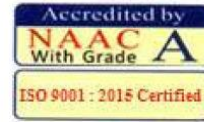




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**DEPARTMENT OF INFORMATION TECHNOLOGY**

**MIC 18 REGULATION**

**I SEMESTER(I BTECH -I SEM)**

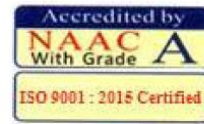
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|-----------------|---|
| <b>18IT1T01</b> | <b>English-I</b>  |
| CO 1            | Use English language, both written and spoken, competently and correctly  |
| CO 2            | Improve comprehension and fluency of speech   |
| CO 3            | Gain confidence in using English in verbal situations   |
| CO 4            | Hone the communication skills to meet the challenges of their careers very successfully   |
| CO 5            | Strengthen communication skills in different contexts like formal and informal  |
| CO6             | Develop knowledge of different fields and serve the society accordingly   |
| <b>18IT1T02</b> | <b>Linear Algebra &amp;Differential Equations</b>   |
| CO 1            | Apply the knowledge to solve a system of homogeneous and non-homogeneous linear equations   |
| CO 2            | Illustrate the methods of computing eigen values and eigen vectors  |
| CO 3            | Able to analyze the real life situations, formulate the differential equations then apply the solving methods                         |
| CO 4            | Explain the techniques of solving the linear differential equations   |
| CO 5            | Optimize functions of several variables and able to find extreme values of constrained functions                                      |
| <b>18IT1T03</b> | <b>Applied Physics</b>  |
| CO 1            | Study of lasers and optical fibers with an emphasis of their application in communication in particular                               |
| CO 2            | Outline the principles of Quantum mechanics to understand the principles of solid state materials for use in engineering applications |
| CO 3            | The Analytical study of response of materials to Electromagnetic fields   |
| CO 4            | To study various magnetic and dielectric materials and their Engineering applications   |
| CO 5            | To Gain knowledge on the physics of semiconductors for their engineering applications   |
| <b>18IT1T04</b> | <b>Problem Solving Approaches</b>   |
| CO 1            | To formulate simple algorithms for arithmetic, logical problems and translate them to programs in c language                          |
| CO 2            | To implement conditional branching, iteration and recursion.  |
| CO 3            | To decompose a problem into functions and synthesize a complete program using divide and conquer approach                             |
| CO 4            | To use arrays, pointers and structures to formulate algorithms and programs   |
| CO 5            | To apply programming to solve matrix addition and multiplication problems and searching and sorting problems                          |
| CO6             | To use structures and files   |
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|                                     |   |
|-------------------------------------|---|
| <b>18IT1T05</b>                     | <b>Engineering Graphics</b>   |
| CO 1                                | Draw the polygons, ellipse, parabola, hyperbola, cycloids and involutes for various types of profiles   |
| CO 2                                | Construction of various scales like plain, diagonal and venierscales. Draw the orthographic projections of the points, lines                          |
| CO 3                                | Draw the projections of planes  |
| CO 4                                | Draw the projections of solids  |
| CO 5                                | Convert Orthographic projections to isometric projection and vice versa   |
| <b>18IT1L06</b>                     | <b>English Communication Skills Lab-I</b>   |
| CO 1                                | The student will acquire basic proficiency in English including reading and listening comprehension, writing and speaking skills.                     |
| <b>18IT1L07</b>                     | <b>Applied Physics Lab</b>  |
| CO 1                                | Implement the basic principles of Optics through various phenomena of light.  |
| CO 2                                | Implement the basic principles of Mechanics to measure different physical parameters.   |
| CO 3                                | Enhance the knowledge of Usage of electronic devices in various applications  |
| <b>18IT1L08</b>                     | <b>Problem Solving Approaches Lab</b>   |
| CO 1                                | Able to draw flowcharts and write algorithms.   |
| CO 2                                | Able design and development of C problem solving skills.  |
| CO 3                                | Able to design and develop modular programming skills.  |
| CO 4                                | Able to trace and debug a program   |
| <b>18IT2L09</b>                     | <b>IT Workshop</b>  |
| CO 1                                | Identify, assemble and update the components of a computer  |
| CO 2                                | Configure, evaluate and select hardware platforms for the implementation and execution of computer applications, services and systems                 |
| CO 3                                | Make use of tools for converting pdf to word and vice versa   |
| CO 4                                | Develop presentation, documents and small applications using productivity tools such as word processor, presentation tools, spreadsheets, HTML, LaTeX |
| <b>II SEMESTER(I BTECH -II SEM)</b> |   |
| <b>18IT2T01</b>                     | <b>English-II</b>   |
| CO 1                                | Use English language in various contexts.   |
| CO 2                                | Improve comprehension and fluency of speech.  |
| CO 3                                | Appreciate a literary text  |
| CO 4                                | Hone the communication skills to meet the challenges of their careers very successfully.  |
| CO 5                                | Understand the need for lifelong learning   |
| <b>18IT2T02</b>                     | <b>Vector Calculus &amp; Fourier Transforms</b>   |
| CO 1                                | Determine the areas and volumes using multiple integration  |
| CO 2                                | Interpret the divergence, gradient and curl physically  |
| CO 3                                | Analyze the general periodic functions in the form of an infinite convergent sine and cosine series   |



