

Rajarshi Shahu Mahavidyalaya (Autonomous), Latur

Department of Computer Science

Teaching Plan (Semester III, V)

(July-2021 to Dec-2021)

Name of the Teacher: **Damte shaheen A.R.**

1. Details of classes to be taught

Sr. No	Class	Subject	Course code and Title	Total Lectures
1	B. Voc. (CT) SY	Computer Technology	DBMS (U-DMS-433)	60
2	B. Voc. (CT) TY	Computer Technology	Computer Ethics (U-CET-659)	60
3	B.Sc. TY	Computer Science	RDBMS (U-RDB-603)	45
4	M. Sc. (CS) SY	Computer Science	Software Testing (P-SOT-331)	60

Class: B. Voc. (CT) S.Y.

Semester: III

**Course Title: Database Management System
(U-DMS-433)**

Unit No:	Topics To be Covered	Date	No. of Lectures	Academic Activities to be organized	No.of Test/Assignment topic and date
I	I : Introduction to Databases and Data Models:- What is database system? Purpose of database system, View of data, Relational databases, Database architecture, Transaction management, The importance of data models, Basic building blocks, Business rules, The evolution of data models, Degrees of data abstraction.	07.07.2021 To 04.08.2021	15	—	—
II Document1	II: Unit-II Database Design, ER-Diagram and Unified Modeling Language:- Database design and ER Model: Overview, ER-Model, Constraints, ER-Diagrams, ERD Issues, weak entity sets, Codd's rules, Relational Schemas, Introduction to UML Relational database model:Logical 15 view of data, keys, Integrity rules. Relational Database design, features of good relational database design, Atomic domain and Normalization (1NF, 2NF, 3NF, BCNF).	05.08.2021 To 01.09.2021	15	Practice Test On queries	Unit Test-I

III	III: Unit- III Relational Algebra and Calculus:- Relational algebra: Introduction Selection and projection, Set operations, Renaming, Joins, Division, Syntax, semantics, Operators, Grouping and ungrouping, Relational comparison. Calculus: Tuple relational calculus, Domain relational Calculus, Calculus vs algebra, Computational Capabilities.	02.09.2021 To 30.09.2021	15	–	–
IV	IV: Constraints, Views and SQL :- What are constraints? Types of constrains, Integrityconstraints Views: Introduction to views,Data independence, security, Updates Comparison between tables and views SQL, data definition, Aggregate function, Null Values, nested sub queries, Joined relations,Triggers.	06.10.2021 To 30.10.2021	15	Practice Test On Relational Algebra	Unit Test-II

Class: B.Voc.(CT) T.Y.

Semester: V

Course Title: Computer Ethics

Code: U-CET-659

Unit No:	Topics To be Covered	Date	No. of Lectures	Academic Activities to be organized	No.of Test/Assignments with topic and date
I	I:The Need for Computer Ethics Training:- Definition of Ethics, The Importance of Integrity, The Difference between Morals, Ethics, and Laws, Defining the Field of Computer Ethics, Computer ethics codes	07.07.2021 To 04.08.2021	15	-	-
II	II: Sample topics in Computer Ethics:- Computer crime and computer security, Software theft and intellectual property rights,Computer hacking and the creation of viruses, Computer and information system failure, Invasion of privacy. Privacy in the Workplace and on the Internet, Social implications of artificial intelligence and expert systems.	05.08.2021 To 27.08.2021	15	-	Unit Test-I

III	III: Components, Binding and Directives:- IT Professionals, Are IT Workers Professionals, Professional Relationships that Must Be Managed, Professional Codes of Ethics, Professional Organizations, Certification Copyright, Government Licensing, IT Professional Malpractice IT Users, Common Ethical Issues for IT Users, Supporting the Ethical Practices of IT Users, Compliance	28.08.2021 To 27.09.2021	15	Practice Test On Comput er crime & compute r security	- -
IV	IV: Social Networking:- What Is a Social Networking Web Site? , Business Applications of Online Social Networking, Social Network Advertising, The Use of Social Networks in the Hiring Process, The Use of Social Media to Improve Customer Service , Social Shopping Web Sites, Social Networking Ethical Issues, Cyber bullying, Cyber stalking, Uploading of Inappropriate Material, Online Virtual Worlds, Crime in Virtual Worlds.	28.09.2021 To 29.10.2021	15	-	Unit Test- II

Class: B.Sc T.Y.

