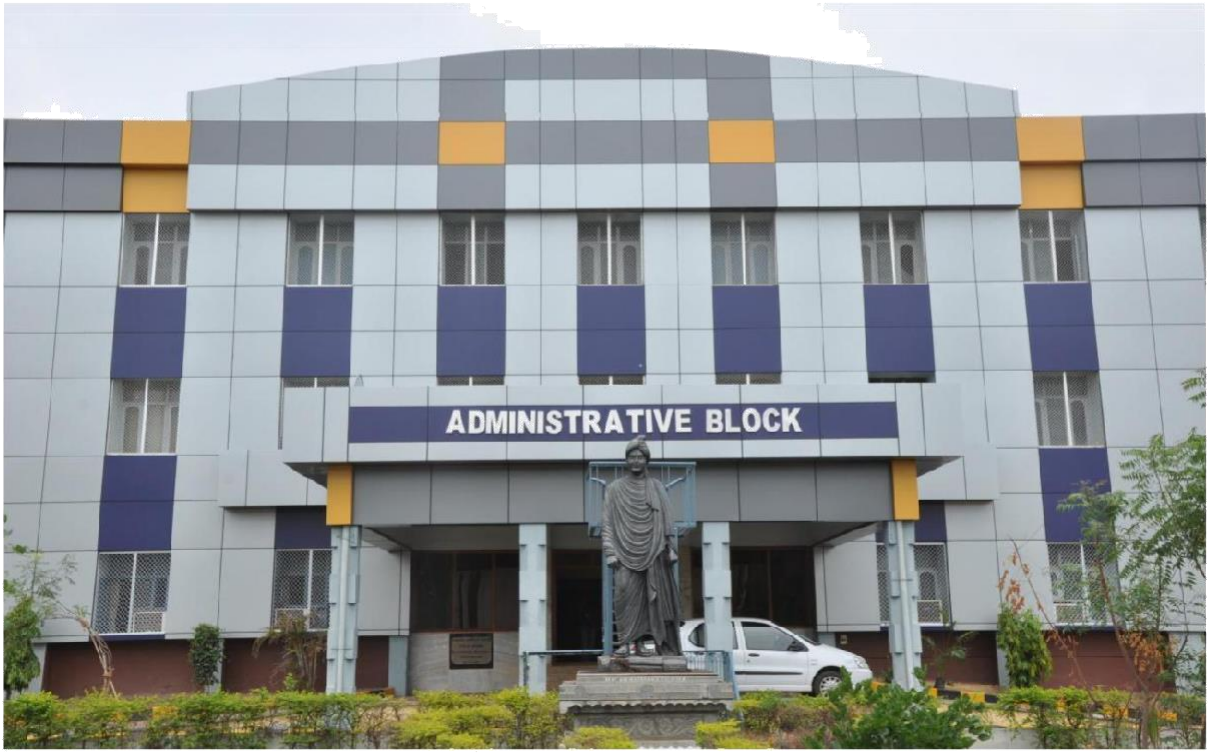


# Scheme–2023

## Department of Emerging Technologies in Computer Science

## G.Pulla Reddy Engineering College (Autonomous): Kurnool

## Accredited by NBA of AICTE and NAAC of UGC

## Affiliated to JNTUA, Anantapuramu

# Scheme and Syllabus for

# Honors in

## Computer Science and Business Systems

**(With Effect from the Batch Admitted in 2023-24)**

**G. PULLA REDDY ENGINEERING COLLEGE (Autonomous) : KURNOOL**

**SCHEME -23**

**B. TECH – CSBS Honors**

***Applicable from the Academic Year 2023-24 onwards***

**B.Tech – CSBS Honors**

| S.No | Title | L | T | P | Credits | CIA | End Exam | Total Marks |
|---|---|---|---|---|---|---|---|---|
| 1. | Big Data Technologies | 3 | 0 | 0 | 3 | 30 | 70 | 100 |
| 2. | Risk Management /MOOCs | 3 | 0 | 0 | 3 | 30 | 70 | 100 |
| 3. | Stock Market and Portfolio Management Analysis / MOOCs | 3 | 0 | 0 | 3 | 30 | 70 | 100 |
| 4. | International Marketing Management | 3 | 0 | 0 | 3 | 30 | 70 | 100 |
| 5. | Digital Marketing | 3 | 0 | 0 | 3 | 30 | 70 | 100 |
| 6. | Big Data Technologies Lab | 0 | 0 | 3 | 1.5 | 30 | 70 | 100 |
| 7. | Stock Market and Portfolio Management Analysis Lab | 0 | 0 | 3 | 1.5 | 30 | 70 | 100 |
| | | | | **Total** | **18** | | | |