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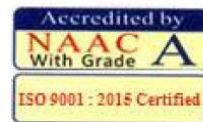
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|                 |   |
|-----------------|---|
| CO 4            | Explain the techniques of Fourier transforms  |
| CO 5            | Illustrate the methods to solve the boundary value problems   |
| <b>18IT2T03</b> | <b>Applied Chemistry</b>  |
| CO 1            | Study of polymers and composite materials enable us to use them in a good number of engineering fields  |
| CO 2            | Industries are run by the quality of fuels and energy crisis can be met by broad understanding of different fuels   |
| CO 3            | Electrochemical principles form the basis of batteries that are being developed. Destruction of metals and alloys can be prevented by understanding the science of corrosion  |
| CO 4            | Study of the existing developed materials forms a basis for developing more number of advanced materials  |
| CO 5            | Methods of purification of water can be known so that more of them can be developed   |
| CO6             | The importance of engineering materials in the domestic and engineering fields can be understood  |
| <b>18IT2T04</b> | <b>Biology for Engineers</b>  |
| CO 1            | Understand how biological observations lead to major discoveries and the morphological, Biochemical and ecological classification of organisms  |
| CO 2            | Understand that all forms of life have the same building blocks and their involvement in the Maintenance and metabolic processes of living organisms  |
| CO 3            | Classify enzymes and distinguish between different mechanisms of enzyme action and Study the chemical reactions that are catalyzed by enzymes. Apply thermodynamic, Principles to biological systems and able to understand major chemical processes that occur, Within a living organism in order to maintain life |
| CO4             | Identify DNA as a genetic material in the molecular basis of information transfer   |
| CO 5            | Identify and classify microorganisms, understand media compositions and growth of Microorganisms  |
| <b>18IT2T05</b> | <b>Basic Electrical &amp; Electronics Engineering</b>   |
| CO 1            | Analyze various electrical networks.  |
| CO 2            | Understand operation of DC generators, single-phase transformer and acquire proper knowledge and working of 3-phase alternator and 3-phase induction motors   |
| CO 3            | Understand operation of Sources of Energy & power transmission and distribution using single line diagrams.   |
| CO 4            | Analyze operation of half wave, full wave bridge rectifiers and OP- AMPs.   |
| CO 5            | Understanding operations of CE amplifier and basic concept of feedback amplifier  |
| <b>18IT2L06</b> | <b>Data Structures Through C</b>  |
| CO 1            | Understand the properties, interfaces, and behaviors of basic abstract data types.  |
| CO 2            | Understand and apply linked lists   |
| CO 3            | Apply Stacks and Queue data structures.   |
| CO 4            | Demonstrate different methods for traversing trees.   |



