SRK INSTITUTE OF TECHNOLOGY
Enikepadu, Vijayawada, 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Department of Computer Science and Engineering

TENTATIVE LESSON PLAN:R1922051

Course Title: Probability and Statistics			
Section: CSE A & B	**Date : 22-03-2020**		**Page No :00**
Revision No :00	**Prepared By: G.Koteswaramma**		**Approved By : HOD**
Tools: Black board			
CO1: Classify the concepts of data science and its importance (L4) or (L2). **"Fundamental of Mathematical Statistics" by S. C. Gupta and V.K. Kapoor,**			
No. of Periods	**TOPIC**	**DATE**	**Mode of Delivery**
	UNIT-I: Descriptive statistics and methods for data science		
1.	Data science and introduction to statistics	From: 22/3/2021 To 10/4/2021	Lecture interspersed with discussions
2.	Population VSsample		
3.	Collection of data		
4.	Primary data and secondary data		
5.	Type of variables: dependent and independent variables.		
6.	Categorical and continuous variables.		
7.	Data visualization.		
8.	Measures of central tendency		
9.	Mean,median,mode,G.M,H.M.		
10.	Measures of variability.		
11.	Range, quartile deviation, mean deviation, standard deviation.		
12.	Skewness and kurtosis		
13.	Revision		
	UNIT-II: Correlation and curve fitting		
CO2: Interpret the association of characteristics and through correlation and regression tools CO3: Make use of the concepts of probability and their applications. **"Fundamental of Mathematical Statistics" by S. C. Gupta and V.K. Kapoor,**			
14.	Correlation	From 12/4/2021 To 1/5/2021	Lecture interspersed with discussions
15.	Correlation coefficient		
16.	Correlation coefficient problems		
17.	Rank correlation, problems		
18.	Regression coefficients		
19.	Regression properties		
20.	Regression lines		
21.	Method of least squares		
22.	Straight line, problems		
23.	Parabola, problems		
24.	Exponential curves, power curves		
25.	Exponential curves, power curves problems.		
26.	Revision		
	UNIT III: Probability and statistics		
CO4: Apply discrete and continuous probability distributions			

"Fundamental Of Mathematical Statistics"By S. C. Gupta And V.K. Kapoor,			Lecture interspersed with discussions
27.	Definition of probability.	From 3/5/2021 To 29/5/2021	
28.	Conditional probability and their problems.		
29.	Baye's theorem and their problems.		
30.	Random variables		
31.	Discrete random variables.		
32.	problems.		
33.	Continuous random variables		
34.	problems.		
35.	Distribution function		
36.	problems		
37.	Mathematical expectation and variance		
38.	problems		
39.	Binomial distribution		
40.	Poisson distribution		
41.	Uniform distribution		
42.	Normal distribution		
43.	problems		
	UNIT IV: Sampling theory		Lecture interspersed with discussions
CO5: design the components of a classical hypothesis test **"Fundamental Of Mathematical Statistics"By S. C. Gupta And V.K. Kapoor,**			
44.	Population and samples	From 31/6/2021 To 19/6/2021	
45.	Sampling distribution of means and variances(definition only)		
46.	Central limit theorem (without proof)		
47.	Introduction to t distribution		
48.	Introduction to chew square distribution		
49.	Introduction to,F-distridutions		
50.	Point and interval distribution		
51.	problems		
52.	Maximum error of estimate.		
53.	problems		
54.	Sampling distribution of means and variances(definition only)		
55.	problems		
	UNIT V:Tests of hypothesis		
CO6: Infer the statistical inferential methods based on small and large sampling tests **"Fundamental Of Mathematical Statistics"By S. C. Gupta And V.K. Kapoor,**			
56.	Introduction		
57.	Hypothesis		
58.	Null and alternative hypothesis		
59.	Type I&II errors		
60.	Level of significance		
61.	One tail and two tail tests		

62.	Tests concerning one mean and two eans	From 27/6/2021 To 10/7/2021	Lecture interspersed with discussions
69.	Tests concerning one mean and two eans		
70.	Large and small samples		
71.	Tests on proportion		
72.	Tests on proportion		
73.	Problems		
74.	Revision		

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TENTATIVE LESSONPLAN

TENTATIVE LESSONPLAN: R1922052

Course Title: JAVA PROGRAMMING		
Section : CSE A & B	Date : 6/4/2021	Page No : 01 of 05
Revision No : 00	Prepared by: E. NAGARAJU	Approved by : HOD

Tools: Black board, PPTs, MS TEAMS APP

UNIT 1: Program Structure in Java: Introduction, Writing Simple Java Programs, Elements or Tokens in Java Programs, Java Statements, Command Line Arguments, User Input to Programs, Escape Sequences Comments, Programming Style.

Data Types, Variables, and Operators :Introduction, Data Types in Java, Declaration of Variables, Data Types, Type Casting, Scope of Variable Identifier, Literal Constants, Symbolic Constants, Formatted Output with printf() Method, Static Variables and Methods, Attribute Final, Introduction to Operators, Precedence and Associativity of Operators, Assignment Operator (=), Basic Arithmetic Operators, Increment (++) and Decrement (- -) Operators, Ternary Operator, Relational Operators, Boolean Logical Operators, Bitwise Logical Operators. Control Statements: Introduction, if Expression, Nested if Expressions, if else Expressions, Ternary Operator?:, Switch Statement, Iteration Statements, while Expression, do while Loop, for Loop, Nested for Loop, For Each for Loop, Break Statement, Continue Statement.

No. of periods	TOPIC	Date	Mode of Delivery
1.	Program Structure in Java: Introduction, Writing Simple Java Programs	6/4/2021	Lecture interspersed with discussions & online classes with MS Teams App
2.	Elements or Tokens in Java Programs	6/4/2021	
3.	Java Statements	8/4/2021	
4.	Command Line Arguments, User Input to Programs	10/4/2021	
5.	Escape Sequences Comments, Programming Style	12/4/2021	
6.	Data Types, Variables, and Operators :Introduction, Data Types in Java, Declaration of Variables, Data Types	12/4/2021	
7.	Type Casting, Scope of Variable Identifier, Literal Constants, Symbolic Constants	15/4/2021	
8.	Formatted Output with printf() Method, Static Variables and Methods, Attribute Final	16/4/2021	
9.	Introduction to Operators, Precedence and Associativity of Operators	17/4/2021	
10.	Assignment Operator (=), Basic Arithmetic Operators, Increment (++) and Decrement (- -) Operators	19/4/2021	
11.	TernaryOperator, Relational Operators	20/4/2021	
12.	Boolean Logical Operators, Bitwise Logical Operators	21/4/2021	
13.	Control Statements: Introduction, if Expression, Nested if Expressions, if–else Expressions	22/4/2021	
14.	Ternary Operator?:, Switch Statement, Iteration	24/4/2021	

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	Statements, while Expression, do–while Loop		
15.	for Loop, Nested for Loop, For–Each for Loop	26/4/2021	
16.	Break Statement, Continue Statemen	27/4/2021	
17.	TUTORIAL CLASS	28/4/2021	

UNIT 2: Classes and Objects: Introduction, Class Declaration and Modifiers, Class Members, Declaration of Class Objects, Assigning One Object to Another, Access Control for Class Members, Accessing Private Members of Class, Constructor Methods for Class, Overloaded Constructor Methods, Nested Classes, Final Class and Methods, Passing Arguments by Value and by Reference, Keyword this. Methods: Introduction, Defining Methods, Overloaded Methods, Overloaded Constructor Methods, Class Objects as Parameters in Methods, Access Control, Recursive Methods, Nesting of Methods, Overriding Methods, Attributes Final and Static

No. of periods	TOPIC	Date	Mode of Delivery
18.	Classes and Objects: Introduction, Class Declaration and Modifiers, Class Members, Declaration of Class Objects	29/4/2021	Lecture interspersed online classes with MS Teams App
19.	Assigning One Object to Another, Access Control for Class Members, Accessing Private Members of Class	31/4/2021	
20.	Constructor Methods for Class, Overloaded Constructor Methods	1/5/2021	
21.	Nested Classes, Final Class and Methods,	4/5/2021	
22.	Passing Arguments by Value and byReference, Keyword this	5/5/2021	
23.	Methods: Introduction, Defining Methods, Overloaded Methods, Overloaded Constructor Methods	6/5/2021	
24.	Class Objects as Parameters in Methods, Access Control	7/5/2021	
25.	Recursive Methods, Nesting of Methods	8/5/2021	
26.	Overriding Methods, Attributes Final and Static	18/5/2021 19/5/2021	
27.	TUTORIAL CLASS	20/5/2021	

UNIT 3: Arrays: Introduction, Declaration and Initialization of Arrays, Storage of Array in Computer Memory, Accessing Elements of Arrays, Operations on Array Elements, Assigning Array to Another Array, Dynamic Change of Array Size, Sorting of Arrays, Search for Values in Arrays, Class Arrays, Two-dimensional Arrays, Arrays of Varying Lengths, Three-dimensional Arrays, Arrays as Vectors.

