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B.Tech - AR17 - Course Articulation Matrix

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	CO Statements	POs												PSOs	
CO3	Explain the working principle of Electro chemical cells and corrosion characteristics.	3	-	-	-	-	-	-	-	-	-	-	-	-	-
CO4	Explain the properties and applications of Nano, Superconductors, Semiconductors, Liquid crystals and fuel cells.	2	-	-	-	-	-	-	-	-	-	-	-	-	-
CO5	Summarize non-conventional energy sources and their applications.	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Course Code	171ES2T02 -Engineering Mechanics	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Determine the resultant force and moment for a given force system.	3	2	1	-	-	-	-	-	-	-	-	-	-	-
CO2	Explain the concept of friction.	2	1	1	-	-	-	-	-	-	-	-	-	-	-
CO3	Calculate the forces in planar and spatial systems.	3	2	1	-	-	-	-	-	-	-	-	-	-	-
CO4	Locate centroid of composite areas and centre of gravity of composite bodies.	1	1	1	-	-	-	-	-	-	-	-	-	-	-
CO5	Calculate the moment of inertia of composite areas and rigid bodies.	3	2	1	-	-	-	-	-	-	-	-	-	-	-
CO6	Apply the concepts of kinematics, kinetics, work - energy and impulse - momentum methods to particle motion.	3	2	1	-	-	-	-	-	-	-	-	-	-	-
Course Code	171CS2T01- Data Structures through C	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Describe the the fundamental concepts of data structure and algorithms,	2	3	1	-	-	-	-	-	-	-	-	-	2	-
CO2	Analyze the time and space complexity of an algorithm using various notations.	2	3	1	-	-	-	-	-	-	-	-	-	2	-
CO3	Apply various searching and sorting techniques to solve computing problems.	2	2	3	-	-	-	-	-	-	-	-	-	2	-
CO4	Explain various operations and applications of Linear Data Structure.	2	2	3	2	-	-	-	-	-	-	-	-	2	-
CO5	Apply various tree , graph traversing techniques and spanning trees in solving complex problem.	2	2	3	2	-	-	-	-	-	-	-	-	2	-
Course Code	171HS2L02 - English Communication Skills Lab – II	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Make effective use of Body language in all situations and contexts to enhance effective communication in all aspects.	-	-	-	-	-	-	-	-	-	3	-	2	-	-
CO2	Identify communicative competency to respond to others in different situations.	-	-	-	-	-	-	-	-	-	3	-	2	-	-
CO3	Make use of effective delivery strategies to select, compile and synthesize information for oral presentation.	-	-	-	-	-	-	-	-	-	3	-	2	-	-
CO4	Demonstrate in mock interviews, group discussion and public speaking.	-	-	-	-	-	-	-	-	-	3	-	2	-	-
CO5	Illustrate interpersonal skills using English language confidently and effectively for personal and professional growth.	-	-	-	-	-	-	-	-	-	3	-	2	-	-

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	CO Statements	POs												PSOs	
CO2	Apply discrete and continuous probability distributions to the given data and execute R-functions for probability distributions.	3	2	-	-	-	-	-	-	-	-	-	-	1	-
CO3	Explain sampling distribution, estimation and R-functions for constructing confidence intervals.	2	1	-	-	-	-	-	-	-	-	-	-	1	-
CO4	Write R program for standard statistical test.	2	3	1	-	-	-	-	-	-	-	-	-	1	-
CO5	Apply the concepts of correlation and regression to the given statistical data using R-function and making use of R-graphic functions to visualize the data.	3	2	1	-	-	-	-	-	-	-	-	-	2	-
Course Code	171CS3T03-Object Oriented Programming through C++	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Compare and contrast object oriented programming and procedural oriented programming.	1	3	-	-	-	-	-	-	-	-	-	-	1	-
CO2	Summarize the OOPS concepts.	3	1	2	-	-	-	-	-	-	-	-	-	1	-
CO3	Make use of constructor and destructor to initialize and destroy class objects.	1	3	1	-	-	-	-	-	-	-	-	-	1	-
CO4	Develop programs using virtual functions and Polymorphism.	1	2	3	1	-	-	-	-	-	-	-	-	2	-