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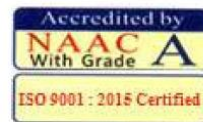
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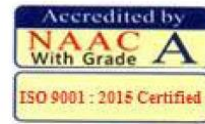
|                             |   |
|-----------------------------|---|
| CO 5                        | Demonstrate the application of Graphs   |
| <b>18IT2L07</b>             | <b>Applied Chemistry Lab</b>  |
| CO 1                        | student is exposed to different methods of chemical analysis abd use of some commonly employed instruments.they thus acquire some expermental skills        |
| <b>18IT2L08</b>             | <b>Data Structures Through C Lab</b>  |
| CO 1                        | Understand the properties, interfaces, and behaviors of basic abstract data types.  |
| CO 2                        | Understand and apply linked lists   |
| CO 3                        | Apply Stacks and Queue data structures.   |
| CO 4                        | Demonstrate different methods for traversing trees.   |
| CO 5                        | Demonstrate the application of Graphs   |
| <b>18IT2L09</b>             | <b>Environmental Studies</b>  |
| CO 1                        | The importance of environment, Natural resources and current global environmental challenges for the sustenance of the life on planet earth                 |
| CO 2                        | The concepts of the ecosystem and its function in the environment   |
| CO 3                        | The biodiversity of India and the threats to biodiversity, and conservation practices to protect the biodiversity   |
| CO 4                        | The various attributes of the pollution and their impacts and measures to reduce or control the pollution along with waste management practices             |
| CO 5                        | The environmental legislations of India and Social issues and the possible means  |
| CO6                         | Environmental assessment and the stages involved in EIA.  |
| <b>II B.TECH I SEMESTER</b> |   |
| <b>18IT3T01</b>             | <b>Probability and statistics</b>   |
| CO 1                        | Understand random variables and discrete probability distributions  |
| CO 2                        | Determine probabilities based on practical situations using the normal distributions  |
| CO 3                        | Apply different distributions to compute confidence intervals   |
| CO 4                        | Test the hypothesis concerning means and proportions  |
| CO 5                        | Understand the concept of least square estimation linear regression   |
| <b>18IT3T02</b>             | <b>Object Oriented Programming</b>  |
| CO 1                        | Understand the principles of object oriented concepts. Define classes and objects by identifying real world entities, their properties and functionalities. |
| CO 2                        | Reuse the existing classes by using inheritance and understand the concepts of packages and exception handling.   |
| CO 3                        | Make use of built-in classes in Java and understand the concept of thread.  |
| CO 4                        | Develop user interfaces using applets, AWT and Event handling in java   |
| CO 5                        | Create portable GUI applications using Swing components.  |
| <b>18IT3T03</b>             | <b>Advanced Data Structures</b>   |
| CO 1                        | Create hash based index for efficient search  |
| CO 2                        | Analyze the efficiency of various tree data structures  |
| CO 3                        | Understand the concept of priority queues and its applications  |



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|                 |   |
|-----------------|---|
| CO 4            | Implement tree data structures for multi-way search   |
| CO 5            | Identify and implement shortest path in various real time problems.   |
| <b>18IT3T04</b> | <b>Digital Logic Design</b>   |
| CO 1            | Apply Boolean laws & theorems to digital Logic functions; simplify the Boolean functions to the minimum number of literals          |
| CO 2            | Design different types of combinational logic circuits using Adders, Subtractors, Decoders, Multiplexers and Magnitude Comparators. |
| CO 3            | Design clocked sequential logic circuits using flip flops   |
| CO 4            | Design different types of Counters, Registers.  |
| CO 5            | Contrast Programmable logic devices(PROM, PAL, and PLA) and its design.   |
| <b>18IT3T05</b> | <b>Effective Technical Communication</b>  |
| CO 1            | learn different ways of enhancing their range of vocabulary   |
| CO 2            | improve their writing skills  |
| CO 3            | identify common errors in writing   |
| CO 4            | hone their skills needed for making presentations and succeed at interviews   |
| CO 5            | gain practical knowledge about the soft skills required   |
| <b>18IT3T06</b> | <b>Indian Constitution</b>  |
| CO 1            | Know the sources, features and principles of Indian Constitution.   |
| CO 2            | Learn about Union Government, State government and its administration.  |
| CO 3            | Get acquainted with Local administration and Pachayati Raj.   |
| CO 4            | Be aware of basic concepts and developments of Human Rights.  |
| CO 5            | Gain knowledge on roles and functioning of Election Commission  |
| <b>18IT3L07</b> | <b>Object Oriented Programming Lab</b>  |
| CO 1            | Understand the behavior of primitive data types, object references, and arrays  |
| CO 2            | Implement Java classes from specifications  |
| CO 3            | Implement interfaces, inheritance, and polymorphism as programming techniques   |
| CO 4            | Apply exception handling.   |
| <b>18IT3L08</b> | <b>Advanced Data Structures Lab</b>   |
| CO 1            | Develop indices.  |
| CO 2            | Implement various search trees.   |
| CO 3            | Crte a graph and traverse the graph   |
| CO 4            | Develop code for shortest path problems.  |
| <b>18IT3L09</b> | <b>R Programming Lab</b>  |
| CO 1            | Implement the basic concepts and data structures of R.  |
| CO 2            | Implement loops and functions in R  |
| CO 3            | Implement mathematical functions and handling files   |
| CO 4            | Apply the different distributions, use various graphical tools in R   |
| CO 5            | Use various graphical tools in R  |
| CO 6            | Describe the properties of discrete and continuous distribution functions   |