Inheritance: Introduction, Process of Inheritance, Types of Inheritances, Universal Super Class- Object Class, Inhibiting Inheritance of Class Using Final, Access Control and Inheritance, Multilevel Inheritance, Application of Keyword Super, Constructor Method and Inheritance, Method Overriding, Dynamic Method Dispatch, Abstract Classes, Interfaces and Inheritance. Interfaces: Introduction, Declaration of Interface, Implementation of Interface, Multiple Interfaces, Nested Interfaces, Inheritance of Interfaces, Default Methods in Interfaces, Static Methods in Interface, Functional

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Interfaces, Annotations			
No. of periods	**TOPIC**	**Date**	**Mode of Delivery**
28.	Arrays: Introduction, Declaration and Initialization of Arrays, Storage of Array in Computer Memory	21/5/2021	**Lecture interspersed online classes with MS Teams App**
29.	Accessing Elements of Arrays, Operations on Array Elements	22/5/2021	
30.	Assigning Array to Another Array, Dynamic Change of Array Size	24/5/2021	
31.	Sorting of Arrays	25/5/2021	
32.	Search for Values in Arrays	26/5/2021	
33.	Class Arrays, Two-dimensional Arrays, Arrays of Varying Lengths	27/5/2021	
34.	Three-dimensional Arrays, Arrays as Vectors	29/5/2021	
35.	Inheritance: Introduction, Process of Inheritance, Types of Inheritances	31/5/2021	
36.	Universal Super ClassObject Class, Inhibiting Inheritance of Class Using Final	1/6/2021	
	Access Control and Inheritance, Multilevel Inheritance, Application of Keyword Super	2/6/2021	
37.	Constructor Method and Inheritance, Method Overriding, Dynamic Method Dispatch	4/6/2021	
38.	Abstract Classes, Interfaces and Inheritance	5/6/2021	
39.	TUTORIAL CLASS	7/6/2021	

UNIT 4: Packages and Java Library: Introduction, Defining Package, Importing Packages and Classes into Programs, Path and Class Path, Access Control, Packages in Java SE, Java.lang Package and its Classes, Class Object, Enumeration, class Math, Wrapper Classes, Auto-boxing and Autounboxing, Java util Classes and Interfaces, Formatter Class, Random Class, Time Package, Class Instant (java.time.Instant), Formatting for Date/Time in Java, Temporal Adjusters Class, Temporal Adjusters Class.

Exception Handling: Introduction, Hierarchy of Standard Exception Classes, Keywords throws and throw, try, catch, and finally Blocks, Multiple Catch Clauses, Class Throwable, Unchecked Exceptions, Checked Exceptions, try-with-resources, Catching Subclass Exception, Custom Exceptions, Nested try and catch Blocks, Rethrowing Exception, Throws Clause.

No. of periods	**TOPIC**	**Date**	**Mode of Delivery**
40.	Packages and Java Library: Introduction, Defining Package, Importing Packages and Classes into Programs, Path and Class Path	8/6/2021	
41.	Access Control, Packages in Java SE, Java.lang Package and its Classes, Class Object, Enumeration	9/6/2021	
42.	class Math, Wrapper Classes, Auto-boxing and	10/6/2021	

	Autounboxing		**Lecture interspersed online classes with MS Teams App**
43.	Java util Classes and Interfaces, Formatter Class, Random Class	11/6/2021	
44.	Time Package, Class Instant (java.time.Instant), Formatting for Date/Time in Java	12/6/2021	
45.	Temporal Adjusters Class, Temporal Adjusters Class. Exception Handling: Introduction, Hierarchy of Standard Exception Classes	14/6/2021	
46.	Keywords throws and throw, try, catch, and finally Blocks	15/6/2021	
47.	Multiple Catch Clauses, Class Throwable, Unchecked Exceptions, Checked Exceptions	16/6/2021	
48.	try-with-resources, Catching Subclass Exception, Custom Exceptions	17/6/2021	
49.	Nested try and catch Blocks, Rethrowing Exception, Throws Clause	18/6/2021	
50.	**Tutorial class**	19/6/2021	

UNIT 5: String Handling in Java: Introduction, Interface Char Sequence, Class String, Methods for Extracting Characters from Strings, Methods for Comparison of Strings, Methods for Modifying Strings, Methods for Searching Strings, Data Conversion and Miscellaneous Methods, Class String Buffer, Class String Builder.
Multithreaded Programming: Introduction, Need for Multiple Threads Multithreaded Programming for Multi-core Processor, Thread Class, Main Thread- Creation of New Threads, Thread States, Thread Priority-Synchronization, Deadlock and Race Situations, Inter-thread Communication - Suspending, Resuming, and Stopping of Threads.
Java Database Connectivity: Introduction, JDBC Architecture, Installing MySQL and MySQL Connector/J, JDBC Environment Setup, Establishing JDBC Database Connections, ResultSet Interface, Creating JDBC Application, JDBC Batch Processing, JDBC Transaction Management

No. of periods	TOPIC	Date	Mode of Delivery
51.	String Handling in Java: Introduction, Interface Char Sequence, Class String	21/6/2021	
52.	Methods for Extracting Characters from Strings	22/6/2021	
53.	Methods for Comparison of Strings, Methods for Modifying Strings	24/6/2021	
54.	Methods for Searching Strings, Data Conversion and Miscellaneous Methods	25/6/2021	
55.	Class String Buffer, Class String Builder, Multithreaded Programming: Introduction, Need for Multiple Threads	26/6/2021	
56.	Multithreaded Programming for Multi-core Processor,Thread Class, Main Thread- Creation of New Threads, Thread States	28/6/2021	
57.	Thread Priority-Synchronization, Deadlock and Race	29/6/2021	

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	Situations		**Lecture interspersed online classes with MS Teams App**
58.	Inter-thread Communication - Suspending, Resuming, and Stopping of Threads,	30/6/2021	
59.	Java Database Connectivity: Introduction	1/7/2021	
60.	JDBC Architecture,	2/7/2021	
61.	Installing MySQL and MySQL Connector/J	3/7/2021	
62.	JDBC Environment Setup,	5/7/2021	
63.	Establishing JDBC Database Connections	5/7/2021	
64.	ResultSet Interface, Creating JDBC Application,	6/7/2021	
65.	JDBC Batch Processing, JDBC Transaction Management	7/7/2021	
66.	**Tutorial class**	8/7/2021	

TEXT BOOKS:

1) JAVA one step ahead, Anitha Seth, B.L.Juneja, Oxford.
2) The complete Reference Java, 8th edition, Herbert Schildt, TMH.

E. Naga Raju
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Signature of the HOD
6/4/21.

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TENTATIVE LESSONPLAN

TENTATIVE LESSONPLAN: R1922053

Course Title: OPERATING SYSTEMS		
Section : CSE A & B	**Date : 6/4/2021**	**Page No : 01 of 03**
Revision No : 00	**Prepared by: M VENKATA LAKSHMI**	**Approved by : HOD**

Tools: Black board, PPTs, MS TEAMS

UNIT 1: Operating Systems Overview, System Structures.

CO1 : To understand the internal operation of modern operating systems from different views and system calls generated inside the system from user and kernel.

TB: Silberschatz A, Galvin P B, and Gagne G, "**Operating System Concepts**", 9th edition, Wiley, 2013.

No. of periods	TOPIC	Date	Mode of Delivery
1.	Introduction to Operating Systems and Overview,	6/4/2021	Online classes with ms teams
2.	Operating system functions	6/4/2021	
3.	Operating system structure,	8/4/2021	
4.	Operating systems operations,	10/4/2021	
5.	Computing environments, Open-Source Operating Systems.	12/4/2021	
6.	System Structures: Operating System Services,	12/4/2021	
7.	User and Operating-System Interface,	15/4/2021	
8.	Systems calls,	16/4/2021	
9.	Types of System Calls,	17/4/2021	
10.	system programs,	19/4/2021	
11.	operating system structure,	20/4/2021	
12.	operating system debugging,	21/4/2021	
13.	System Boot, Tutorial	22/4/2021	

UNIT 2: Process Concept, Process Scheduling, IPC.

CO2: To define, explain, processes, threads, CPU scheduling algorithms, Inter Process Communication between processes, and IPC Problems.

TB: Tanenbaum A S, "**Modern Operating Systems**", 3rd edition, Pearson Education, 2008. (for Interprocess Communication and File systems.)

