring |
| 3. | **7Aug - 12Aug** | Introduction, Features, Types of Authoring Tools: Card or Page-Based, Icon- Based, Time-Based |
| 4. | **14Aug - 19Aug** | Object-Oriented; VRML: History, Features |
| 5. | **21Aug - 26 Aug** | Images: Graphics/Image Data Types, File Formats; Color Models in Images and Video |
| 6. | **28 Aug - 2Sep** | Video: Introduction, Types of Video Signals; Analog and Digital Video |
| 7. | **4Sep - 9Sep** | Analog Video Standards: NTSC, PAL, SECA |
| 8. | **11 Sep - 16Sep** | Digital Video Standards: Chroma Subsampling, CCIR Standards, HDTV |
| 9. | **18 Sep - 23Sep** | Digital Audio: Basic Concepts, Analog vs. Digital Audio, Digitization of Sound; Digital Audio File Formats, MIDI |
| 10. | **25 Sep – 30 Sep** | Quantization and Transmission of Audio: Coding of Audio; Pulse Code Modulation |
| 11. | **3 Oct - 7Oct** | Coding of Audio; Lossless Predictive Coding; DPCM; DM; ADPCM |
| 12. | **9Oct - 14Oct** | Compression Techniques: Introduction, Types of Data Compression, |
| 13. | **16Oct - 21Oct** | Run-Length Coding, Variable- Length Coding, Dictionary-Based Coding, Transform Coding |
| 14. | **23Oct - 28Oct** | Image and Video Compression Techniques: JPEG Standard for Image Compression |
| 15. | **30Oct - 4 Nov** | JPEG Mode, Video Compression Techniques: H.261, H.263, MPEG |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA, KAITHAL**

**(2023– 2024)**

**Course Code- B23-CAP-101 Class – BSc/BA**

**Subject – Problem Solving through C Sem. - 1st**

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| --- | --- | --- |
| **Sr. No.** | **Date** | **Course content** |
| **1** | **24 July-29 July** | Overview of C: History, Importance, Structure of C Program, |
| **2** | **31 July-5 Aug** | Character Set, Constants and Variables, Identifiers and Keywords, |
| **3** | **7 Aug-12Aug** | Data Types, Assignment Statement, Symbolic Constant. Input/output: Formatted I/O |
| **4** | **14 Aug-19 Aug** | Function-, Input Functions viz. scanf(), getch(), getche(), getchar(), gets(), |
| **5** | **21 Aug-26 Aug** | Output functions viz. printf(), putch(), putchar(), puts(). |
| **6** | **28Aug-2 Sep** | Operators & Expression: Arithmetic, Relational, Logical, Bitwise, Unary, Assignment |
| **7** | **4 Sep- 9 Sep** | Conditional Operators and Special Operators Operator Hierarchy; Arithmetic Expressions, |
| **8** | **11 Sep – 16 Sep** | Evaluation of Arithmetic Expression |
| **9** | **18 Sep -23 Sep** | Type Casting and Conversion. Decision making with if statement |
| **10** | **25 Sep –30 Sep** | ifelse statement, nested if statement, else-if ladder, switch and break statement, goto statement |
| **11** | **3 Oct-7 Oct** | Looping Statements: for, while, and dowhile loop, jumps in loops. |
| **12** | **9 Oct -14 Oct** | Arrays: One Dimensional arrays - Declaration, Initialization and Memory representation; Two Dimensional. |
| **13** | **16 Oct-21 Oct** | Arrays -Declaration, Initialization and Memory representation |
| **14** | **23 Oct-28 Oct** | Functions: definition, prototype, function call, , |
| **15** | **30 Oct- 4 Nov** | Passing arguments to a function: call by value; call by reference, |
| **16** | **6 Nov- 9 Nov** | Recursive functions. Strings: Declaration and Initialization |
| **17** | **17 Nov-18 Nov** | Pointers in C: Declaring and initializing pointers, accessing address and value of variables using pointers; Pointers and Arrays. |
| **18** | **20 Nov-25 Nov** | User defined data types: Structures - Definition, Advantages of Structure |
| **19** | **27 Nov- 2 Dec** | Declaring structure variables, accessing structure members, Structure members initialization. |
| **20** | **4 Dec- 9 Dec** | Array of Structures; Unions - Union definition; difference between Structure and Union. |
| **21** | **11 Dec- 16 Dec** | Revision |
| **22** | **18 Dec- 23 Dec** | Revision |
| **23** | **25 Dec- 30 Dec** | Revision |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA, KAITHAL**