## BIG DATA TECHNOLOGIES (BDT)

**Honors in CSBS** — **Scheme: 2023**

| Course Code | Category | Hours/Week | | | Credits | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | L | T | P | C | Continuous Internal Assessment | End Exam | TOTAL |
| HCB01 | H | 3 | 0 | 0 | 3 | 30 | 70 | 100 |

**Sessional Exam Duration:** 2 Hours — **End Exam Duration:** 3 Hours

**Course Outcomes:** After the completion of the course, student will be able to

| | |
|---|---|
| **CO1:** | Understand the basics of Big Data Analytics, Hadoop. |
| **CO2:** | Design Map Reduce programs for a given problem. |
| **CO3:** | Write Pig Scripts on Hadoop that works on large datasets. |
| **CO4:** | Perform Data Querying Operations using Apache Hive. |
| **CO5:** | Implement Data Management using NoSQL Databases |

### UNIT– I

**Big Data Analytics:** What is Big Data Analytics, Why this Sudden Hype Around Big Data Analytics? Classification of Analytics, Top Challenges Facing Big Data, Few Top Analytics Tools, Introduction to Hadoop:
**Introducing Hadoop:** HDFS, HDFS Commands, Processing Data with Hadoop, Managing Resources and Applications with Hadoop YARN, Interacting with Hadoop EcoSystem.

### UNIT– II

**Understanding Map Reduce & YARN:** The Map Reduce Framework Concept, Developing Simple Map Reduce Application, Points to consider While Designing Map Reduce, YARN Background and YARN Architecture.

### UNIT– III

**Analyzing Data with Pig:** Introducing PIG, Running PIG, Getting started with pig Latin, Working with operators in pig

### UNIT– IV

**Understanding HIVE:** Introducing Hive,Hive Services, Built in functions in Hive, Hive DDL, Data Manipulation in Hive.

### UNIT– V

**NoSQL Data Management:** Introduction to NoSQL, Characteristics of NoSQL, Types of NoSQL Data Models, Schema-less Databases.

**Text Books:**


1. Big Data Black Book: Covers Hadoop 2, Map Reduce, Hive,YARN, Pig, R and Data Visualization by DreamTech,2015.
2. Big Data and Analytics by Seema Acharya,Wiley Publication,2015.
3. Business Intelligence and Analytic Trends for Today's Businesses", Wiley,2013
4. P. J. Sadalage and M. Fowler, "NoSQL Distilled: A Brief Guide to the Emerging World Polyglot Persistence", Addison-Wesley Professional,2012
5. Tom White, "Hadoop: The Definitive Guide", Third Edition, O'Reilley,2012


**Reference Books:**


1. "Hadoop Operations", O'Reilley, Eric Sammer,2012
2. "Programming Hive", O'Reilley, E. Capriolo, D. Wampler, and J. Rutherglen,2012
3. "HBase: The Definitive Guide", O'Reilley, Lars George,2011
4. Too Big to Ignore: The Business Case for Big Data (Wiley and SAS Business Series) By Phil Simon, Wiley 1e.

5. "Programming Pig", O'Reilley, Alan Gates,2011

**Web References:**

1. https://www.coursera.org/specializations/big-data – Coursera Big Data Specialization
2. https://www.edx.org/course/big-data-analysis-with-python – edX
3. https://www.udacity.com/course/ai-for-business-leaders--nd088 – Udacity AI for Business

**Question Paper Pattern:**

**Sessional Examination:** The question paper for Sessional Examination shall be for 40 marks. The question paper shall consist of four questions and all questions are compulsory. Question No.1 contains five short answer questions (2 marks each) for a total of ten marks. Remaining three questions shall be EITHER/OR type descriptive questions for ten marks each. Each of these descriptive questions may contain sub-questions.