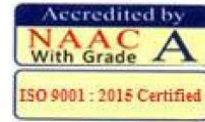




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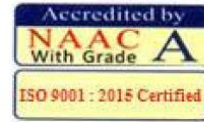
| <b>IV SEMESTER(II BTECH -II SEM)</b> |   |
|--------------------------------------|---|
| <b>18IT4T01</b>                      | <b>Discrete Mathematical Structures</b>   |
| <b>CO 1</b>                          | Apply mathematical logic to design new programming languages  |
| <b>CO 2</b>                          | Illustrate the properties of sets and functions to design a modelling software system   |
| <b>CO 3</b>                          | Explain a structure of an algebra which is useful to understand the theory of sequential machines, formal languages and coding theory |
| <b>CO 4</b>                          | Apply the techniques of recursion for representing the data in the analysis of algorithms   |
| <b>CO 5</b>                          | Provide the knowledge of graphs such as trees which is useful in maintaining files and directories by OS                              |
| <b>18IT4T02</b>                      | <b>Data Base Management Systems</b>   |
| <b>CO 1</b>                          | Describe a database and different database models   |
| <b>CO 2</b>                          | Design Entity Relationship models And Relational Model  |
| <b>CO 3</b>                          | Design and implement queries using Structured Query Language  |
| <b>CO 4</b>                          | Design database schema using normalization.   |
| <b>CO 5</b>                          | Understand the characteristics of database transaction management.  |
| <b>18IT4T03</b>                      | <b>Computer Organization and Architecture</b>   |
| <b>CO 1</b>                          | Understand the architecture of a modern computer with its various processing units.   |
| <b>CO 2</b>                          | Understand RTL, micro operations, instruction cycle   |
| <b>CO 3</b>                          | Understand the features of hardwired and micro programmed control units.  |
| <b>CO 4</b>                          | Analyze the memory hierarchy system and performance improvement by cache memory.  |
| <b>CO 5</b>                          | Analyze the communication methods of I/O devices and standard I/O interfaces.   |
| <b>18IT4T04</b>                      | <b>Operating Systems</b>  |
| <b>CO 1</b>                          | Understand the functionalities of an operating system and Evaluate different CPU scheduling algorithms.                               |
| <b>CO 2</b>                          | Apply synchronization to cooperating processes and handle the deadlocks   |
| <b>CO 3</b>                          | Learn various management techniques for efficient utilization of system memory.   |
| <b>CO 4</b>                          | Understand and analyze theory and implementation of files and Evaluate different disk scheduling algorithms.                          |
| <b>CO 5</b>                          | Analyze the functionalities in various operating systems.   |
| <b>18IT4T05</b>                      | <b>Managerial Economics and Financial Analysis</b>  |
| <b>CO 1</b>                          | The knowledge of estimating the Demand and demand elasticity's for a product  |
| <b>CO 2</b>                          | The knowledge of understanding of the Input-Output-Cost relationships and estimation of the least cost combination of inputs          |
| <b>CO 3</b>                          | to understand the nature of different markets and Price Output determination under various market conditions                          |