**(2023– 2024)**

**Course Code- B23-CSE-103 Class – BSc/BA**

**Subject – Basics of Computer Science Sem. - 1st**

|  |  |  |
| --- | --- | --- |
| **Sr. No.** | **Date** | **Course content** |
| **1** | **24 July-29 July** | Introduction to Computers: Definition of Computers, History |
| **2** | **31 July-5 Aug** | Generations of Computers, Characteristics of computer, Classification of Computers. |
| **3** | **7 Aug-12Aug** | Fundamental Block diagram of Computer: CPU, Input & Output Unit |
| **4** | **14 Aug-19 Aug** | Software: Definition of Software, Types of Software-System software, Application software and Utility software |
| **5** | **21 Aug-26 Aug** | Types of Computer Languages, Assemblers, Interpreters, Compiler. |
| **6** | **28Aug-2 Sep** | Introduction to Operating Systems: Types of Operating System, |
| **7** | **4 Sep- 9 Sep** | Functions of Operating System. |
| **8** | **11 Sep – 16 Sep** | Windows: Introduction to Windows, Starting Windows, Desk Top, Task Bar, |
| **9** | **18 Sep -23 Sep** | Opening and closing applications |
| **10** | **25 Sep –30 Sep** | Icons creating, renaming and removing. Date and Time setting, |
| **11** | **3 Oct-7 Oct** | Working with files and folders-creating, deleting, opening, finding, copying, moving, and renaming. |
| **12** | **9 Oct -14 Oct** | Networking: Concept |
| **13** | **16 Oct-21 Oct** | Basic Elements of a Communication System |
| **14** | **23 Oct-28 Oct** | Data Transmission Media, LAN, MAN, WAN |
| **15** | **30 Oct- 4 Nov** | Introduction of Internet and WWW |
| **16** | **6 Nov- 9 Nov** | Basic working of a Web Browser |
| **17** | **17 Nov-18 Nov** | Introduction to popular web browsers. |
| **18** | **20 Nov-25 Nov** | Practicals |
| **19** | **27 Nov- 2 Dec** | Practicals |
| **20** | **4 Dec- 9 Dec** | REVISION |
| **21** | **11 Dec- 16 Dec** | REVISION |
| **22** | **18 Dec- 23 Dec** | REVISION |
| **23** | **25 Dec- 30 Dec** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code – Paper-I Class- BSc/BA**

**Subject- : Data Structures Sem.-3rd**

|  |  |  |
| --- | --- | --- |
| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Introduction: Elementary data organization, Data Structure definition, Data type vs. data structure, Categories of data structures |
| 2. | **31July- 5 Aug** | Data structure operations, Applications of data structures, Algorithms complexity and time-space tradeoff |
| 3. | **7Aug - 12Aug** | Big-O notation. Strings: Introduction, strings, String operations, Pattern matching algorithms |
| 4. | **14Aug - 19Aug** | Arrays: Introduction, Linear arrays, Representation of linear array in memory, Traversal, Insertions |
| 5. | **21Aug - 26 Aug** | Deletion in an array, Multidimensional arrays, Parallel arrays, Sparse matrix. Linked List: Introduction, Array vs. linked list |
| 6. | **28 Aug - 2Sep** | Representation of linked lists in memory, Traversal, Insertion, Deletion, Searching in a linked list |
| 7. | **4Sep - 9Sep** | Header linked list, Circular linked list, Two-way linked list, Garbage collection, Applications of linked lists. Algorithm of insertion/ deletion in SLL |
| 8. | **11 Sep - 16Sep** | Stack: primitive operation on stack, algorithms for push and pop. Representation of Stack as Linked List and array |
| 9. | **18 Sep - 23Sep** | Stacks applications : polish notation, recursion. Introduction to queues, Primitive Operations on the Queues |
| 10. | **25 Sep – 30 Sep** | Circular queue, Priority queue, Representation of Queues as Linked List and array, Applications of queue |
| 11. | **3 Oct - 7Oct** | Algorithm on insertion and deletion in simple queue and circular queue. |
| 12. | **9Oct - 14Oct** | Trees - Basic Terminology, representation, Binary Trees, Tree Representations using Array & Linked List, Basic operation on Binary tree |
| 13. | **16Oct - 21Oct** | Traversal of binary trees:- In order, Preorder & post order, Applications of Binary tree |
| 14. | **23Oct - 28Oct** | Algorithm of tree traversal with and without recursion. |
| 15. | **30Oct - 4 Nov** | Introduction to graphs, Definition, Terminology, Directed, Undirected & Weighted graph, Representation of graphs |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