CO5	Apply inheritance to build real time applications, Exception handling mechanism to handle runtime errors.	1	2	1	3	-	-	-	-	-	-	-	-	2	-
CO6	Develop C++ classes with templates and STL.	3	1	1	1	-	-	-	-	-	-	-	-	2	-
Course Code	171HS3T04-Managerial Economics & Financial Analysis	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Explain the Managerial Economic concepts for decision making and forward planning.	-	-	-	-	-	-	-	-	1	-	-	-	-	-
CO2	Illustrate the law of demand and its exceptions, to use different forecasting methods for predicting demand for various products and services	-	-	-	-	-	-	-	-	-	2	-	-	-	-
CO3	Identify the cost behavior, costs useful for managerial decision making and Break Even Point (BEP) of an enterprise.	1	1	-	-	-	-	-	-	-	-	1	-	-	-
CO4	Outline the different types of business organizations along with basic knowledge on business cycle.	-	-	-	-	-	-	-	-	-	-	1	-	-	-
CO5	Make use of the process & principles of accounting and prepare Journal, Ledger, Trial Balance, Trading A/c., Profit & Loss A/c. and Balance Sheet of an enterprise.	1	1	-	-	-	-	-	-	-	3	-	-	-	-
CO6	Utilize various techniques on investment project proposals with the help of capital budgeting techniques for decision making.	1	1	-	-	-	-	-	-	-	-	2	-	-	-

	CO Statements	POs												PSOs	
Course Code	171CS3T04-Advanced Data Structures	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Describe the working principles of K-way Merge Sort.	2	1	1	-	-	-	-	-	-	-	-	-	2	-
CO2	Apply Hashing Techniques to solve data integrity problems.	1	2	-	3	-	-	-	-	-	-	-	-	1	-
CO3	Explain the various techniques to implement Priority Queues.	2	2	-	2	-	-	-	-	-	-	-	-	1	-
CO4	Compare various balanced search Trees.	3	-	1	1	-	-	-	-	-	-	-	-	2	-
CO5	Compare and contrast B and B+ trees.	2	1	1	-	-	-	-	-	-	-	-	-	2	-
CO6	Construct various kinds of Tries.	3	-	1	-	-	-	-	-	-	-	-	-	1	-
Course Code	171CS3L01-Object Oriented Programming Lab	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Make Use of Control Structures and modular programming in solving complex problems.	-	2	1	-	-	-	-	-	3	1	-	-	2	-
CO2	Apply object oriented techniques to solve computing problems.	-	2	3	-	-	-	-	-	2	1	-	-	1	-
CO3	Experiment with the key features of the object-oriented programming language.	-	3	2	-	-	-	-	-	2	1	-	-	2	-
CO4	Develop C++ classes for code reuse through inheritance.	-	2	3	-	-	-	-	-	2	1	-	-	2	-
CO5	Apply exception handling technique to handle various errors.	-	2	3	-	-	-	-	-	2	1	-	-	3	-
CO6	Develop C++ programs using Inline, friend functions, Reference variable, this pointer, operator Overloading, static and dynamic binding, template and STL.	-	3	3	-	-	-	-	-	2	1	-	-	1	-
Course Code	171CS3L02-Advanced Data Structures Lab	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Construct the graph traversals and minimum spanning tree for a given graph.	-	2	3	-	-	-	-	-	2	-	-	-	-	2
CO2	Develop program to implement lossless data compression algorithm.	-	-	1	-	-	-	-	-	2	3	-	-	-	-
CO3	Apply the hashing techniques to implement Dictionary.	-	2	-	-	-	-	-	-	3	-	-	-	-	3
CO4	Build a Binary Heap using Priority queues.	-	1	3	-	-	-	-	-	1	-	-	-	-	-
CO5	Analyze various basic operations of AVL tree, Red-Black tree, B-Tree to improve the efficiency.	-	2	2	-	-	-	-	-	3	2	-	-	-	2
CO6	Identify the appropriate data structure for a given problem.	-	-	2	-	-	-	-	-	3	1	-	-	-	-
Course Code	171HS3A10-Employability Skills - I	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Explain the number and letter series and analogies in different models	1	-	-	-	-	-	-	-	-	-	-	1	-	-
CO2	Demonstrate processes of coding & decoding and direction test	1	-	-	-	-	-	-	-	-	1	-	1	-	-
CO3	Demonstrate the basic grammatical skills using articles and prepositions	-	-	-	-	-	-	-	-	-	1	-	1	-	-
CO4	Use tenses, voice types and conversion rules to deliver an effective speech	-	-	-	-	-	-	-	-	-	1	-	1	-	-
CO5	Demonstrate creative speaking abilities using all forms of sentences	-	-	-	-	-	-	-	-	-	1	-	1	-	-