Semester: V

Course Title: Relational Database Management

SystemCourse Code: U-RDB-603

Unit No:	Topics To be Covered	Date	No. of Lect ures	Academic Activities to be organized	No.of Test/ Assignm ent with topicand date
I	I: Introduction to Database and Elements of DBMS- Definition of DBMS, File processing Vs DBMS Advantages and disadvantages of DBMS Users of DBMS, DBMS Structure, DBMS Languages: DDL, DML, DCL Terms: Entity, Entity set, attributes, Keys: Primary, secondary foreign, composite	08.07.2021 To 31.07.2021	12	Practice Test On queries	-
II	II: Data Models and Relational Algebra and Calculus:- Introduction, Object based logical model, Recordbased logical model (RDB, NDB ,HDB) ,E-R model, E-R diagram, introduction Relation, Schemes, Domain, Tuples, Cardinality degree, Algebraic operation. Fundamental operation: Select, product, union Set difference: Natural join, Cartesian product, rename Relational calculus: Tuple and domain relational calculus.	05.08.2021 To 09.09.2021	13	-	Unit Test-I

III	III: Relational Database Design and SQL:- Normalization: INF, 2NF, 3NF, BCNF, Class diagrams and E-R tables Functional dependency, Data types, Table Creation, Modify ,Selecting, Deleting records , Simple queries, Oracle constraints	10.09.2021 To 01.10.2021	10	Practice Test On Relational Algebra	-
IV	IV: Use of Operators and Advance in SQL:- Comparison operators: Between, In, Not In, Like, Null Logical operators: AND, OR, NOT SQLfunction, Joins Sub-queries, Views.	02.10.2021 To 23.10.2021	10	-	Unit Test-II

Class: Msc(CS).SY

Semester: III

Course Title: Software TestingCourse

Code: P-SOT-331

Unit No:	Topics To be Covered	Date	No. of Lect ures	Academi c Activitie s to be organize d	No.of Test/ Assignment with topic anddate
I	<p>I:Software Testing Background and the Software Development Process:-</p> <p>The Psychology of Testing, Software Testing Principles., Software Testing Background: What Is a Bug?, Terms for Software Failures, Software Bug: A Formal Definition, Why Do Bugs Occur?, What Exactly Does a Software Tester Do?, What Makes a Good Software Tester?, The Software Development Process: Product Components, What Effort Goes Into a Software Product?, Product Components, What Effort Goes Into a Software Product?, What Parts Make Up a Software Product?, Software Development Lifecycle Models: Big-Bang, Code-and-Fix, Waterfall, Spiral.</p>	<p>05.07.2021 To 23.07.2021</p>	<p>15</p>	<p>Basic Knowledge Of Software Engineeri ng</p>	<p>—</p>

II	<p>II: The Realities of Software Testing and Testing Fundamentals:-</p> <p>Introduction, Testing Axioms, Software Testing Terms and Definitions: Precision and Accuracy, Verification and Validation, Quality and Reliability, Testing and Quality Assurance (QA). Testing the Software with Blinders On: Dynamic Black-Box Testing: Testing the Software While Blindfolded, Test-to-Pass and Test-to-Fail, Equivalence Partitioning , Data Testing, Boundary Conditions, Sub-Boundary Conditions , Default, Empty, Blank, Null, Zero, and None, Invalid, Wrong, Incorrect, and Garbage Data , State Testing ,Testing the Software's Logic Flow, Testing States to Fail.</p>	24.07.2021 To 13.08.2021	15	-	Unit Test-I
III	<p>III: Applying Your Testing Skills:-</p> <p>An Overview of Configuration Testing, impatibility Testing Overview, The overall urse of a test: Planning, Execution, aluation. Testing Strategies: Explorative sting, Automated Testing, Testing by cument, Smoke Test. Testing Methods: ackbox, Whitebox, Gray Box. a) Tool pport for testing: Types of test tool, fective use of tools, Potential benefits and ks, Introducing a tool into an organization.</p>	16.08.2021 To 03.09.2021	15		Unit Test-II