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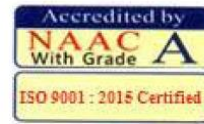
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|-------------------------------------|---|
| CO 4                                | The Learner is able to prepare Financial Statements and the usage of various Accounting tools for Analysis                                |
| CO 5                                | The Learner can able to evaluate various investment project proposals with the help of capital budgeting techniques                       |
| <b>18IT4T06</b>                     | <b>Professional Ethics</b>  |
| CO 1                                | It gives a comprehensive understanding of a variety issues that are encountered by every professional in discharging professional duties  |
| CO 2                                | It provides the student the sensitivity and global outlook in the contemporary world to fulfill the professional obligations effectively. |
| <b>18IT4L07</b>                     | <b>OperatingSystems and Linux Programming Lab</b>   |
| CO 1                                | Implement various basic functionalities of operating systems  |
| CO 2                                | Illustrate kernel functionalities using LINUX   |
| <b>18IT4L08</b>                     | <b>Data Base Management Systems Lab</b>   |
| CO 1                                | Create own database.  |
| CO 2                                | Manipulate data in database using SQL language.   |
| CO 3                                | Experiment with various SQL queries with database created   |
| CO 4                                | Write programs using PL/SQL language.   |
| CO 5                                | Create triggers using PL/SQL.   |
| <b>18IT4L09</b>                     | <b>Python Programming Lab</b>   |
| CO 1                                | Structure simple Python programs for solving problems.  |
| CO 2                                | Decompose a Python program into functions.  |
| CO 3                                | Represent compound data using Python lists, tuples, and dictionaries.   |
| CO 4                                | Read and write data from/to files in Python Programs.   |
| CO 5                                | To build software for real needs.   |
| <b>V SEMESTER(III BTECH -I SEM)</b> |   |
| <b>18IT5T01</b>                     | <b>Data Mining and Warehousing</b>  |
| CO 1                                | Design data warehouse with dimensional modeling and apply OLAP operations.  |
| CO 2                                | Understand the Data Mining Principles and need of preprocessing   |
| CO 3                                | Compare and evaluate different data mining techniques like classification and prediction.   |
| CO 4                                | Identify the frequent patterns from transactional data.   |
| CO 5                                | Compare and evaluate different clustering techniques.   |
| <b>18IT5T02</b>                     | <b>Web Technologies</b>   |
| CO 1                                | Analyze a web page and identify its elements and attributes.  |
| CO 2                                | Create web pages using HTML and Cascading Styles sheets.  |
| CO 3                                | Build dynamic web pages and client-side scripts using AJAX  |
| CO 4                                | Build web applications using PHP.   |
| CO 5                                | Develop interactive web pages that include databases  |
| <b>18IT5T03</b>                     | <b>Design and Analysis of Algorithms</b>  |
| CO 1                                | Understand the performance Analysis of an Algorithm using Space and Time Complexities   |