	CO Statements	POs												PSOs	
CO4	Develop real time applications using multithreading and I/O streams.	2	1	1	-	3	-	-	-	-	-	-	-	2	-
CO5	Apply java applets to standalone applications.	3	1	1	-	2	-	-	-	-	-	-	-	2	-
CO6	Develop GUI applications using event handlers, adapter classes, AWT and Swing components.	3	1	1	-	2	-	-	-	-	-	-	-	2	-
Course Code	171CS4T08-Database Management Systems	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Summarize various database characteristics.	2	-	-	-	1	-	-	-	-	-	-	-	1	-
CO2	Identify various database architectures.	2	-	1	-	1	-	-	-	-	-	-	-	1	-
CO3	Interpret relational database using SQL.	1	-	1	-	2	-	-	-	-	-	-	-	2	-
CO4	Examine issues in data storage and query processing for appropriate solutions.	1	2	1	-	2	-	-	-	-	-	-	-	2	-
CO5	Make use of normalization techniques for database design.	2	2	1	-	3	-	-	-	-	-	-	-	1	-
CO6	Illustrate the mechanisms of transaction management.	2	2	-	-	1	-	-	-	-	-	-	-	1	-
Course Code	171HS4T05-Management Science	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Apply management and motivation theories to renovate the practice of management.	-	-	-	-	-	-	-	-	-	2	-	1	-	-
CO2	Use principles of Statistical Quality Control and Materials management in the design of products and process controls.	1	1	-	-	-	-	-	-	-	3	-	1	-	-
CO3	Appraise the functional management challenges associated with high levels of change in the organizations.	-	-	-	-	-	-	-	-	-	1	-	1	-	-
CO4	Identify activities with their interdependency and use scheduling techniques of project management PERT/CPM.	1	1	-	-	-	-	-	-	-	1	1	1	-	-
CO5	Develop global vision and management skills both at strategic level and interpersonal level.	-	-	-	-	-	-	-	-	-	1	-	1	-	-
Course Code	171CS4T10-Computer Organization	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Describe the structure and various types of instructions in the computer system.	2	2	-	-	-	-	-	-	-	-	-	-	2	-
CO2	Demonstrate the working of CPU, RISC and CISC architecture.	2	2	1	2	-	-	-	-	-	-	-	-	2	-
CO3	Summarize the computer arithmetic.	2	2	2	2	-	-	-	-	-	-	-	-	2	-
CO4	Demonstrate the use of pipeline and vector processing.	2	2	2	2	-	-	-	-	-	-	-	-	2	-
CO5	Exemplify I/O and Memory organization.	1	2	1	3	-	-	-	-	-	-	-	-	2	-
Course Code	171CS4L03-Java Programming Lab	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Apply OOP concepts to solve basic problems in Java.	-	1	3	-	1	-	-	-	2	-	-	-	1	-
CO2	Make use of class, inheritance, interface and packages to develop solutions to complex problems.	-	1	3	-	2	-	-	-	2	-	-	-	1	-
CO3	Develop a solution for a real time problem using Exception handling.	-	1	3	-	2	-	-	-	2	-	-	-	1	-

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	CO Statements	POs												PSOs	
Course Code	171CS5E04-Software Testing Methodologies(Professional Elective – I)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Explain the fundamentals of software testing.	2	2	-	-	-	-	-	-	-	-	-	-	2	-
CO2	Compare SDLC with STLC.	1	3	-	-	-	-	-	-	-	-	-	-	1	-
CO3	Summarize verification and validation activities.	2	2	-	-	-	-	-	-	-	-	-	-	2	-
CO4	Design the test cases using different testing strategies.	2	-	3	-	-	-	-	-	-	-	-	-	1	-
CO5	Outline the importance of static testing and various levels of software testing.	2	2	-	-	-	-	-	-	-	-	-	-	1	-
CO6	Discuss about various Automation Testing tools.	1	2	-	-	3	-	-	-	-	-	-	-	1	-
Course Code	171HS5T06- Employability Skills – III	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Calculate the L.C.M and H.C.F of numbers	1	-	-	-	-	-	-	-	-	-	-	1	-	-
CO2	Solve problems on Numbers & Simple equations	1	-	-	-	-	-	-	-	-	-	-	1	-	-
CO3	Apply different types of models on ratio & proportion, average, ages and percentages	1	-	-	-	-	-	-	-	-	-	-	1	-	-
CO4	Apply interviewing skills, Group discussion skills and personal priorities	-	-	-	-	-	-	-	-	-	1	-	1	-	-
CO5	Apply resume writing skills, e-mail writing & business etiquette	-	-	-	-	-	-	-	-	-	1	-	1	-	-