IV	IV: Testing Web Applications:- Testing Concepts for WebApps: Dimensions of Quality, Errors within a WebApp Environment, Testing Strategy, Test Planning. The Testing Process An Overview. Content Testing: ContentTesting Objectives, Database Testing. User Interface Testing: Interface Testing Strategy, Testing Interface Mechanisms, Testing Interface Semantics Usability Tests, Compatibility Tests. Component-LevelTesting. Navigation Testing: TestingNavigation Syntax, Testing Navigation Semantics. Configuration Testing: Server-Side Issues,	04.09.2021 To 25.09.2021			
----	--	--------------------------------	--	--	--

Shahen

Name of The Teacher & Sign

Damte Shahen A.R

Puny

Head of Department

- **Head**

Dept. of Computer Science
 Rajarshi Shahu Mahavidyalaya, Latur

SB

Principal

PRINCIPAL

Rajarshi Shahu Mahavidyalaya
 (Autonomous) Latur

Rajarshi Shahu Mahavidyalaya (Autonomous), Latur

Department of Computer Science

Teaching Plan (Semester IV, VI)

(Dec-2021 to April-2022)

Name of the Teacher: **Damte Shaheen A.R.**

2. Details of classes to be taught

Sr.No	Class	Subject	Course code and Title	Total Lectures
1	B.Voc(CT) SY	Computer Technology	Aptitude & Logical Reasoning (U-ALR-526)	60
2	B.Voc(CT) TY	Computer Technology	Test Engineering (U-TST-765)	60
3	B.Voc(CT) TY	Computer Technology	Digital Marketing (U-IDM-762)	60
4	B.Voc(CT) FY	Computer Technology	Analysis,Design and Testing ofweb Based Applications (U-ADT-316)	60

Class: B.Voc. (CT) S.Y.
Course Title: Aptitude and Logical Reasoning

Semester: IV

Course Code:U-ALR-526

Unit No:	Topics To be Covered	Date	No. of Lectures	Academic Activities to be organized	No.of Test/ Assignment topic and date
I	1: Numerical Abilities / Quantitative Aptitude 1:- Number Theory, Square Roots, HCF and LCM, Data Sufficiency Test, Profit and Loss, Surds and Indices, Simplification, Percentage, Approximation, Quantitative Comparison, Average Number Theory, Square Roots, HCF and LCM, Data Sufficiency Test, Profit and Loss, Surds and Indices, Simplification, Percentage, Approximation, Quantitative Comparison, Average.	17.12.2021 To 11.01.2022	15	Short Tricks of multiplication By 11,5 and 2x2 ,3x3	—
II	II: Numerical Abilities / Quantitative Aptitude 2:- Logarithms, Fraction and Decimals, Commercial Math, Ratio and Proportion, Data Interpretation Compound and Simple Interest, Partnership, Mensuration Area, Volume, Data Comparison, Discounts.	15.01.2022 To 08.02.2022	15	Guidance regarding placement	Unit Test-I
III	III: Logical Reasoning I Number Test, Logical Diagram (Venn Diagram), Analogy Test, Relationship Test, Insert Missing Sequence Test, Alpha Numeric Symbol Sequence, Direction and Distance Test, Alphabet Test, Classification (Odd Man Out) Test.	11.02.2022 To 07.03.2022	15	Extra Problems On some Important Topic	—

IV	IV: Logical Reasoning 2:- Cubes and Cubical Dice Test, Logical Word Sequence Test, Time SequenceTest, Coding & Decoding Test, Statement Arguments, Mathematical Operations,Statement Conclusion, Series Test, Data Sufficiency Test, DataArrangement Test, Logic Test. Revision	08.03.2022 To 29.03.2022	15	-	Unit Test- II
-----------	--	--------------------------------	----	---	------------------

Class: B.Voc.(CT) T.Y.