**End Examination:** The question paper for End Examination shall be for 70 marks. The question paper shall contain six questions and all questions are compulsory. Question No.1 shall contain ten short answer questions (2 marks each) for a total of twenty marks, with two short answer questions from each unit. Remaining five questions (Each question covering one unit of syllabus) carrying 10 marks each shall be EITHER/OR type descriptive questions and may contain sub-questions.

## RISK MANAGEMENT (RM)

**Honors in CSBS** — **Scheme: 2023**

| Course Code | Category | Hours/Week | | | Credits | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | L | T | P | C | Continuous Internal Assessment | End Exam | TOTAL |
| HCB02 | H | 3 | 0 | 0 | 3 | 30 | 70 | 100 |

**Sessional Exam Duration: 2 Hours** — **End Exam Duration: 3 Hours**

**Course Outcomes:** At the end of the course students will be able to

| | |
|---|---|
| **CO1:** | Understand the concept, classification, and evaluation of risk and factors influencing risk management. |
| **CO2:** | Analyze Enterprise Risk Management and methods to control market risk. |
| **CO3:** | Apply credit risk management tools such as securitization and credit derivatives. |
| **CO4:** | Evaluate strategic and operational risk management approaches in various organizational contexts. |
| **CO5:** | Assess financial risks and use financial instruments and treasury tools for effective risk control. |

### UNIT– I

**Risk Management -** Concept and classification of Risk, Acceptable risk Vs Unacceptable risk, cost of risk, Degree of risk, influencing factors, constraints, monitoring, and evaluation of Risk. Meaning, Scope & Objective of Risk Management, Risk Management Process, Risk management models, Personal risk management Vs Corporate risk management, Risk Control, Risk avoidance, Classifications, Evaluation and measures of risk reduction. AI for Risk Identification and Classification, **AI-Driven Risk Evaluation Tools** (e.g., SAS Risk Intelligence, IBM OpenPages).

### UNIT– II

**Enterprise Risk Management** - Meaning of ERM, Source of risk to an Enterprise, Prerequisite for ERM. Integrated risk assessment.

**Market Risk Management** - Importance, Exposure in financial markets, Methods to handle & control Market risk. **AI-Powered Scenario Simulations** for stress testing and contingency planning.

### UNIT– III

**Credit Risk Management** - Need, Securitization for credit risk, Credit derivatives, Methods for credit risk management.

**Strategic Risk Management** - Strategic out look to risk management, Strategic planning to manage risk Managing risk in Merger & Acquisitions.

### UNIT– IV

**Operational Risk Management** - Meaning, Sources, Objectives & Classification of Operational Risk, Operational Events- Regulatory issues of Operational Risk Management, Measurement and Stages of Operational Risk Management, Roles of Supervisor, Disclosure Requirement, Insurance & Operational Risk Management.

### UNIT– V

**Financial Risk Management** - Definition and Source of financial risk, Need & Importance of Financial Risk Management, Tools for Financial Risk Management - Derivatives- Futures- Swaps- Options, Role of Chief Risk Officer, Integrated Risk Program, Double trigger option. Liquidity Management-Tools for Treasury Risk Management

**Text Books:**

1. Risk Management – IIBF, Macmillan, New Delhi.

**Reference Books:**

1. Principles of Risk Management & Insurance – George E. Rejda.
2. Risk Management & Insurance - Scott Harington

3. Risk Management & Insurance - C. Arthur Williams.

**Web References:**

1. https://www.youtube.com/watch?v=4SWEX4L2dOc
2. https://onlinecourses.nptel.ac.in/noc24_mg19/preview

**Question Paper Pattern:**

**Sessional Examination:** The question paper for Sessional Examination shall be for 40 marks. The question paper shall consist of four questions and all questions are compulsory. Question No.1 contains five short answer questions (2 marks each) for a total of ten marks. Remaining three questions shall be EITHER/OR type descriptive questions for ten marks each. Each of these descriptive questions may contain sub-questions.