**Subject Code – Paper-II Class- BSc/BA**

**Subject- : SOFWTARE ENGINEERING Sem-3rd**

|  |  |  |
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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Introduction: Program vs. Software, Software Engineering, Programming paradigms, Software |
| 2. | **31July- 5 Aug** | Crisis – problem and causes, Phases in Software development: Requirement Analysis, Software Design |
| 3. | **7Aug - 12Aug** | Coding, Testing, Maintenance, Software Development Process Models: Waterfall, Prototype |
| 4. | **14Aug - 19Aug** | Evolutionary and Spiral models, Role of Metrics |
| 5. | **21Aug - 26 Aug** | Feasibility Study, Software Requirement Analysis and Specifications: SRS, Need for SRS |
| 6. | **28 Aug - 2Sep** | Characteristics of an SRS, Components of an SRS, Problem Analysis, Information gathering tools |
| 7. | **4Sep - 9Sep** | Organising and structuring information, Requirement specification, validation and metrics |
| 8. | **11 Sep - 16Sep** | Structured Analysis and Tools: Data Flow Diagram, Data Dictionary, Decision table, Decision trees |
| 9. | **18 Sep - 23Sep** | , Structured English, Entity-Relationship diagrams .Software Project Planning: Cost estimation |
| 10. | **25 Sep – 30 Sep** | COCOMO model, Project scheduling, Staffing and personnel planning, team structure |
| 11. | **3 Oct - 7Oct** | Software configuration management, Quality assurance plans, Project monitoring plans, Risk Management. |
| 12. | **9Oct - 14Oct** | Software testing strategies: unit testing, integration testing, V and V |
| 13. | **16Oct - 21Oct** | System testing, Alpha and Beta testing. Black box, white box testing. Cyclomatic Complexity |
| 14. | **23Oct - 28Oct** | Software Implementation and Maintenance: Type of maintenance, Management of Maintenance |
| 15. | **30Oct - 4 Nov** | Maintenance Process, maintenance characteristics |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

Class- BSc/BA

Subject Code- Paper 1

Subject- : Fundamentals of Database Systems Sem.-5th

|  |  |  |
| --- | --- | --- |
| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Basic Concepts – Data, Information, Records and files. Traditional file – based Systems |
| 2. | **31July- 5 Aug** | File Based Approach-Limitations of File Based Approach, Database Approach-Characteristics of Database Approach |
| 3. | **7Aug - 12Aug** | Database Management System (DBMS), Components of DBMS Environment |
| 4. | **14Aug - 19Aug** | DBMS Functions and Components, Advantages and Disadvantages of DBMS |
| 5. | **21Aug - 26 Aug** | Roles in the Database Environment - Data and Database Administrator, Database Designers, Applications Developers and Users. |
| 6. | **28 Aug - 2Sep** | Database System Architecture – Three Levels of Architecture, External, Conceptual and Internal Levels |
| 7. | **4Sep - 9Sep** | Schemas, Mappings and Instances, Data Independence – Logical and Physical Data Independence |
| 8. | **11 Sep - 16Sep** | Classification of Database Management System, Centralized and Client Server architecture to DBMS |
| 9. | **18 Sep - 23Sep** | Data Models: Records- based Data Models, Object-based Data Models, Physical Data Models and Conceptual Modeling |
| 10. | **25 Sep – 30 Sep** | Entity-Relationship Model – Entity Types, Entity Sets |
| 11. | **3 Oct - 7Oct** | Attributes Relationship Types, Relationship Instances and ER Diagrams |
| 12. | **9Oct - 14Oct** | Relational Data Model:-Brief History, Terminology in Relational Data Structure |
| 13. | **16Oct - 21Oct** | Relations, Properties of Relations, Keys, Domains, Integrity Constraints over Relations |
| 14. | **23Oct - 28Oct** | Base Tables and Views, Basic Concepts of Hierarchica |
| 15. | **30Oct - 4 Nov** | Network Data Model |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA KAITHAL**