Course Code	171IT5L01-Operating Systems and Computer Networks Lab	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Make use of Unix utilities and perform basic shell control operations on the Unix utilities.	-	2	3	-	-	-	-	-	-	-	-	-	3	-
CO2	Simulate various process scheduling algorithms.	-	2	1	1	3	-	-	-	-	-	-	-	3	-
CO3	Demonstrate the working of various system calls, dead locks avoidance and memory management algorithms.	-	1	-	-	3	-	-	-	-	-	-	-	2	-
CO4	Make use of a programming platform to design services that control a network behavior.	-	2	3	-	-	-	-	-	-	-	-	-	3	-
CO5	Develop data link layer services of dynamic framing.	-	2	1	1	3	-	-	-	-	-	-	-	3	-
CO6	Demonstrate the working of various routing algorithms, error detection and correction techniques.	-	1	3	-	-	-	-	-	-	-	-	-	2	-
Course Code	171CS5L06-Python Programming Lab	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Build basic programs in Python.	3	-	3	-	-	-	-	-	3	-	-	-	2	-
CO2	Develop programs using conditional and iterative statements.	3	2	3	-	-	-	-	-	3	-	-	-	2	-
CO3	Make use of different data structures in solving complex problems.	3	3	3	-	-	-	-	-	3	-	-	-	2	-
CO4	Apply standard libraries in building real time applications.	3	2	3	-	2	-	-	-	3	-	-	-	2	-

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	CO Statements	POs												PSOs	
Course Code	171CS7L13-Big Data Analytics Lab	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Develop linear and non linear data structures using Java Collection framework	-	2	-	-	2	-	-	-	2	-	-	2	1	-
CO2	Build the Hadoop Cluster using various installation modes.	-	2	-	-	2	-	-	-	2	-	-	2	2	-
CO3	Apply hadoop commands to interact with HDFS.	-	2	-	-	2	-	-	-	2	-	-	2	2	-
CO4	Solve Big Data Problems using Map Reduce approach.	-	1	-	-	2	-	-	-	2	-	-	2	1	-
CO5	Analyse the big data using Pig Latin.	-	2	-	-	2	-	-	-	2	-	-	1	2	-
CO6	Build queries using Hive Query Language.	-	1	-	-	2	-	-	-	2	-	-	2	2	-
Course Code	171IT7P01-Industry Oriented (Internship) Minor Project	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Conduct a technical survey to identify a real world engineering problem	1	1	-	-	-	-	-	-	-	1		1	-	1
CO2	Analyze the industrial plant layout using technical expertise	2	-	-	-	-	1	1	-	-			1	-	1
CO3	Compare theoretical and real work environments in technical perspective	2	-	-	-	-	-	-	-	-	1	1	1	-	1
CO4	Identify the challenges in the execution of operations	1	1	1	1	-	-	-	-	-	-	-	-	-	1
CO5	Execute the operations and report the results of assigned tasks using modern tools adhering to professional ethics	-	-	-	-	2	-	-	2	1	1	-	-	-	1
VIII SEM															
Course Code	171CS8E21-Agile Methodologies(Professional Elective-VI)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Compare the Agile Model with Traditional Models	3	1	-	-	-	-	-	-	-	-	-	-	2	-
CO2	Summarize the Agile Manifesto.	2	1	-	-	-	-	-	-	-	-	-	-	3	-
CO3	Demonstrate the various Agile Software Development Process Models.	2	3	-	-	-	-	-	-	-	-	-	-	2	-
CO4	Model the Sprint framework in Agile environment.	3	2	1	1	-	-	-	-	-	-	-	-	1	-
CO5	Create User Stories for software requirements in Agile Software Development.	2	2	3	3	-	-	-	-	-	-	-	-	1	-
CO6	Identify the role of Product Backlog and Estimations for each Sprint and plans for each Sprint in the Scrum Framework.	2	3	1	1	-	-	-	-	-	-	-	-	2	-
Course Code	171CS8E22-Cyber Security(Professional Elective-VI)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Illustrate cybercrime fundamentals.	3	1	-	-	2	-	-	2	-	-	-	-	2	-
CO2	Analyze cyber offence planning.	2	3	-	2	2	-	-	-	-	-	-	-	2	-
CO3	Interpret cybercrime on mobile and wireless devices.	1	2	-	2	3	-	-	-	-	-	-	-	2	-
CO4	Distinguish type of tools and methods used in cyber crimes.	1	2	-	3	2	-	-	-	-	-	-	-	2	-
CO5	Explain the importance of cyber security.	2	1	-	-	2	-	-	3	-	-	-	-	2	-

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	CO Statements	POs												PSOs	