No. of periods	TOPIC	Date	Mode of Delivery
14.	Process Concept: Process scheduling	24/4/2021	
15.	Operations on processes,	26/4/2021	
16.	Inter-process communication,	27/4/2021	
17.	Communication in client server systems.	28/4/2021	

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18.	Multithreaded Programming: Multithreading models,	29/4/2021	**Online Class with MS Teams**
19.	Thread libraries, Threading issues.	31/4/2021	
20.	Process Scheduling: Basic concepts,	1/5/2021	
21.	Scheduling criteria,	4/5/2021	
22.	Scheduling algorithms,	5/5/2021	
		6/5/2021	
23.	Multiple processor scheduling, Thread scheduling.	7/5/2021	
24.	Inter-process Communication: Race conditions, Critical Regions,	8/5/2021	
25.	Mutual exclusion with busy waiting, Sleep and wakeup,	18/5/2021	
26.	Semaphores,	19/5/2021	
27.	Mutexes, Monitors,	20/5/2021	
28.	Message passing, Barriers,	21/5/2021	
29.	Classical IPC Problems - Dining philosophers problem,	22/5/2021	
30.	Classical IPC Problems -Readers and writers problem.	24/5/2021	
31.	**Tutorial**	25/5/2021	

UNIT 3: Memory-Management Strategies, Virtual Memory Management.
CO 3: To understand the memory management, how to create dynamic memory and different memory allocation techniques.
TB: Silberschatz A, Galvin P B, and Gagne G, "**Operating System Concepts**", 9th edition, Wiley, 2013

No. of periods	TOPIC	Date	Mode of Delivery
32.	Memory-Management Strategies: Introduction,	26/5/2021	**Online Class with MS Teams**
33.	Swapping,	27/5/2021	
34.	Contiguous memory allocation,	29/5/2021	
35.	Paging,	31/5/2021	
36.	Segmentation.	1/6/2021	
37.	Virtual Memory Management: Introduction, Demand paging,	2/6/2021	
38.	Copy on-write,	4/6/2021	
39.	Page replacement,	5/6/2021	
40.	Page replacement algorithms	7/6/2021	
		8/6/2021	
41.	Frame allocation, Thrashing,	9/6/2021	
42.	Memory-mapped files, Kernel memory allocation.	10/6/2021	
43.	**Tutorial**	11/6/2021	

UNIT 4: Deadlocks, File Systems, Secondary-Storage Structure.
CO4: To understand Deadlock and recovery, Input Output Management in file system and use of

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Device Driver and Secondary Storage (Disk) Mechanism .
TB: Silberschatz A, Galvin P B, and Gagne G, "**Operating System Concepts**", 9th edition, Wiley, 2013

No. of periods	TOPIC	Date	Mode of Delivery
44.	Deadlocks: Resources, Conditions for resource deadlocks,	12/6/2021	Online Class with MS Teams
45.	Deadlock avoidance	14/6/2021	
46.	Deadlock prevention	15/6/2021	
47.	Deadlock detection and recovery and Ostrich algorithm,	16/6/2021	
48.	Deadlock prevention.	17/6/2021	
49.	File Systems: Files,	18/6/2021	
50.	Directories,	19/6/2021	
51.	File system implementation,	21/6/2021	
52.	File- Management and optimization.	22/6/2021	
53.	Secondary-Storage Structure: Overview of disk structure,	24/6/2021	
54.	Disk Attachment, Disk scheduling	25/6/2021	
55.	Disk scheduling algorithms	26/6/2021	
56.	RAID Structure,	28/6/2021	
57.	Stable storage implementation.	29/6/2021	
58.	**Tutorial**	30/6/2021	

UNIT 5: System Protection, System Security
CO5: To analyze Security and Protection Mechanism in Operating System from various views.
TB: Silberschatz A, Galvin P B, and Gagne G, "**Operating System Concepts**", 9th edition, Wiley, 2013

No. of periods	TOPIC	Date	Mode of Delivery
59.	System Protection: Goals of protection,	1/7/2021	Online Class with MS Teams
60.	Principles and domain of protection,	2/7/2021	
61.	Access matrix,	3/7/2021	
62.	Access control, Revocation of access rights.	5/7/2021	
63.	System Security: Introduction,	6/7/2021	
64.	Program threats,System and network threats,	7/7/2021	
65.	Cryptography for security,	8/7/2021	
66.	User authentication,	9/7/2021	
67.	Implementing security defenses,	10/7/2021	
68.	Firewall to protect systems and networks,	11/7/2021	
69.	Computer security classification,	12/7/2021	
70.	**Tutorial**	13/7/2021	

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TENTATIVE LESSON PLAN
Data Base Management System (R1922054)

Course Title: Data Base Management System		
Section : II/II CSE :A	Date : 06/4/21	Page No : 01 of 03
Revision No : 00	Prepared By : SRILAKSHMI. K	Approved By : HOD

Tools : Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**An Overview of Database Management** **CO1: Describe a relational database and object-oriented database.** **TB : Introduction to Database Systems, CJ Date, Pearson**		
1.	Introduction- What is Database System	From: 07/4/21 To:15/4/21	Online Class with MS Teams
2.	What is Database, Why Database		
3.	Data Independence		
4.	Relation Systems and Others		
5.	The Three Levels of Architecture- The External Level, the Conceptual Level, the Internal Level		
6.	Mapping, Database Administrator		
7.	The Database Management Systems		
8.	Client/Server Architecture		
10	**Tutorial**		

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –II	**Relational Model** **CO2: Describe ER model and normalization for database design.** **TB : Introduction to Database Systems, CJ Date, Pearson**		
11	Relational Model: Introduction to relational model	From: 16/4/21 To: 30/4/21	Online Class with MS Teams
12	concepts of domain, attribute		
13	tuple, relation		
14	importance of null values		
15	constraints (Domain, Key constraints, integrity constraints)		
16	BASIC SQL: Simple Database schema, data types, table definitions (create, alter)		
17	different DML operations (insert, delete, update)		
18	basic SQL querying (select and project) using where clause		

19,20	arithmetic & logical operations		
21	SQL functions(Date and Time, Numeric, String conversion).		
22	**Tutorial**		
UNIT –III Queries, Constraints, Triggers **CO3: Create, maintain and manipulate a relational database using SQL** **TB : . Data base Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition**			
23	Entity Relationship Model: Introduction	From:1/05/21 to 15/5/21	Online class with MS Teams
24	Representation of entities, attributes, entity set		
25	relationship, relationship set		
26	constraints, sub classes, super class,		
27	inheritance,specialization,		
28	generalization using ER Diagrams		
29	SQL: Creating tables with relationship		
30	implementation of key and integrity constraints		
31	nested queries, sub queries		
32	grouping, aggregation, ordering		
32	implementation of different types of joins		
33	view(updatable and non-updatable), relational set operations.		
34	**Tutorial**		

No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT –IV Schema Refinement (Normalization) **CO4: Describe ER model and normalization for database design.** **TB : Introduction to Database Systems, CJ Date, Pearson**			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
35	Introduction to Normalization or	From: 17/5/21 to 3/6/21	Online class with MS Teams
36	schema refinement		
37	Purpose of Normalization		
38	Advantages of Normalization		
39	functional dependency		
40	First normal form		
41	Second normal form		
42	Third normal form		
43,44	Concept of surrogate key		
45	Boyce-codd normal form(BCNF)		
46	Lossless join		
48	dependency preserving decomposition		
49	Fourth normal form(4NF)		
50	Fifth normal form(5NF)		

51	**Tutorial**		
UNIT –V Transaction Management and Concurrency Control: **CO5: Understand the role and issues in management of data such as efficiency, privacy, security, ethical responsibility, and strategic advantage** **TB : Introduction to Database Systems, CJ Date, Pearson**			
52	Transaction Concept: Transaction State	From: 4/6/21 to 3/7/21	Online class with MS Teams
53	Implementation of Atomicity and Durability		
54	Concurrent Executions		
55	Serializability		
56	Recoverability		
57	Implementation of Isolation		
58	Testing for Serializability		
59	Failure Classification,		
60	Storage		
61	Recovery and Atomicity		
62	Recovery algorithm.		
63,64	Indexing Techniques: B+ Trees		
65	Search, Insert		
66	Delete algorithms		
67	File Organization and Indexing		
68	Cluster Indexes		
69	Primary and Secondary Indexes		
70	Index data Structures Hash Based Indexing:		
71	Tree base Indexing		
72	Comparison of File Organizations, Indexes and Performance Tuning		
73	**Tutorial**		

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(ISO 9001:2015 Certified Institution)
Department of Computer Science and Engineering

TENTATIVE LESSON PLAN
Data Base Management System (R1922054)

Course Title: Data Base Management System		
Section : II/II CSE :B	Date : 06/4/21	Page No : 01 of 03
Revision No : 00	Prepared By : SRILAKSHMI. K	Approved By : HOD

Tools : Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I	**An Overview of Database Management** **CO1: Describe a relational database and object-oriented database.** **TB : Introduction to Database Systems, CJ Date, Pearson**		
1.	Introduction- What is Database System	From: 07/4/21 To:15/4/21	Online Class with MS Teams
2.	What is Database, Why Database		
3.	Data Independence		
4.	Relation Systems and Others		
5.	The Three Levels of Architecture- The External Level, the Conceptual Level, the Internal Level		
6.	Mapping, Database Administrator		
7.	The Database Management Systems		
8.	Client/Server Architecture		
10	**Tutorial**		