**(2023-2024)**

Class- BSc/BA

Subject Code- Paper-II

Subject- : Web Designing Semester-5th

|  |  |  |
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| Serial no. | Weeks | Course content |
| 1 | **24July-29July** | Introduction to Internet and World Wide Web; Evolution and History of World Wide Web; Basic Features; Web Browsers; Web Servers |
| 2. | **31July- 5 Aug** | Hypertext Transfer Protocol; URLs |
| 3. | **7Aug - 12Aug** | Searching and Web- Casting Techniques; Search Engines and Search Tools |
| 4. | **14Aug - 19Aug** | Steps for Developing Website; Choosing the Contents |
| 5. | **21Aug - 26 Aug** | Home Page; Domain Names; Internet Service Provider |
| 6. | **28 Aug - 2Sep** | Planning and Designing Web Site |
| 7. | **4Sep - 9Sep** | Creating a Website; Web Publishing: Hosting Site |
| 8. | **11 Sep - 16Sep** | Introduction to HTML; Hypertext and HTML; HTML Document Features |
| 9. | **18 Sep - 23Sep** | HTML Tags; Header, Title, Body, Paragraph, Ordered/Unordered Line, Creating Links; Headers; Text Styles |
| 10. | **25 Sep – 30 Sep** | Text Structuring; Text Colors and Background; Formatting Text |
| 11. | **3 Oct - 7Oct** | Page layouts; Insertion of Text, Movement of Text |
| 12. | **9Oct - 14Oct** | Images: Types of Images, Insertion of Image, Movement of Image |
| 13. | **16Oct - 21Oct** | Ordered and Unordered lists; Inserting Graphics; Table Handling Functions like Columns |
| 14. | **23Oct - 28Oct** | , Rows, Width, Colours; Frame Creation and Layouts; Working with Forms and Menus; |
| 15. | **30Oct - 4 Nov** | Working with Buttons like Radio, Check Box |
| 16. | **6 Nov - 9Nov** | REVISION |
| 17. | **17 Nov - 18 Nov** | REVISION |
| 18. | **20 Nov – 24 Nov** | REVISION |

**INDIRA GANDHI MAHILA MAHAVIDYALAYA, KAITHAL**

**(2023– 2024)**

**Course Code- B23-CSE-104 Class – BAI/B.COM I/B.AMC I**

**Subject – Fundamentals of Computer Science (MDC) Sem. - 1st**

|  |  |  |
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| **Sr. No.** | **Date** | **Course content** |
| **1** | **24 July-29 July** | Introduction to Computers: Definition of Computers, History |
| **2** | **31 July-5 Aug** | Generations of Computers, Characteristics of computer, Classification of Computers. |
| **3** | **7 Aug-12Aug** | Fundamental Block diagram of Computer: CPU, Input & Output Unit |
| **4** | **14 Aug-19 Aug** | Software: Definition of Software, Types of Software-System software, Application software and Utility software |
| **5** | **21 Aug-26 Aug** | Types of Computer Languages, Assemblers, Interpreters, Compiler. |
| **6** | **28Aug-2 Sep** | Introduction to Operating Systems: Types of Operating System, |
| **7** | **4 Sep- 9 Sep** | Functions of Operating System. |
| **8** | **11 Sep – 16 Sep** | Windows: Introduction to Windows, Starting Windows, Desk Top, Task Bar, |
| **9** | **18 Sep -23 Sep** | Opening and closing applications |
| **10** | **25 Sep –30 Sep** | Icons creating, renaming and removing. Date and Time setting, |
| **11** | **3 Oct-7 Oct** | Working with files and folders-creating, deleting, opening, finding, copying, moving, and renaming. |
| **12** | **9 Oct -14 Oct** | Networking: Concept |
| **13** | **16 Oct-21 Oct** | Basic Elements of a Communication System |
| **14** | **23 Oct-28 Oct** | Data Transmission Media, LAN, MAN, WAN |
| **15** | **30 Oct- 4 Nov** | Introduction of Internet and WWW |
| **16** | **6 Nov- 9 Nov** | Basic working of a Web Browser |
| **17** | **17 Nov-18 Nov** | Introduction to popular web browsers. |
| **18** | **20 Nov-25 Nov** | Practicals |
| **19** | **27 Nov- 2 Dec** | Practicals |
| **20** | **4 Dec- 9 Dec** | REVISION |
| **21** | **11 Dec- 16 Dec** | REVISION |
| **22** | **18 Dec- 23 Dec** | REVISION |
| **23** | **25 Dec- 30 Dec** | REVISION |