**End Examination:** The question paper for End Examination shall be for 70 marks. The question paper shall contain six questions and all questions are compulsory. Question No.1 shall contain ten short answer questions (2 marks each) for a total of twenty marks, with two short answer questions from each unit. Remaining five questions (Each question covering one unit of syllabus) carrying 10 marks each shall be EITHER/OR type descriptive questions and may contain sub-questions.

## STOCK MARKET AND PORTFOLIO MANAGEMENT ANALYSIS (SMPM)

**Honors in CSBS** — **Scheme: 2023**

| Course Code | Category | Hours/Week | | | Credits | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | L | T | P | C | Continuous Internal Assessment | End Exam | TOTAL |
| HCB03 | H | 3 | 0 | 0 | 3 | 30 | 70 | 100 |

**Sessional Exam Duration: 2 Hours** — **End Exam Duration: 3 Hours**

**Course Outcomes:** At the end of the course students will be able to

| | |
|---|---|
| **CO1:** | Understand the fundamental concepts of investment |
| **CO2:** | Apply knowledge of trading mechanisms |
| **CO3:** | Analyze risk and return trade-offs, construct diversified portfolios, and evaluate portfolio performance |
| **CO4:** | Evaluate company financial performance using ratio analysis |
| **CO5:** | Understand the fundamental concepts of mutual funds |

### UNIT– I

**Introduction to Stock Market:** Basics of Investment- Investment vs. Speculation, Financial and Real Assets; Securities Market- Primary and Secondary Markets; Types of Securities-Equity, Bonds, Derivatives; Regulatory Bodies- SEBI, RBI, Stock Exchanges (NSE, BSE)**;** Market Indices-Sensex, Nifty, Sectoral Indices**,** IPO Process and Book Building

### UNIT– II

**Stock Market Instruments and Trading Mechanism:** Types of Orders- Market, Limit, Stop-loss**;** Trading Process- Demat Account, Stock Brokers**;** Margin Trading, Short Selling**;** Settlement Cycle (T+1)**;** Risk and Return Concept in Stock Markets**;** Technical vs. Fundamental Analysis (Introductory Overview)

### UNIT– III

**Portfolio Management** – Theory and Practices: Introduction to Portfolio- Objectives, Types; Diversification & Risk Reduction; Risk & Return Measurement: Standard Deviation, Beta, Sharpe Ratio; Markowitz's Modern Portfolio Theory; Efficient Frontier and Capital Market Line; Capital Asset Pricing Model (CAPM). **AI for Portfolio Optimization** using ML Algorithms using use cases Comparing traditional vs AI-optimized portfolios using Sharpe and Beta.

### UNIT– IV

**Equity Valuation and Investment Strategies:** Fundamental Analysis: EIC Framework (Economy-Industry-Company); Financial Ratios: P/E, EPS, ROE, Debt-Equity; Discounted Cash Flow (DCF) Valuation Basics; Growth vs. Value Investing; Behavioral Finance Basics: Investor Psychology, Herding, Overconfidence

### UNIT– V

**Mutual Funds and Portfolio Evaluation:** Mutual Funds: Types, NAV, Expense Ratio, SIP, SWP; ETF vs. Mutual Fund; Evaluation of Mutual Funds; Portfolio Revision: 7/8/2025Active vs. Passive Management; Performance Attribution: Alpha, Beta, Treynor Ratio; Recent Trends: ESG Investing, Robo-Advisors.

**Text Books:**


1. Investment Analysis and Portfolio Management, by Prasanna Chandra
2. Security Analysis and Portfolio Management, by S. Kevin
3. Mutual Funds in India: Structure, Performance and Regulations, by N. P. Agarwal

**Reference Books:**

1. Security Analysis and Portfolio Management, by V.A. Avadhani.
2. Investment Science by David G. Luenberger, Oxford University Press
3. Behavioural Finance by Chandra, Prasanna, McGraw Hill

**Web References:**

https://www.bsebti.com/

**Question Paper Pattern:**

**Sessional Examination:** The question paper for Sessional Examination shall be for 40 marks. The question paper shall consist of four questions and all questions are compulsory. Question No.1 contains five short answer questions (2 marks each) for a total of ten marks. Remaining three questions shall be EITHER/OR type descriptive questions for ten marks each. Each of these descriptive questions may contain sub-questions.