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –II	**Relational Model** **CO2: Describe ER model and normalization for database design.** **TB : Introduction to Database Systems, CJ Date, Pearson**		
11	Relational Model: Introduction to relational model	From: 16/4/21 To: 30/4/21	Online Class with MS Teams
12	concepts of domain, attribute		
13	tuple, relation		
14	importance of null values		
15	constraints (Domain, Key constraints, integrity constraints)		
16	BASIC SQL: Simple Database schema, data types, table definitions (create, alter)		
17	different DML operations (insert, delete, update)		
18	basic SQL querying (select and project) using where clause		

19,20	arithmetic & logical operations		
21	SQL functions(Date and Time, Numeric, String conversion).		
22	**Tutorial**		
UNIT –III Queries, Constraints, Triggers **CO3: Create, maintain and manipulate a relational database using SQL** **TB : . Data base Management Systems, Raghurama Krishnan, Johannes Gehrke, TATA McGraw Hill 3rd Edition**			
23	Entity Relationship Model: Introduction	From:1/05/21 to 15/5/21	Online class with MS Teams
24	Representation of entities, attributes, entity set		
25	relationship, relationship set		
26	constraints, sub classes, super class,		
27	inheritance,specialization,		
28	generalization using ER Diagrams		
29	SQL: Creating tables with relationship		
30	implementation of key and integrity constraints		
31	nested queries, sub queries		
32	grouping, aggregation, ordering		
32	implementation of different types of joins		
33	view(updatable and non-updatable), relational set operations.		
34	**Tutorial**		

No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT –IV Schema Refinement (Normalization) **CO4: Describe ER model and normalization for database design.** **TB : Introduction to Database Systems, CJ Date, Pearson**			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
35	Introduction to Normalization or	From: 17/5/21 to 3/6/21	Online class with MS Teams
36	schema refinement		
37	Purpose of Normalization		
38	Advantages of Normalization		
39	functional dependency		
40	First normal form		
41	Second normal form		
42	Third normal form		
43,44	Concept of surrogate key		
45	Boyce-codd normal form(BCNF)		
46	Lossless join		
48	dependency preserving decomposition		
49	Fourth normal form(4NF)		
50	Fifth normal form(5NF)		

51	**Tutorial**		
UNIT –V Transaction Management and Concurrency Control: **CO5: Understand the role and issues in management of data such as efficiency, privacy, security, ethical responsibility, and strategic advantage** **TB : Introduction to Database Systems, CJ Date, Pearson**			
52	Transaction Concept: Transaction State	From: 4/6/21 to 3/7/21	Online class with MS Teams
53	Implementation of Atomicity and Durability		
54	Concurrent Executions		
55	Serializability		
56	Recoverability		
57	Implementation of Isolation		
58	Testing for Serializability		
59	Failure Classification,		
60	Storage		
61	Recovery and Atomicity		
62	Recovery algorithm.		
63,64	Indexing Techniques: B+ Trees		
65	Search, Insert		
66	Delete algorithms		
67	File Organization and Indexing		
68	Cluster Indexes		
69	Primary and Secondary Indexes		
70	Index data Structures Hash Based Indexing:		
71	Tree base Indexing		
72	Comparison of File Organizations, Indexes and Performance Tuning		
73	**Tutorial**		

6/4/21

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6/4/21

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TENTATIVE LESSON PLAN: R1922055

FORMAL LANGUAGES AND AUTOMATA THEORY

Course- Formal Languages and Automata Theory		
Section: Sec A & B	**Date: 6/4/2021**	**Page No: 01 of 04**
Revision No: 00	**Prepared By: Dr.B.Ashalataha**	**Approved By: HOD**

Tools: Black Board, PPTs

No. of Periods	Topic	Date	Mode of Delivery
Unit-1 Finite Automata **CO1: To Classify machines by their power to recognize languages.** **TB:" Introduction to Automata Theory, Languages and Computation, J.E.Hopcroft, R.Motwani and J.D.Ullman, 3rd Edition, Pearson, 2008. "**			
1	Need of Automata theory, Central Concepts of Automata Theory, Automation, Finite Automation	6/4/2021	Lecture interspersed with discussions
2	Transition Systems, Acceptance of a String, DFA	8/4/2021	
3	Design of DFAs	10/4/2021	
4	NFA, Design of NFA, Equivalence of DFA and NFA	12/4/2021	
5	Conversion of NFA into DFA	15/4/2021	
6	Finite Automata with Є-Transitions, Minimization of Finite Automata	16/4/2021	
7	Finite Automata with output-Mealy and Moore Machines	17/4/2021 19/4/2021	
8	Applications and Limitation of Finite Automata.	20/4/2021 21/4/2021	
9	**Tutorial**	22/4/2021	
UNIT-II: Regular Expressions **CO2: To Summarize language classes & grammars relationship among them with the help of Chomsky hierarchy.** **TB:" Introduction to Automata Theory, Languages and Computation, J.E.Hopcroft, R.Motwani andJ.D.Ullman, 3rd Edition, Pearson, 2008. "**			
1	Regular Expressions, Regular Sets, Identity Rules	24/4/2021 26/4/2021	
2	Equivalence of two RE, Manipulations of REs	27/4/2021 28/4/2021	Lecture

3	Finite Automata and Regular Expressions, Inter Conversion	29/4/2021 30/4/2021	interspersed with discussions
4	Equivalence between FA and RE, Pumping Lemma of Regular Sets	1/5/2021 4/5/2021	
5	Closure Properties of Regular Sets, Grammars	5/5/2021 6/5/2021	
6	Classification of Grammars, Chomsky Hierarchy Theorem	7/5/2021 8/5/2021	
7	Right and Left Linear Regular Grammars	10/5/2021 11/5/2021	
8	Equivalence between RG and FA, Inter Conversion	12/5/2021 13/5/2021	
9	**Tutorial**	15/5/2021	
UNIT-III Context Free Grammars **CO3: Employ finite state machines to solve problems in computing.** **TB:" Theory of Computer Science-Automata, Languages and Computation, K.L.P.Mishra and N.Chandrasekharan, 3rd Edition, PHI, 2007. "**			
1	Formal Languages, Context Free Grammar, Leftmost and Rightmost Derivations	17/5/2021 18/5/2021	Lecture interspersed with discussions
2	Parse Trees, Ambiguous Grammars	19/5/2021	
3	Simplification of Context Free Grammars-Elimination of Useless Symbols, ϵ-Productions and Unit Productions	20/5/2021	
4	Normal Forms-Chomsky Normal Form	21/5/2021	
5	Greibach Normal Form	22/5/2021	
6	Pumping Lemma, Closure Properties, Applications of Context Free Grammars	24/5/2021	
7	**Tutorial**	24/5/2021	
UNIT-IV: Pushdown Automata **CO4: Illustrate deterministic and non-deterministic machines.** **TB:" Introduction to Automata Theory, Languages and Computation, J.E.Hopcroft, R.Motwani andJ.D.Ullman, 3rd Edition, Pearson, 2008. "**			
1	Pushdown Automata, Definition, Model, Graphical Notation	25/5/2021 26/5/2021	

2	Instantaneous Description, Language Acceptance of Pushdown Automata	27/5/2021 28/5/2021	Lecture interspersed with discussions
3	Design of Pushdown Automata, Deterministic and Non – Deterministic Pushdown Automata	29/5/2021 31/5/2021	
4	Equivalence of Pushdown Automata and Context Free Grammars, Conversion	1/6/2021 25/5/2021	
5	Two Stack Pushdown Automata	2/6/2021 4/6/2021	
6	Application of Pushdown Automata	5/6/2021 7/6/2021	
7	**Tutorial**	8/6/2021	
UNIT-V: Turning Machine **CO5: Quote the hierarchy of problems arising in the computer science .** **TB: Theory of Computer Science-Automata, Languages and Computation, K.L.P.Mishra and N.Chandrasekharan, 3rd Edition, PHI, 2007**			
1	Definition, Model	9/6/2021 10/6/2021	Lecture interspersed with discussions
2	Representation of TMs-Instantaneous Descriptions	11/6/2021 12/6/2021	
3	Transition Tables and Transition Diagrams	14/6/2021 15/6/2021	
4	Language of a TM	16/6/2021 17/6/2021	
5	Design of TMs	18/6/2021 19/6/2021	
6	Design of TMs	21/6/2021 22/6/2021	
7	Design of TMs	24/6/2021 25/6/2021	
8	Types of TMs	25/6/2021 26/6/2021	
9	Types of TMs	28/6/2021 29/6/2021	
10	Church's Thesis	30/6/2021	

		1/7/2021	
11	Universal and Restricted TM	2/7/2021 3/7/2021	
12	Decidable and Un-decidable Problems	4/7/2021 5/7/2021	
13	Halting Problem of TMs	6/7/2021	
14	Post's Correspondence Problem	7/7/2021	
15	Modified PCP	8/7/2021	
16	Classes of P and NP	8/7/2021	
17	NP-Hard and NP-Complete Problems	9/7/2021	
18	**Tutorial**		