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|                                       |  |
|---------------------------------------|--|
| CO 2                                  | Describe, apply and analyze the complexity of divide and conquer strategy.                                     |
| CO 3                                  | Synthesize efficient Algorithms for common engineering problems using Greedy Method.                           |
| CO 4                                  | Apply and analyze the complexity of dynamic programming strategy.  |
| CO 5                                  | Ability to solve complex problems using Back Tracking and Branch & Bound.                                      |
| <b>18IT5T04</b>                       | <b>Formal languages and Automata Theory</b>  |
| CO 1                                  | Understand the basic concepts of Automata Theory   |
| CO 2                                  | Infer the equivalence of languages described by finite automata and regular expressions.                       |
| CO 3                                  | Devise regular, context free grammars while recognizing the strings and tokens and able to Normalize grammars. |
| CO 4                                  | Apply Pushdown Automata for problem solving.   |
| CO 5                                  | Understand basic properties and compute using Turing Machines.   |
| <b>18IT5T06</b>                       | <b>Unix and Shell Programming</b>  |
| CO 1                                  | Create powerful data processing applications using UNIX shell and commands                                     |
| CO 2                                  | Manage data, files and programs at command line using UNIX   |
| CO 3                                  | Create and modify data files and documents using editors and tools   |
| CO 4                                  | Demonstrate knowledge of creating new commands.  |
| CO 5                                  | Develop Scripts and programs that demonstrate effective use of structured programming.                         |
| <b>18IT5T09</b>                       | <b>Optimization Techniques</b>   |
| CO 1                                  | Understand the methodology of Operations Research & concepts of linear programming                             |
| CO 2                                  | Formulate the solutions to transportation problems   |
| CO 3                                  | Explain the solutions for various sequencing problems  |
| CO 4                                  | Apply game theory to solve real world problems   |
| CO5                                   | Illustrate the solutions to different replacement policies   |
| <b>18IT5L16</b>                       | <b>Data Mining Lab</b>   |
| CO 1                                  | Learn about WEKA tool and its applications   |
| CO 2                                  | Extract knowledge using Data Mining techniques.  |
| CO 3                                  | Adapt to new Data Mining tools.  |
| CO 4                                  | Explore recent trends in Data Mining such as Web mining,spatial-temporal mining,                               |
| <b>18IT5L17</b>                       | <b>Web Technologies Lab</b>  |
| CO 1                                  | Knowledge of HTML, Java Script and XML to develop web applications   |
| CO 2                                  | Understanding about JDBC connections and Java Mail API   |
| CO 3                                  | Acquire Knowledge of the design and development process of a complete web application                          |
| <b>VI SEMESTER(III BTECH -II SEM)</b> |  |
| <b>18IT6T01</b>                       | <b>Compiler Design</b>   |
| CO 1                                  | Acquire knowledge in different phases and passes of Compiler.  |

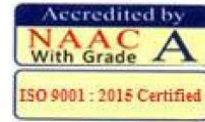




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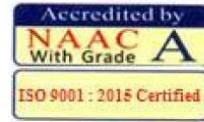
|                 |  |
|-----------------|--|
| CO 2            | Demonstrate knowledge about scanning of tokens and perform the syntax analysis by using Topdown parsing techniques.                            |
| CO 3            | Perform the syntax analysis by using Bottom Up parsing techniques for more complex grammars.   |
| CO 4            | Compare different memory management techniques in runtime environment.   |
| CO 5            | Demonstrate knowledge about compiler generation tools and techniques.  |
| <b>18IT6T02</b> | <b>Computer Networks</b>   |
| CO 1            | Independently enumerate the layers of the OSI model and TCP/IP   |
| CO 2            | Identify the different types of network topologies and protocols.  |
| CO 3            | Compare and contrast methods to identify Errors and correct them.  |
| CO 4            | Differentiate between various network routing algorithms.  |
| CO 5            | Understand WWW and HTTP Architectures.   |
| <b>18IT6T03</b> | <b>Software Engineering</b>  |
| CO 1            | Understand the perspective of various software process models  |
| CO 2            | Understand the Requirements Engineering Process and compile an SRS   |
| CO 3            | Analyze the requirements and perform a Design  |
| CO 4            | Apply testing principles on software project and understand the maintenance concepts.  |
| CO 5            | Identify risks, manage the change to assure quality in software projects   |
| <b>18IT6T05</b> | <b>UML and Design Pattern</b>  |
| CO 1            | Identify the purpose and methods of use of common object-oriented design patterns  |
| CO 2            | Select and apply these patterns in their own designs for simple programs   |
| CO 3            | Represent the data dependencies of a simple program using UML  |
| CO 4            | Represent user and programmatic interactions using UML   |
| CO 5            | Create design documentation outlining the testable and complete design of a simple Program   |
| <b>18IT6T07</b> | <b>Employability Skills: Quantitative Aptitude &amp; Reasoning</b>   |
| CO 1            | Understand the basics concepts of Numerical Ability & Reasoning Skills   |
| CO 2            | Use the logical thinking and analytical abilities to solve Quantitative aptitude questions from companies specific and other competitive tests |
| CO 3            | Solve questions related to time and distance, time and work ,percentages, simple interest and compound interest etc.                           |
| CO 4            | Solve questions related to coding and decoding, number series, directions, puzzles ,etc.   |
| CO 5            | Understand and solve puzzle related questions for competitive and campus placements exams.   |
| <b>18IT6L21</b> | <b>Computer Networks Lab</b>   |
| CO 1            | Implement programs on networking concepts using various services.  |
| CO 2            | Implement networking applications using IPC mechanism of UNIX.   |
| CO 3            | Compare routing algorithms.  |