Semester: VI

Course Title: Test Engineering

Course Code:U-TST-765

Unit No:	Topics To be Covered	Date	No. of Lect ures	Academic Activities to be organized	No.of Test/ Assignm ent with topic and date
I	I: Basics of Software Testing and Testing Methods:- Software Testing, Objectives of Testing Failure, Error, Fault, Defect, Bug Terminology Test Case, When to Start and Stop Testing of Software (Entry and Exit Criteria) Verification and Validation (V Model). Quality Assurance Quality Control Methods of Testing: Static and dynamic Testing, The box approach White Box Testing Inspections. Walk throughs, Technical Reviews Functional Testing, Code Coverage Testing. Code Complexity Testing, Black Box Testing: Requirements based testing, Boundary Value Analysis, Equivalence Partitioning.	17.12.2021 To 12.01.2022	15	Give Basic Knowledge Of Software Engineerin g	–
II	II: Types and levels of Testing:- Levels of testing, Unit Testing: Driver, Stub, Integration Testing: Top-Down Integration. Bottom-Up integration, BiDirectional Integration, Testing on web Application: Performance testing [Stress testing, Security Testing, Client Sever testing] Acceptance Testing: Alpha Testing and Beta Testing, Special Tests: Regression Testing, GUI Testing.	13.01.2022 To 17.02.2022	15	–	Unit Test-I

III	<p>III: Test Management and Defect Management:-</p> <p>Test Planning: Preparing a Test Plan, Deciding Test Approach, setting up Criteria for testing, Identifying Responsibilities, Staffing, Resource Requirements, Test Deliverable's, Testing tasks</p> <p>Test Management: Test Infrastructure management, Test People management Test Process: Base</p> <p>Lining a Test Plan, Test Case Specification. Test Reporting: Executing Test Cases, Preparing Test Summery Report.</p> <p>Defect Classification, Defect management Process. Defect Life Cycle, defect Template Estimate Expected Impact of a defect, Techniques for finding Defects, Reporting a Defect.</p>	18.02.2022 To 16.03.2022	15	Practice Test on unit 2	-
IV	<p>IV: Testing tools and Measurements:-</p> <p>Manual Testing and Need for Automated Testing Tools Advantages and Disadvantages of Using Tools Selecting a testing Tools ,</p> <p>When to Use Automated Test tools, Testingusing Automated Tools. Metrics and measurement:</p> <p>Types of metrics. Product metrics and process</p> <p>Metrics. Object oriented metrics in testing.</p>	17.03.2022 To 31.03.2022	15	-	Unit Test-II

Class: B.Voc.(CT) T.Y.

Semester: VI

Course Title:Introduction to Digital

MarketingCourse Code:U-IDM-762

Unit No:	Topics To be Covered	Date	No. of Lectures	Academic Activities to be organized	No.of Test/ Assignment with topicand date
I	I: Introduction to Digital Marketing:- Basic of Online Marketing, Difference of Internet Marketing vs Traditional Marketing, Search Engine Basics, Key points of internet marketing, Basic terms used in internet marketing, Effective platforms forpromotions, why people moving in digital marketing? Howmuch business can you grab after using internet marketing techniques? Structure of Online Marketing.	17.12.2021 To 11.01.2022	15	-	-
II	II: Website Introduction & Creation:- Understanding the web and its functioning, understanding need of website, Choosing Great Domains, Using CMS Panel andgetting the hosting for website, Creating a professional and elegant website onWordPress.	15.01.2022 To 08.02.2022	15	Example ofHow To create Website Using Wordpres s	Unit Test-I

III	III: Search Engine Optimization:- Introduction to SEO, Search Engine Working, Keyword, Research & Planning, On-Page SEO, Off-Page SEO, Link Building, Tools for SEO, Understanding Google Algorithm SEO Site Audit, Search Engine Marketing, what is Google AdWords, Google Ads Campaign, Search Campaign, Sale Campaign, Banner and Search Ads, Keyword Understanding, Creating successful ads.	11.02.2022 To 07.03.2022	15	Creatin gDigital Ads/Banner	-
IV	IV: Social Media Marketing:- Introduction to Social Media Marketing, Facebook Marketing, Facebook Campaign Creation, Facebook for lead generation, Facebook Pixel, Instagram Marketing, Instagram Promotion or ad creation, Youtube Introduction, Understanding Youtube Algorithm, Growing Youtube Channel, LinkedIn Marketing, Twitter Marketing, Quora Marketing.	08.03.2022 To 29.03.2022	15	-	Unit Test-I

Shahen

Name of The Teacher & Sign

Damte Shahen A.R.

Purp

Head of Department

- Head

Dept. of Computer Science
Rajarshi Shahu Mahavidyalaya, Latur

SB
Principal

PRINCIPAL

Rajarshi Shahu Mahavidyalaya
(Autonomous) Latur