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TENTATIVE LESSON PLAN: R1632051

Course Title : Computer Networks		
Section : A	Date : 5-6-2021	Page No:1 of 4
Revision No : 00	Prepared By : P.Bhagya Lakshmi	Approved By : HOD

Tools: MS Teams,PPT

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I Introduction **CO 1: Understand OSI and TCP/IP models** **TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010**			
1.	Introduction	7/4/21	Online class with MS Teams
2.	Network Topologies	7/4/21 8/4/21	
3.	LAN	9/4/21	
4.	MAN	10/4/21	
5.	WAN	12/4/21	
6.	OSI Reference Model	13/4/21 to 15/4/21	
7.	TCP/IP Model	16/4/21to 17/4/21	
8.	Comparison between OSI and TCP/IP	19/4/21	
9.	Tutorial Class	20/4/21	
UNIT - II:Physical Layer **CO 2: Understand about the physical layer in OSI reference model** **TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010**			
10.	**Physical Layer – Fourier Analysis:** – Bandwidth LimitedSignals	22/4/21	Online class with MS Teams
11.	The Maximum Data Rate ofa Channel	23/4/21to 24/4/21	
12.	Guided Transmission Media,	26/4/21 to 27/4/21	
13.	Digital Modulation	28/4/21	
14.	Multiplexing: Frequency Division Multiplexing,	30/4/21	
15.	Time Division Multiplexing,	1/5/21	
16.	Code Division Multiplexing	3/5/21	
17.	Data Link Layer Design Issues,Error Detection and	4/5/21	

19.	Sliding Window Protocols	6/5/21	
20.	Tutorial Class	7/5/21	

UNIT –III DATALINK LAYER
CO 3: Understand about the data link layer in OSI reference model
TB: Computer Networks: A Top Down Approach, Behrouz A. Forouzan, FirouzMosharraf, McGraw Hill Education

21.	**The Data Link Layer** - ServicesProvided to the Network Layer	8/5/21	Online class with MS Teams
22.	Framing	10/5/21	
23.	Error Control –Flow Control,	11/5/21to12 /5/21	
24.	Error Detection and Correction	13/5/21	
25.	Error-Correcting Codes	14/5/21to16 /5/21	
26.	Error Detecting Codes,	17/5/21	
27.	Elementary Data Link Protocols- A Utopian Simplex Protocol-	18/5/21	
28.	A Simplex Stop and Wait Protocol for an Error free channel-	19/5/21	
29.	A Simplex Stop and Wait Protocol for a Noisy Channel,	20/5/21	
30.	Sliding Window Protocols-AOne Bit Sliding Window Protocol-	21/5/21	
31.	A Protocol Using Go-Back-N-	22/5/21to24 /5/21	
32.	A Protocol Using Selective Repeat	26/5/21	
33.	Tutorial class	27/5/21	

UNIT - IV The Medium Access Control Sublayer
CO 4: Analyze MAC layer protocols and LAN technologies
TB: Computer Networks: A Top Down Approach, Behrouz A. Forouzan, FirouzMosharraf, McGraw Hill Education

No. of Periods	TOPIC	DATE	Mode of Delivery
34.	**The Medium Access Control Sublayer**-The Channel Allocation Problem	28/5/21	Online class with MS Teams
35.	Static Channel Allocation-Assumptions for Dynamic Channel Allocation,	29/5/21	
36.	Multiple Access Protocols-Aloha-	31/5/21	
37.	Carrier Sense Multiple AccessProtocols-	1/6/21	
38.	Collision-Free Protocols	2/6/21	
39.	Limited Contention Protocols-	3/6/21	
40.	Wireless LAN Protocols,	4/6/21	
41.	Ethernet-Classic Ethernet PhysicalLayer-Classic	5/6/21	

	Ethernet		
42.	MAC Sublayer Protocol-EthernetPerformance-Fast Ethernet	7/6/21	
43.	Gigabit Ethernet-10-Gigabit Ethernet-Retrospective on Ethernet	8/6/21to 9/6/21	
44.	Wireless Lans-The 802.11Architecture	10/6/21to 11/6/21	
45.	Protocol Stack-The 802.11 Physical Layer	12/6/21	
46.	The802.11 MAC Sublayer Protocol	14/6/21to 15/6/21	
47.	The 805.11 Frame Structure-Services	16/6/21	
48.	Tutorial class	17/6/21	
UNIT -V Network Layer **CO 5: Understand routing and congestion control algorithms** **TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010**			
49.	**Design Issues**-The Network LayerDesign Issues –	18/6/21to2 1/6/21	Online class with MS Teams
50.	Store and Forward Packet Switching-	22/6/21	
51.	Services Provided to the Transport Layer	23/6/21	
52.	Implementation of ConnectionlessService-	24/6/21	
53.	Implementation of Connection Oriented Service-	25/6/21	
54.	Comparison of Virtual Circuit and Datagram Networks,	26/6/21	
55.	Routing Algorithms-The Optimality principle	28/6/21	
56.	Shortest path Algorithm,	29/6/21	
57.	Congestion Control Algorithms	30/6/21	
58.	Approaches to Congestion Control-Traffic	1/7/21	
59.	Aware Routing-Admission	2/7/21	
60.	Control-TrafficThrottling-Load Shedding.	3/7/21	
61.	Tutorial Class	5/7/21	
UNIT -VI Transport Layer and Application Layer **CO 6: Understand how internet works.** **TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010**			
62.	**Transport Layer – The** Internet Transport Protocols: Udp,	6/7/21	Online class with MS Teams
63.	The Internet Transport Protocols:Tcp	7/7/21 to 12/7/21	
64.	Application Layer –The Domain Name System:	13/7/21	
65.	The DNS Name Space, ResourceRecords,	14/7/21	
66.	Name Servers,	15/7/21	
67.	Electronic Mail: Architecture and Services,	16/7/21	

68.	The User Agent, Message Formats,	17/7/21 to 22/7/21	
69.	Message Transfer,	23/7/21	
70.	Final Delivery	24/7/21	
71.	Tutorial Class	26/7/21	

P. Bhagya Lakshmi
Signature of the Faculty 5/6/21

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TENTATIVE LESSON PLAN: R1632051

Course Title : Computer Networks		
Section : B	Date : 5-6-2021	Page No:1 of 4
Revision No : 00	Prepared By : P.Bhagya Lakshmi	Approved By : HOD

Tools: MS Teams,PPT

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I Introduction **CO 1: Understand OSI and TCP/IP models** **TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010**			
1.	Introduction	7/4/21	Online class with MS Teams
2.	Network Topologies	7/4/21 8/4/21	
3.	LAN	9/4/21	
4.	MAN	10/4/21	
5.	WAN	12/4/21	
6.	OSI Reference Model	13/4/21 to 15/4/21	
7.	TCP/IP Model	16/4/21to 17/4/21	
8.	Comparison between OSI and TCP/IP	19/4/21	
9.	Tutorial Class	20/4/21	
UNIT –II :Physical Layer **CO 2: Understand about the physical layer in OSI reference model** **TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010**			
10.	**Physical Layer – Fourier Analysis:** – Bandwidth LimitedSignals	22/4/21	Online class with MS Teams
11.	The Maximum Data Rate ofa Channel	23/4/21to 24/4/21	
12.	Guided Transmission Media,	26/4/21 to 27/4/21	
13.	Digital Modulation	28/4/21	
14.	Multiplexing: Frequency Division Multiplexing,	30/4/21	
15.	Time Division Multiplexing,	1/5/21	
16.	Code Division Multiplexing	3/5/21	
17.	Data Link Layer Design Issues,Error Detection and Correction,	4/5/21	
18.	Elementary Data Link Protocols,	5/5/21	

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TENTATIVE LESSON PLAN: R1632051

Course Title : Computer Networks		
Section : A	Date : 4-11-2021	Page No:1 of 4
Revision No : 00	Prepared By : P.Bhagya Lakshmi	Approved By : HOD

Tools: MS Teams,PPT

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT –I Introduction **CO 1: Understand OSI and TCP/IP models** **TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010**			
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4.	MAN	10/4/21	
5.	WAN	12/4/21	
6.	OSI Reference Model	13/4/21 to 15/4/21	
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9.	Tutorial Class	20/4/21	
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16.	Code Division Multiplexing	3/5/21	
17.	Data Link Layer Design Issues,Error Detection and	4/5/21	