**End Examination:** The question paper for End Examination shall be for 70 marks. The question paper shall contain six questions and all questions are compulsory. Question No.1 shall contain ten short answer questions (2 marks each) for a total of twenty marks, with two short answer questions from each unit. Remaining five questions (Each question covering one unit of syllabus) carrying 10 marks each shall be EITHER/OR type descriptive questions and may contain sub-questions.

## INTERNATIONAL MARKETING MANAGEMENT(IMM)

**Honors in CSBS** | **Scheme: 2023**

| Course Code | Category | Hours/Week | | | Credits | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | L | T | P | C | Continuous Internal Assessment | End Exam | TOTAL |
| HCB04 | H | 3 | 0 | 0 | 3 | 30 | 70 | 100 |

**Sessional Exam Duration: 2 Hours** | **End Exam Duration: 3 Hours**

**Course Outcomes:** At the end of the course students will be able to

| | |
|---|---|
| **CO1:** | Recall fundamental concepts of international marketing and trade theories. |
| **CO2:** | Understand environmental and cultural dimensions influencing global marketing decisions. |
| **CO3:** | Apply market entry strategies for international expansion. |
| **CO4:** | Analyze the global marketing mix for products, pricing, promotion, and distribution. |
| **CO5:** | Evaluate the impact of international legal, financial, and economic systems on marketing operations. |
| **CO6:** | Develop global marketing strategies and plans for digital and sustainable markets. |

### UNIT– I

**Introduction to International Marketing**
Definition, Nature, Scope, and Importance of International Marketing, Differences between Domestic and International Marketing, EPRG Framework, Theories of International Trade: Absolute Cost Advantage, Comparative Cost Advantage, Opportunity Cost Theory, Role of International Marketing in Economic Development, Challenges in International Marketing.

### UNIT– II

**International Marketing Environment** – Political, Legal, Cultural, Economic, and Technological Environment. PESTLE Analysis in Global Markets. Hofstede's Cultural Dimensions. Impact of Globalization on Marketing Strategies. International Marketing Research and Market Segmentation. Analysis of International Competitors.

### UNIT– III

**Entry Strategies and Globalization Approaches** – Modes of Entry: Exporting, Licensing, Franchising, Joint Ventures, Wholly-Owned Subsidiaries. Strategic Alliances and Internationalization Process. Standardization vs Adaptation Debate. Entry Barriers and Risk Management. Role of WTO and Trade Blocs (EU, NAFTA, ASEAN). Ethics and CSR in International Business.

### UNIT– IV

**International Marketing Mix Decisions** – Product Planning: International Product Life Cycle, Branding, Packaging, and Labeling. Pricing Strategies: Factors Influencing International Pricing, Transfer Pricing, Dumping. Promotion Decisions: Global Advertising, Media Planning, Sales Promotion, Personal Selling, Public Relations. Distribution: International Channels, Logistics, Role of Export Houses. e-Commerce in Global Markets.

### UNIT– V

**Emerging Trends in International Marketing** – Digital Marketing in International Context. SocialMedia Strategies Across Borders. Sustainable and Green Marketing Practices. International Customer Relationship Management (CRM). Innovations in Global Marketing. Case Studies: Internationalization of Indian Brands (e.g., Zomato, Tanishq, Infosys, Patanjali).

**Text Books:**

1. International Marketing, Philip R. Cateora, Mary C. Gilly, John L. Graham, McGraw Hill, 17th Edition, 2020.

2. Global Marketing Management, Warren J. Keegan, Pearson, 9th Edition, 2022.
3. International Marketing, Rakesh Mohan Joshi, Oxford University Press, 4th Edition, 2021.

**Reference Books:**

1. International Marketing Strategy, Isobel Doole & Robin Lowe, Cengage, 7th Edition, 2023.
2. Export-Import Procedures and Documentation, Thomas A. Cook, AMACOM, 3rd Edition, 2021.

**Web References:**

1 https://online.hbs.edu/courses/global-business/
2 https://www.edx.org/course/international-business-environment

**Question Paper Pattern:**

**Sessional Examination:** The question paper for Sessional Examination shall be for 40 marks. The question paper shall consist of four questions and all questions are compulsory. Question No.1 contains five short answer questions (2 marks each) for a total of ten marks. Remaining three questions shall be EITHER/OR type descriptive questions for ten marks each. Each of these descriptive questions may contain sub-questions.