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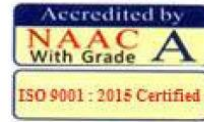
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| CO 4                                 | Understand the working principles of various communication services using protocols.  |
| CO 5                                 | Practice packet/file transmission between nodes.  |
| <b>18IT6L22</b>                      | <b>Software Engineering Lab</b>   |
| CO 1                                 | Prepare SRS document, design document, test cases and software configuration management and risk management related document.   |
| CO 2                                 | Develop function oriented and object oriented software design using tools like rational rose.   |
| CO 3                                 | Design and develop Test Cases for a system  |
| CO 4                                 | Track the progress of a project using various tools.  |
| <b>18IT6T23</b>                      | <b>Essence of Indian Traditional Knowledge</b>  |
| CO 1                                 | Understand the concept of Traditional knowledge and its importance  |
| CO 2                                 | Know the need and importance of protecting traditional knowledge  |
| CO 3                                 | Know the various enactments related to the protection of traditional knowledge.   |
| CO 4                                 | Understand the concepts of Intellectual property to protect the traditional knowledge   |
| CO 5                                 | Evaluate strategies to increase the protection of TK.   |
| <b>VII SEMESTER(IV BTECH -I SEM)</b> |   |
| <b>18IT7T01</b>                      | <b>Big Data &amp;Hadoop</b>   |
| CO 1                                 | Understand methods for data summarization, query, and analysis.   |
| CO 2                                 | Apply data modeling techniques to large data sets   |
| CO 3                                 | Creating applications for Big Data analytics  |
| CO 4                                 | Building a complete business data analytic solution   |
| CO 5                                 | Understand programming tools PIG & HIVE in Hadoop eco-system.   |
| <b>18IT7T02</b>                      | <b>E-Commerce</b>   |
| CO 1                                 | Identify and analyze stake holder needs   |
| CO 2                                 | Understand electronic payment systems   |
| CO 3                                 | Acquire Knowledge on Intra organizational commerce  |
| CO 4                                 | Design and prepare marketing strategies for corporate digital Library   |
| CO 5                                 | Design and prepare accurate e-commerce related presentations of multimedia information taking into account technical and aesthetic considerations                       |
| <b>18IT7T04</b>                      | <b>Software Testing Methodologies</b>   |
| CO 1                                 | Have an ability to apply software testing knowledge and engineering methods.  |
| CO 2                                 | Ability to identify the needs of software test automation, and define a test tool to support test automation.   |
| CO 3                                 | Understand and identify various software testing problems, and solve these problems by designing and selecting software test models, criteria, strategies, and methods. |
| CO 4                                 | Use various communication methods and skills to communicate with their teammates to conduct their practice-oriented software testing projects.                          |