	Correction,		
18.	Elementary Data Link Protocols,	5/5/21	
19.	Sliding Window Protocols	6/5/21	
20.	Tutorial Class	7/5/21	
UNIT –III DATALINK LAYER **CO 3: Understand about the data link layer in OSI reference model** **TB: Computer Networks: A Top Down Approach, Behrouz A. Forouzan, FirouzMosharraf, McGraw Hill Education**			
21.	**The Data Link Layer** - ServicesProvided to the Network Layer	8/5/21	Online class with MS Teams
22.	Framing	10/5/21	
23.	Error Control –Flow Control,	11/5/21to12 /5/21	
24.	Error Detection and Correction	13/5/21	
25.	Error-Correcting Codes	14/5/21to16 /5/21	
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27.	Elementary Data Link Protocols- A Utopian Simplex Protocol-	18/5/21	
28.	A Simplex Stop and Wait Protocol for an Error free channel-	19/5/21	
29.	A Simplex Stop and Wait Protocol for a Noisy Channel,	20/5/21	
30.	Sliding Window Protocols-AOne Bit Sliding Window Protocol-	21/5/21	
31.	A Protocol Using Go-Back-N-	22/5/21to24 /5/21	
32.	A Protocol Using Selective Repeat	26/5/21	
33.	Tutorial class	27/5/21	
UNIT - IV The Medium Access Control Sublayer **CO 4: Analyze MAC layer protocols and LAN technologies** **TB: Computer Networks: A Top Down Approach, Behrouz A. Forouzan, FirouzMosharraf, McGraw Hill Education**			
No. of Periods	**TOPIC**	**DATE**	**Mode of Delivery**
34.	**The Medium Access Control Sublayer**-The Channel Allocation Problem	28/5/21	Online class with MS Teams
35.	Static Channel Allocation-Assumptions for Dynamic Channel Allocation,	29/5/21	
36.	Multiple Access Protocols-Aloha-	31/5/21	
37.	Carrier Sense Multiple AccessProtocols-	1/6/21	
38.	Collision-Free Protocols	2/6/21	
39.	Limited Contention Protocols-	3/6/21	

40.	Wireless LAN Protocols,	4/6/21	
41.	Ethernet-Classic Ethernet PhysicalLayer-Classic Ethernet	5/6/21	
42.	MAC Sublayer Protocol-EthernetPerformance-Fast Ethernet	7/6/21	
43.	Gigabit Ethernet-10-Gigabit Ethernet-Retrospective on Ethernet	8/6/21to 9/6/21	
44.	Wireless Lans-The 802.11Architecture	10/6/21to 11/6/21	
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46.	The802.11 MAC Sublayer Protocol	14/6/21to 15/6/21	
47.	The 805.11 Frame Structure-Services	16/6/21	
48.	Tutorial class	17/6/21	
UNIT -V Network Layer **CO 5: Understand routing and congestion control algorithms** **TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010**			
49.	**Design Issues**-The Network LayerDesign Issues –	18/6/21to2 1/6/21	Online class with MS Teams
50.	Store and Forward Packet Switching-	22/6/21	
51.	Services Provided to the Transport Layer	23/6/21	
52.	Implementation of ConnectionlessService-	24/6/21	
53.	Implementation of Connection Oriented Service-	25/6/21	
54.	Comparison of Virtual Circuit and Datagram Networks,	26/6/21	
55.	Routing Algorithms-The Optimality principle	28/6/21	
56.	Shortest path Algorithm,	29/6/21	
57.	Congestion Control Algorithms	30/6/21	
58.	Approaches to Congestion Control-Traffic	1/7/21	
59.	Aware Routing-Admission	2/7/21	
60.	Control-TrafficThrottling-Load Shedding.	3/7/21	
61.	Tutorial Class	5/7/21	
UNIT -VI Transport Layer and Application Layer **CO 6: Understand how internet works.** **TB: Tanenbaum and David J Wetherall, Computer Networks, 5th Edition, Pearson Edu, 2010**			
62.	**Transport Layer – The** Internet Transport Protocols: Udp,	6/7/21	
63.	The Internet Transport Protocols:Tcp	7/7/21 to 12/7/21	
64.	Application Layer –The Domain Name System:	13/7/21	
65.	The DNS Name Space, ResourceRecords,	14/7/21	

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66.	Name Servers,	15/7/21	Online class with MS Teams
67.	Electronic Mail: Architecture and Services,	16/7/21	
68.	The User Agent, Message Formats,	17/7/21 to 22/7/21	
69.	Message Transfer,	23/7/21	
70.	Final Delivery	24/7/21	
71.	Tutorial Class	26/7/21	

P. Bhagya Lakshmi
Signature of the Faculty 5/6/21

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TENTATIVE LESSON PLAN

Course Title DATA WAREHOUSING AND MINING(R1632052)		
Year /Sem : III/II **Section : Sec A**	**Date : 12/4/21**	**AY:2020-21**
Revision No :	**Prepared By :Dr.N Neelima Priyanka Associate Prof**	**Approved By : HOD**

Tools: Black Board,PPT, Video Lectures

UNIT-I Introduction
CO1:Understand stages in building a Data Warehouse.
TEXT BOOK:
1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson.
2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier

No.of Periods	Topic	Date	Mode of delivry
1	Introduction	From: 12/4/2021 To: 27/4/2021	Lecture with discussions
2	Why Data Mining? What Is Data Mining?		
3	What Kinds of Data Can Be Mined?		
4	What Kinds of Patterns Can Be Mined?		
5	Which Technologies Are Used?		
6	Major Issues in Data Mining.		
7	Data Objects and Attribute Types		
8	Basic Statistical Descriptions of Data		
9	Visualization of		
10	Data Visualization		
11	Visualization methods		
12	Measuring Data Similarity and dissimilarity		
13	Measuring Data Similarity and		
14	Tutorial		

UNIT-II:Data Pre-processing
CO2:Gain knowledge about data preprocessing, and proximity measures on different data sets.
TEXT BOOK:
1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson.
2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier

15	Data Preprocessing	From: 28/4/2021	Lecture with
16	Data Cleaning		
17	Data Integration		
18	Data Reduction		
19	WaveletTransformation		
20	PCA		

21	Data Transformation	To: 12/5/2021	discussions
22	Smoothing,Normalization ect		
23	Data Discretization		
24	Tutorial		
UNIT-III: Classification CO3:Gain knowledge about basic concepts of classification and Decision Tree algorithm. TEXT BOOK: 1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson. 2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier			
25	Introduction toClassification	From: 13/5/2021 To: 25/5/2021	Lecture with discussions
26	Basic concepts		
27	General approach to solving a classification		
28	Decision tree induction		
29	Working of decision tree		
30	Building a decision tree		
31	Decision tree algorithm		
32	Methods for expressing an attribute test conditions		
33	Measures for selecting the best split		
34	Algorithm for decision tree induction		
35	Tutorial		
UNIT-IV: ClassificationAlterative Techniques CO4:Gain knowledge about basic concepts of classification and Decision Tree algorithm TEXT BOOK: 1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson. 2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier			
36	Classification: Alterative Techniques	From: 26/5/2021 To: 5/6/2021	Lecture with discussions
37	Bayes' Theorem,		
38	Naïve Bayesian Classification,		
40	Bayesian Belief Networks		
41	Tutorial		
UNIT-V: Association Analysis: Basic Concepts and Algorithms CO5:Analyze and evaluate performance of algorithms for Association Rules. TEXT BOOK: 1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson. 2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier .			
42	Association Basic concepts		Lecture with
43	Problem Defecation,		

44	Frequent item set generation	From: 7/6/2021 To: 16/6/2021	discussions
45	Rule generation		
46	Compact representation of frequent item sets		
47	Closed Item set		
48	FP-growth algorithm		
49	Apriori example		
50	Rule generation example		
51	FP Growth Example		
52	Analysis of FP Growth		
53	Tutorial		

UNIT-VI:Cluster Analysis: Basic Concepts and Algorithms

CO6:Be able to understand Clustering techniques like K-Means, bisecting K-Means and additional issues of K-Means. Become familiar with Hierarchical clustering and density based clustering

TEXT BOOK:

1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson.
2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier

54	Basic concepts, cluster analysis	From: 17/6/2021 To: 1/7/2021	Lecture with discussions
55	Different types of clustering		
56	Different types of clusters		
57	K-means,The basic K-means algorithm		
58	The Basic K-Means Algorithm		
59	K-means: Additional issues, Bisection k-means		
60	k-means and different types of clusters strengths and weaknesses		
61	K-means as an optimization problem		
62	Hierarchical clustering		
63	Agglomerative hierarchical clustering algorithm, specific techniques		
65	DBSCAN, Traditional Density: Center-based		
66	Tutorial		

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TENTATIVE LESSON PLAN

Course Title DATA WAREHOUSING AND MINING(R1632052)		
Year /Sem : III/II **Section : Sec B**	**Date : 12/4/21**	**AY:2020-21**
Revision No :	**Prepared By :Dr.N Neelima Priyanka Associate Prof**	**Approved By : HOD**

Tools: Black Board,PPT, Video Lectures

UNIT-I Introduction
CO1:Understand stages in building a Data Warehouse.
TEXT BOOK:
1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson.
2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier

No.of Periods	Topic	Date	Mode of delivry
1	Introduction	From: 12/4/2021 To: 27/4/2021	Lecture with discussions
2	Why Data Mining? What Is Data Mining?		
3	What Kinds of Data Can Be Mined?		
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10	Data Visualization		
11	Visualization methods		
12	Measuring Data Similarity and dissimilarity		
13	Measuring Data Similarity and		
14	Tutorial		