**End Examination:** The question paper for End Examination shall be for 70 marks. The question paper shall contain six questions and all questions are compulsory. Question No.1 shall contain ten short answer questions (2 marks each) for a total of twenty marks, with two short answer questions from each unit. Remaining five questions (Each question covering one unit of syllabus) carrying 10 marks each shall be EITHER/OR type descriptive questions and may contain sub-questions.

## DIGITAL MARKETING(DM)

**Honors in CSBS** | **Scheme: 2023**

| Course Code | Category | Hours/Week | | | Credits | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | L | T | P | C | Continuous Internal Assessment | End Exam | TOTAL |
| HCB05 | H | 3 | 0 | 0 | 3 | 30 | 70 | 100 |

**Sessional Exam Duration: 2 Hours** | **End Exam Duration: 3 Hours**

**Course Outcomes:** At the end of the course students will be able to

| | |
|---|---|
| **CO1:** | Understand the evolution of digital marketing and the modern consumer journey. |
| **CO2:** | Create and execute content strategies for various social media platforms. |
| **CO3:** | Apply digital channels effectively to acquire, engage, and retain customers |
| **CO4:** | Analyze how digital marketing contributes to organizational success and leadership. |
| **CO5:** | Understand future trends and innovations in digital marketing on a global scale. |

### UNIT– I

**Introduction to Digital Marketing**: The new digital world - trends that are driving shifts from traditional marketing practices to digital marketing practices, the modern digital consumer and new consumer's digital journey. Marketing strategies for the digital world – latest practices.

### UNIT– II

**Social Media Marketing** -Introduction to Blogging, Create a blog post for your project. Include headline, imagery, links and post, Content Planning and writing. Introduction to Face book, Twitter, Google +, LinkedIn, YouTube, Instagram and Pinterest; their channel advertising and campaigns.

### UNIT– III

**Acquiring & Engaging Users through Digital Channels**: Understanding the relationship between content and branding and its impact on sales, search engine marketing, mobile marketing, video marketing, and social-media marketing. Marketing gamification, Online campaign management; using marketing analytic tools to segment, target and position; overview of search engine optimization (SEO).

### UNIT– IV

**Designing Organization for Digital Success**: Digital transformation, digital leadership principles, online P.R. and reputation management. ROI of digital strategies, how digital marketing is adding value to business, and evaluating cost effectiveness of digital strategies.

### UNIT– V

**Digital Innovation and Trends**: The contemporary digital revolution, digital transformation framework; security and privatization issues with digital marketing Understanding trends in digital marketing – Indian and global context, online communities and co-creation.

**Text Books:**


1.Moutsy Maiti: Internet Marketing, Oxford University PressIndia

2- Puneet Bhatia: Fundamental of Digital Marketing, 2e, 2019, Pearson Education India

3- Liana Li Evans; Social Media Marketing,1/e, 2011, Pearson Education India 19


**Reference Books:**


1. Ryan, Damian; Understanding Digital Marketing:marketing strategies for engaging the digitalKogan Page (3rd Edition,2014).

2. TracyL.Tuten&MichaelR.Solomon:SocialMediaMarketing(SagePublication)
3. Vandana, Ahuja; Digital Marketing, Oxford University Press India (November,2015).

**Web References:**

1. https://www.scribd.com/document/575956653/1-1
2. https://coschedule.com/marketing-ideas/social-media-marketing-ideas
3. https://www.studocu.com/in/document/dr-apj-abdul-kalam-technical-university/btech-cse/digital-innovation-trends-understanding-the-digital-revolution-dsm/127121274

**Question Paper Pattern:**

**Sessional Examination:** The question paper for Sessional Examination shall be for 40 marks. The question paper shall consist of four questions and all questions are compulsory. Question No.1 contains five short answer questions (2 marks each) for a total of ten marks. Remaining three questions shall be EITHER/OR type descriptive questions for ten marks each. Each of these descriptive questions may contain sub-questions.