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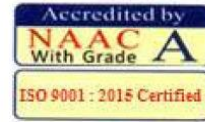
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| <b>CO 5</b>                             | Apply techniques and skills to use modern software testing tools to support software testing projects  |
| <b>18IT7T07</b>                         | <b>Mobile Computing</b>  |
| <b>CO 1</b>                             | Develop new mobile applications.   |
| <b>CO 2</b>                             | Identify solutions to the technical issues in the mobile communication paradigm.   |
| <b>CO 3</b>                             | Understand the ad hoc network applications and/or algorithms/protocols   |
| <b>CO 4</b>                             | Understand & develop any existing or new protocol related to mobile environment.   |
| <b>CO 5</b>                             | Understand the platforms and protocols used in mobile environment  |
| <b>18IT7T19</b>                         | <b>Global Environment Trends</b>   |
| <b>CO 1</b>                             | The Learning objective of this paper is to understand the concept and nature of business environment at global level and various elements of international business. |
| <b>CO 2</b>                             | To familiarize about the international trade, trade theories & practices, Analysis.  |
| <b>CO 3</b>                             | To understand the nature of international markets, marketing practices like pricing branding, mode of entry into international markets and operations                |
| <b>CO 4</b>                             | To learn different Accounting Systems at international level, preparation of Financial Statement and FDI, currency exchange rates systems                            |
| <b>CO 5</b>                             | To study and understand the concept of HRM at international level, recruitment policy, practices and successful implementation of strategies.                        |
| <b>18IT7L20</b>                         | <b>Big Data &amp;Hadoop Lab</b>  |
| <b>CO 1</b>                             | Preparing for data summarization, query, and analysis  |
| <b>CO 2</b>                             | Applying data modeling techniques to large data sets   |
| <b>CO 3</b>                             | Creating applications for Big Data analytics.  |
| <b>CO 4</b>                             | Building a complete business data analytic solution.   |
| <b>18IT7L21</b>                         | <b>Mini Project/Internship</b>   |
| <b>VIII SEMESTER(III BTECH -II SEM)</b> |  |
| <b>18IT8T01</b>                         | <b>Cloud Computing</b>   |
| <b>CO 1</b>                             | Explain and characterize different cloud deployment models and service models  |
| <b>CO 2</b>                             | Understand different cloud programming platforms and tools.  |
| <b>CO 3</b>                             | Illustrate Virtualization for Data-Center Automation   |
| <b>CO 4</b>                             | Identify the security issues in cloud computing  |
| <b>CO 5</b>                             | Understand various basic concepts related to cloud computing technologies  |
| <b>18IT8T05</b>                         | <b>Human Computer Interaction</b>  |
| <b>CO 1</b>                             | Describe typical human-computer interaction (HCI) models, styles, and various historic HCI paradigms.  |
| <b>CO 2</b>                             | Apply an interactive design process and universal design principles to designing HCI systems.  |
| <b>CO 3</b>                             | Understand the importance of Natural Languages in computing interactions.  |



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| <b>CO 4</b>     | Analyze and identify user models, user support, socio-organizational issues, and stakeholder requirements of HCI systems.  |
| <b>CO 5</b>     | Discuss tasks and dialogs of relevant HCI systems based on task analysis and dialog design   |
| <b>18IT8T08</b> | <b>Satellite communication</b>   |
| <b>CO 1</b>     | Understand the basic concepts, applications, frequencies used and types of satellite communications.   |
| <b>CO 2</b>     | Understand the concept of look angles, launches and launch vehicles and orbital effects in satellite communications.   |
| <b>CO 3</b>     | Understand the various satellite subsystems and its functionality.   |
| <b>CO 4</b>     | Understand the concepts of satellite link design and calculation of C/N ratio.   |
| <b>CO 5</b>     | Understand the concepts of multiple access and various types of multiple access techniques in satellite systems.   |
| <b>18IT8T20</b> | <b>Additive Manufacturing</b>  |
| <b>CO 1</b>     | Describe various CAD issues for 3D printing and rapid prototyping and related operations for STL model manipulation.   |
| <b>CO 2</b>     | Formulate and solve typical problems on reverse engineering for surface reconstruction from physical prototype models through digitizing and spline-based surface fitting.       |
| <b>CO 3</b>     | Formulate and solve typical problems on reverse engineering for surface reconstruction from digitized mesh models through topological modelling and subdivision surface fitting. |
| <b>CO 4</b>     | Explain and summarize the principles and key characteristics of additive manufacturing technologies and commonly used 3D printing and additive manufacturing systems.            |
| <b>CO 5</b>     | Explain and summarize typical rapid tooling processes for quick batch production of plastic and metal parts.   |