UNIT-II:Data Pre-processing
CO2:Gain knowledge about data preprocessing, and proximity measures on different data sets.
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15	Data Preprocessing	From: 28/4/2021	Lecture with
16	Data Cleaning		
17	Data Integration		
18	Data Reduction		
19	WaveletTransformation		
20	PCA		

21	Data Transformation	To: 12/5/2021	discussions
22	Smoothing,Normalization ect		
23	Data Discretization		
24	Tutorial		
UNIT-III: Classification CO3:Gain knowledge about basic concepts of classification and Decision Tree algorithm. TEXT BOOK: 1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson. 2. Data Mining concepts and Techniques, 3/e, Jiawei Han, Michel Kamber, Elsevier			
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32	Methods for expressing an attribute test conditions		
33	Measures for selecting the best split		
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35	Tutorial		
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36	Classification: Alterative Techniques	From: 26/5/2021 To: 5/6/2021	Lecture with discussions
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40	Bayesian Belief Networks		
41	Tutorial		
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42	Association Basic concepts		Lecture with
43	Problem Defecation,		

44	Frequent item set generation	From: 7/6/2021 To: 16/6/2021	discussions
45	Rule generation		
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47	Closed Item set		
48	FP-growth algorithm		
49	Apriori example		
50	Rule generation example		
51	FP Growth Example		
52	Analysis of FP Growth		
53	Tutorial		

UNIT-VI:Cluster Analysis: Basic Concepts and Algorithms

CO6:Be able to understand Clustering techniques like K-Means, bisecting K-Means and additional issues of K-Means. Become familiar with Hierarchical clustering and density based clustering

TEXT BOOK:

1. Introduction to Data Mining: Pang-Ning Tan & Michael Steinbach, Vipin Kumar, Pearson.
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54	Basic concepts, cluster analysis	From: 17/6/2021 To: 1/7/2021	Lecture with discussions
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56	Different types of clusters		
57	K-means,The basic K-means algorithm		
58	The Basic K-Means Algorithm		
59	K-means: Additional issues, Bisection k-means		
60	k-means and different types of clusters strengths and weaknesses		
61	K-means as an optimization problem		
62	Hierarchical clustering		
63	Agglomerative hierarchical clustering algorithm, specific techniques		
65	DBSCAN, Traditional Density: Center-based		
66	Tutorial		

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TENTATIVE LESSION PLAN: R1632053
DESIGN AND ANALYSIS OF ALGORITHMS

Course Title: DESIGN AND ANALYSIS OF ALGORITHMS		
Section : Sec A	Date : 1/4/2021	Page No : 01 of 04
Revision No : 00	Prepared By : D.MADHAVI	Approved By : HOD

Tools : MS Teams, PPTs

No. of periods	TOPIC	Date	Mode of Delivery
UNIT-I : INTRODUCTION **CO1: Argue the correctness of algorithms using inductive proofs and invariants.** **CO2: Analyze worst-case running times of algorithms using asymptotic analysis.** **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			
1	What is an Algorithm	From: 12/4/2021 To: 27/4/2021	Online Class with Microsoft's Teams
2	Algorithm Specification		
3	Pseudocode Conventions		
4	Recursive Algorithm		
5	Performance Analysis		
6	Space Complexity		
7	Time Complexity		
8	Amortized Complexity		
9	Asymptotic Notation		
10	Practical Complexities		
11	Performance Measurement		
12	**Tutorial**		
UNIT-II : DIVIDE AND CONQUER **CO3: Describe the divide-and-conquer paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize divide-and- conquer algorithms. Derive and solve recurrences describing the performance of divide- and-conquer algorithms.** **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			

No. of periods	TOPIC	Date	Mode of Delivery
13	Dived and Conquer: General Method	From: 28/4/2021 To: 12/5/2021	Online classes with Microsoft's Teams
14	Defective Chessboard		
15	Binary Search		
16	Finding the Maximum and Minimum		
17	Merge Sort		
18	Quick Sort		
19	Performance Measurement		
20	Randomized Sorting Algorithms		
21	**Tutorial**		
UNIT – III: GREEDY METHOD **CO5: Describe the greedy paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize greedy algorithms, and analyze them.** **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			
22	The Greedy Method: The General Method	From: 13/5/2021 To: 25/5/2021	Online classes with Microsoft's Teams
23	Knapsack Problem		
24	Job Sequencing with Deadlines		
25	Minimum-cost Spanning Trees		
26	Prim's Algorithm,		
27	Kruskal's Algorithms		
28	An Optimal Randomized Algorithm		
29	Optimal Merge Patterns		
30	Single Source Shortest Paths.		
31	**Tutorial**		
UNIT – IV: DYNAMIC PROGRAMMING **CO2: Describe the dynamic-programming paradigm and explain when an**			

No. of periods	TOPIC	Date	Mode of Delivery
algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic- programming algorithms, and analyze them. **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			
32	Dynamic Programming Introduction	From: 26/5/2021 To: 5/6/2021	Online classes with Microsoft's Teams
33	All - Pairs Shortest Paths,		
34	Single – Source Shortest paths General Weights,		
35	String Edition		
36	0/1 Knapsack		
37	Reliability Design,		
38	**Tutorial**		
UNIT – V BACKTRACKING **CO4: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic- programming algorithms, and analyze them.** **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			
39	**Backtracking:** The General Method	From: 7/6/2021 To: 16/6/2021	Online classes with Microsoft's Teams
40	The 8-Queens Problem		
41	Sum of Subsets		
42	Graph Coloring		
43	Hamiltonian Cycles		
44	**Tutorial**		
UNIT – VI: BRANCH AND BOUND **CO4: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic- programming algorithms, and analyze them.** **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			

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No. of periods	TOPIC	Date	Mode of Delivery
45	**Branch and Bound:** The Method	From: 17/6/2021 To: 1/7/2021	Online classes with Microsoft's Teams
46	Least cost (LC) Search		
47	The 15-Puzzle: an Example		
48	Control Abstraction for LC-Search		
49	Bounding, FIFO Branch-and-Bound		
50	LC Branch and Bound		
51	0/1 Knapsack Problem		
52	LC Branch-and Bound Solution		
53	FIFO Branch-and-Bound Solution		
54	Traveling Salesperson		
55	**Tutorial**		

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TENTATIVE LESSION PLAN: R1632053
DESIGN AND ANALYSIS OF ALGORITHMS

Course Title: DESIGN AND ANALYSIS OF ALGORITHMS		
Section : Sec B	Date : 1/4/2021	Page No : 01 of 04
Revision No : 00	Prepared By : D.MADHAVI	Approved By : HOD

Tools : MS Teams, PPTs

No. of periods	TOPIC	Date	Mode of Delivery
UNIT-I : INTRODUCTION **CO1: Argue the correctness of algorithms using inductive proofs and invariants.** **CO2: Analyze worst-case running times of algorithms using asymptotic analysis.** **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			
1	What is an Algorithm	From: 12/4/2021 To: 27/4/2021	Online Class with Microsoft's Teams
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7	Time Complexity		
8	Amortized Complexity		
9	Asymptotic Notation		
10	Practical Complexities		
11	Performance Measurement		
12	**Tutorial**		
UNIT-II : DIVIDE AND CONQUER **CO3: Describe the divide-and-conquer paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize divide-and- conquer algorithms. Derive and solve recurrences describing the performance of divide- and-conquer algorithms.**			

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No. of periods	TOPIC	Date	Mode of Delivery
TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press			
13	Dived and Conquer: General Method	From: 28/4/2021 To: 12/5/2021	Online classes with Microsoft's Teams
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15	Binary Search		
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17	Merge Sort		
18	Quick Sort		
19	Performance Measurement		
20	Randomized Sorting Algorithms		
21	**Tutorial**		
UNIT – III: GREEDY METHOD **CO5: Describe the greedy paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize greedy algorithms, and analyze them.** **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			
22	The Greedy Method: The General Method	From: 13/5/2021 To: 25/5/2021	Online classes with Microsoft's Teams
23	Knapsack Problem		
24	Job Sequencing with Deadlines		
25	Minimum-cost Spanning Trees		
26	Prim's Algorithm,		
27	Kruskal's Algorithms		
28	An Optimal Randomized Algorithm		
29	Optimal Merge Patterns		
30	Single Source Shortest Paths.		
31	**Tutorial**		
UNIT – IV: DYNAMIC PROGRAMMING			