**End Examination:** The question paper for End Examination shall be for 70 marks. The question paper shall contain six questions and all questions are compulsory. Question No.1 shall contain ten short answer questions (2 marks each) for a total of twenty marks, with two short answer questions from each unit. Remaining five questions (Each question covering one unit of syllabus) carrying 10 marks each shall be EITHER/OR type descriptive questions and may contain sub-questions.

## BIG DATA TECHNOLOGIES LAB (BDT(P))

**Honors in CSBS** — **Scheme: 2023**

| Course Code | Category | Hours/Week | | | Credits | Maximum Marks | | |
|---|---|---|---|---|---|---|---|---|
| | | L | T | P | C | Continuous Internal Assessment | End Exam | TOTAL |
| HCB06 | H | 0 | 0 | 3 | 1.5 | 30 | 70 | 100 |

**End Exam Duration: 3 Hours**

**Course Outcomes:** At the end of the course students will be able to

| | |
|---|---|
| **CO1:** | Students will be able to implement big data pipelines and Hadoop Commands |
| **CO2:** | Students gain proficiency in implementing Hadoop Map Reduce programs. |
| **CO3:** | Students will be able to implement Pig scripts and Hive queries. |

### List of Experiments

1. Perform Hadoop Setup in Local and Pseudo mode and monitor through Web Based UI.
2. Implementation of Hadoop Shell Commands on files.
3. Implementation of word count Example using Hadoop Map Reduce
4. Write Pig Latin Scripts on Describe, for each and order by operator.
5. Perform DDL Operations on Hive.
6. Apache Hive & Pig for Querying Large Datasets Creation of tables, data loading, and running queries.

### List of Additional Experiments

1. Practice Linux Commands
2. To develop a Map-Reduce program to find the grades of student's.
3. Write a Map Reduce Program that works on Gutenberg data.
4. Map Reduce Programming Basics sorting, and filtering examples in Java/Python.
5. Run the Pig Latin Scripts to find Word Count and Max Temperature.
6. Practice usage of Hive Built in Functions.

**References:**


1. Vignesh Prajapati, Big Data Analytics with R and Hadoop, Packt Publishing.
2. Benjamin Bengfort, Data Analytics with Hadoop, O'Reilly.
3. Srinivasan & J.Shrinivasan, Cloud Computing – A Hands-on Approach, Wiley India.


**Web References**

https://www.coursera.org/specializations/big-data

| STOCK MARKET AND PORTFOLIO MANAGEMENT ANALYSIS LAB (SMPM(P)) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Honors in CSBS** | | | | | | **Scheme: 2023** | | |
| **Course Code** | **Category** | **Hours/Week** | | | **Credits** | **Maximum Marks** | | |
| | | **L** | **T** | **P** | **C** | **Continuous Internal Assessment** | **End Exam** | **TOTAL** |
| **HCB07** | **H** | **0** | **0** | **3** | **1.5** | **30** | **70** | **100** |
| | | | | | | **End Exam Duration: 3 Hours** | | |

**Course Outcomes:** At the end of the course students will be able to

| | |
|---|---|
| **CO1:** | Understand Market Mechanisms and Regulatory Structure |
| **CO2:** | Apply Tools for Portfolio Construction and Risk Analysis |
| **CO3:** | Apply Investment Evaluation Techniques and Behavioral Insights |

**List of Experiments**

1. Classifying Investments & Asset Types
2. Regulatory Bodies & Market Structure Map
3. IPO Simulation with Allotment Logic
4. Trade Log Simulation (T+1)
5. Order Types & Demat Tracker
6. Returns & Volatility Calculation
7. Diversified vs. Concentrated Portfolio
8. Portfolio Risk Metrics
9. Efficient Frontier Construction
10. Ratio Analysis – Company Comparison

**List of Additional Experiments**

1. DCF Valuation Model
2. Behavioral Bias Simulation
3. Mutual Fund Comparison Dashboard
4. Robo-Advisors & ESG Scorecard

**References:**

1. Investment Analysis and Portfolio Management**,** Prasanna Chandra, McGraw Hill Education

**Web References**

1. https://www.nseindia.com/
2. https://www.khanacademy.org/economics-finance-domain/core-finance