CO2	Solve Linear programming problem, transportation and assignment problems.	3	3	3	3	3	3	-	-	-	-	-	-	3	-
CO3	Solve sequencing problem, replacement problem and inventory problem.	3	3	3	3	3	3	-	-	-	-	-	-	3	-
CO4	Apply game theory problems, queuing theory in decision making.	3	2	-	-	-	3	-	-	-	-	-	-	3	-
CO5	Apply dynamic programming & simulation techniques in real-world problems.	3	2	-	-	-	3	-	-	-	-	-	-	3	3
Course Code	171CS8005-Optical Communications(Open Elective)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Discover various properties of ray theory transmission and mode theory.	1	2	3	-	-	-	-	-	-	-	-	-	2	-
CO2	Analyze various attenuation mechanisms that affect the optical transmission link.	3	2	-	2	-	-	-	-	-	-	-	-	2	-
CO3	Apply different types of fiber joints for single and multimode fibers.	2	2	2	3	-	-	-	-	-	-	-	-	1	-
CO4	Utilize optical sources and detectors based on their properties (emission wavelength, spectral widths, quantum efficiency, response time etc).	1	2	3	2	-	-	-	-	-	-	-	-	2	-
CO5	Interpret source to fiber power launching, link power and rise time budgeting, WDM system.	2	3	-	2	-	-	-	-	-	-	-	-	2	-
Course Code	171EE8007-Internet Of Things(Open Elective)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Demonstrate the need of IoT in the computing world.	2	3	-	-	-	-	-	-	-	-	-	-	2	-
CO2	Identify the Business Process models of IoT.	-	-	-	-	-	-	-	-	-	-	-	-	2	-
CO3	Develop the communication protocols and communication technologies.	3	-	1	-	-	-	-	-	-	-	-	-	-	-
CO4	Analyze the data storage and acquisition mechanisms for real time applications.	3	-	-	-	-	-	-	-	-	-	-	-	3	-
CO5	Describe the involvement of cloud service model platforms in IoT.	-	-	-	-	-	-	-	-	-	-	-	-	2	-
CO6	Design an IoT application for complex problems.	3	3	-	-	-	-	-	-	-	-	-	-	-	-
Course Code	171EC8002-Disaster Management(Open Elective)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Explain the basics of disaster management and their mitigation measures.	2	-	-	-	-	-	2	-	-	-	-	-	-	-
CO2	Interpret the disaster vulnerability conditions of India.	2	-	-	-	-	-	2	-	-	-	-	-	-	-
CO3	Choose the means of preparedness measures against disaster.	2	-	-	-	-	-	2	-	-	-	-	-	-	-
CO4	Illustrate the impact of hazards on structures.	2	-	-	-	-	-	2	-	-	-	-	-	-	-
CO5	Outline the various rehabilitation programmes to be adopted.	2	-	-	-	-	-	2	-	-	-	-	-	-	-

	CO Statements	POs												PSOs	
Course Code	171CS8O07-Nano Technology and its Applications (Open Elective)	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Explain the structure and properties of Nano materials.	2	1	-	-	-	-	-	-	-	-	-	-	-	-
CO2	Summarize the importance of development and fabrication of different types of Nano materials.	2	1	-	-	-	-	-	-	-	-	-	-	-	-
CO3	Illustrate various methods of synthesizing different Nano materials.	-	1	-	-	-	-	-	-	-	3	-	-	-	-
CO4	Analyze the Nano structure of materials using various characterization techniques.	3	3	-	2	-	-	-	-	-	-	-	-	-	-
CO5	Make use of different Advanced Nano materials for Engineering and Technological applications.	3	2	-	-	-	3	-	3	-	-	-	-	-	-
Course Code	171IT8P02-Major Project	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	Develop technical procedure of planning and scheduling of an identified project work through technical survey in line with societal and environmental implications.	1	-	-	-	-	2	2	-	-	-	1	-	1	1
CO2	Demonstrate technical skills of data collection and data analysis adhering to professional ethics	1	-	-	-	-	-	-	2	-	-	1	1	1	1
CO3	Design the solutions for the critical problem areas marked in data analysis	2	2	3	2	-	-	-	-	-	-	-	-	1	1
CO4	Build a team of people to work together and communicate well in the critical stages of project progress.	-	-	-	-	-	-	-	-	1	2	1	1	1	1
CO5	Use modern tools to derive conclusions and communicating the results of the project work effectively	-	-	-	-	3	-	-	-	-	2	1	1	1	1