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No. of periods	TOPIC	Date	Mode of Delivery
CO2: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic- programming algorithms, and analyze them. **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			
32	Dynamic Programming Introduction	From: 26/5/2021 To: 5/6/2021	Online classes with Microsoft's Teams
33	All - Pairs Shortest Paths,		
34	Single – Source Shortest paths General Weights,		
35	String Edition		
36	0/1 Knapsack		
37	Reliability Design,		
38	**Tutorial**		
UNIT – V BACKTRACKING **CO4: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic- programming algorithms, and analyze them.** **TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press**			
39	**Backtracking:** The General Method	From: 7/6/2021 To: 16/6/2021	Online classes with Microsoft's Teams
40	The 8-Queens Problem		
41	Sum of Subsets		
42	Graph Coloring		
43	Hamiltonian Cycles		
44	**Tutorial**		
UNIT – VI: BRANCH AND BOUND **CO4: Describe the dynamic-programming paradigm and explain when an algorithmic design situation calls for it. Recite algorithms that employ this paradigm. Synthesize dynamic- programming algorithms, and analyze them.**			

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No. of periods	TOPIC	Date	Mode of Delivery
TB: "Fundamentals of computer algorithms" E. Horowitz S. Sahni, University Press			
45	**Branch and Bound:** The Method	From: 17/6/2021 To: 1/7/2021	Online classes with Microsoft's Teams
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51	0/1 Knapsack Problem		
52	LC Branch-and Bound Solution		
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54	Traveling Salesperson		
55	**Tutorial**		

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TENTATIVE LESSON PLAN: R1632054
SOFTWARE TESTING METHODOLOGIES

Course Title: SOFTWARE TESTING METHODLOGIES (R1632054)		
Section : Sec A & B	**Date : 06/04/2021**	**Page No :** 01 of 05
Revision No : 00	**Prepared By : CH.AMBEDKAR**	**Approved By : HOD**

Tools: Black board, Power Point Presentation

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I : ➢ **Introduction:** ➢ **Flow graphs and Path testing:** **CO 1 :** Able to apply software testing knowledge and engineering methods and Have ability to know the Basics concepts of path testing **TB: 1. Software Testing techniques – Boris Bezier, Dreamtech** **2. Software Testing Tools – Dr.K.V.K.K.Prasad, Dreamtech.**			
1	**UNIT-1:** Introduction	06/4/2021	Lecture interspersed with discussions Online Classes with MS Teams
2	Purpose of testing	07/4/2021	
3	Goals of testing	08/4/2021	
4	Phases in tester's mental life	09/4/2021	
5	Dichotomies	10/4/2021	
6	Model for testing	12/4/2021	
7	Consequences of bugs	13/4/2021	
8	Taxonomy of bugs	15/4/2021	
9	Tutorial	16/4/2021	
10	Basics concepts of path testing	17/4/2021	
11	Control Flow graphs	19/4/2021	
12	Path testing. Loops	20/4/2021	
13	Effectiveness of path testing	22/4/2021	
14	Predicates, path predicates and achievable paths.	23/4/2021	

15	Path sensitizing	24/4/2021	
16	Path instrumentation	26/4/2021	
17	Tutorial	27/4/2021	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-II : ➢ **Transaction Flow Testing:** ➢ **Dataflow testing:** **CO 2 :** Able to know different testing techniques transaction, data flow, domain Testing strategies. **TB: 1. Software Testing techniques – Boris Bezier, Dreamtech** **2. Software Testing Tools – Dr.K.V.K.K.Prasad, Dreamtech.**			
18	Transaction flows	27/4/2021	Lecture interspersed with discussions Online Classes with MS Teams
19	Transaction flow testing techniques	28/4/2021	
20	Basics of dataflow testing	29/4/2021	
21	Data flow graphs	30/4/2021	
22	Strategies in dataflow testing	01/5/2021	
23	Application of dataflow testing.	03/5/2021	
24	Tutorial	04/5/2021	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III : ➢ **Domain Testing:** ➢ **Paths, Path products and Regular expressions:** **CO 3 :** Able to solve testing problems by designing and selecting software test models, criteria, strategies and methods **TB: 1. Software Testing techniques – Boris Bezier, Dreamtech** **2. Software Testing Tools – Dr.K.V.K.K.Prasad, Dreamtech.**			
25	Domain and Paths	05/5/2021	Lecture interspersed with discussions Online Classes with MS Teams
26	Domain closure	06/5/2021	
27	Nice and ugly domains	07/5/2021	
28	Domain testing	08/5/2021	
29	Domains and interfaces testing	10/5/2021	

30	Domains and testability	11/5/2021	
31	Span Compatibility	12/5/2021	
32	Tutorial	13/5/2021	
33	Path Products & Path Sums	15/5/2021	Lecture interspersed with discussions Online Classes with MS Teams
34	Path Expression	17/5/2021	
35	Node Reduction procedure	18/5/2021	
36	Applications: Maximum Path count Arithmetic	19/5/2021	
37	Lower path count Arithmetic	20/5/2021	
38	Probability	21/5/2021	
39	Mean processing time of a routine	22/5/2021	
40	Push/pop, Get/Return	24/5/2021	
41	Tutorial	25/5/2021	

UNIT-IV :

- **Syntax Testing:**
- **Logic Based Testing:**

CO 4 : Have basic understanding and knowledge of contemporary issues in software testing, such as component based software testing problems.

TB: 1. Software Testing techniques – Boris Bezier, Dreamtech.
2. Software Testing Tools – Dr.K.V.K.K.Prasad, Dreamtech.

No. of Periods	TOPIC	Date	Mode of Delivery
41	Syntax Testing: Why, What and How	26/5/2021	Lecture interspersed with discussions Online Classes with MS Teams
42	A Grammar for formats	27/5/2021	
43	Test Case Generation	28/5/2021	
44	Implementation and Application	29/5/2021	
45	Overview	31/5/2021	
46	Decision tables	01/6/2021	

47	Path expressions	02/6/2021	
48	KV charts	03/6/2021	
49	Tutorial	04/6/2021	
UNIT-V : ➢ **State, State Graphs and Transition Testing:** ➢ **Graph Matrices and Application:** **CO 5 :** Able to understand and identify various software testing applications using graphs and graph matrices **TB: 1. Software Testing techniques – Boris Bezier, Dreamtech.** **2. Software Testing Tools – Dr.K.V.K.K.Prasad, Dreamtech.**			
50	State graphs	05/6/2021	Lecture interspersed with discussions Online Classes with MS Teams
51	Good & bad state graphs	07/6/2021	
52	State testing	08/6/2021	
53	Motivational overview	09/6/2021	
54	Matrix of graph	10/6/2021	
55	Relations	11/6/2021	
56	Power of a matrix	12/6/2021	
57	Node reduction algorithm	14/6/2021	
58	Tutorial	16/6/2021	
UNIT-VI: ➢ **Software Testing Tools:** **CO 6 :** Able to test the applications manually by applying different testing methods and automation tools. **TB: 1. Software Testing techniques – Boris Bezier, Dreamtech.** **2. Software Testing Tools – Dr.K.V.K.K.Prasad, Dreamtech.**			
59	**Software Testing Tools:** Introduction to Testing.	17/6/2021	Lecture interspersed with discussions Online Classes with MS Teams
60	Automated Testing, Concepts of Testing.	18/6/2021	
61	Introduction to tools like Win runner,	19/6/2021	
62	Load Runner, Jmeter.	21/6/2021	
63	About Win Runner, About Win Runner	22/6/2021	
64	Mapping the GUI, Recording Test	24/6/2021	

65	Working with Test, Checkpoints	25/6/2021	Online Classes with MS Teams
66	Test Script Language	28/6/2021	
67	Running and Debugging Tests	01/7/2021	
68	Putting it all together, Analyzing Results	02/7/2021	
69	Rapid Test Script Wizard	05/7/2021	
70	Tutorial	06/7/2021	

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Department of Computer Science and Engineering

TENTATIVE LESSON PLAN: R163205B
INTERNET OF THINGS

Course Title: Internet of Things (R163205B)		
Section : Sec A	Date : 06/04/2021	Page No : 01 of 04
Revision No : 00	Prepared By : M Naresh Babu	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
Unit-1 The Internet of Things **CO1: Demonstrate knowledge and understanding of the security and ethical issues of the Internet of Things** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education**			
1	**UNIT-1:** The Internet of Things: An Overview of Internet of things	7/4/21	Lecture interspersed with discussions
2	Internet of Things Technology Behind IoTs	8/4/51	
3,4	Sources of the IoTs	9/4/21 10/4/21	
5,6,7	M2M Communication	12/4/21 13/4/21 14/4/21	
8,9	Examples OF IoTs	15/4/21 16/4/21	
10	Design Principles For Connected Devices	17/4/21	
11	Tutorial	19/4/21	
UNIT-II: Business Models for Business Processes in the Internet of Things **CO2: Conceptually identify vulnerabilities, including recent attacks, involving the Internet of Things** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
12	**UNIT-II:** Business Models for Business Processes in the Internet of Things	20/4/21	Lecture interspersed with discussions
13,14	IoT/M2M systems LAYERS AND designs standardizations	22/4/21 23/4/21	
15,16	Modified OSI Stack for the IoT/M2M Systems	24/4/21 26/4/21	
17,18	ETSI M2M domains and High-level capabilities	27/4/21	

		28/4/21	
19,20	Communication Technologies	29/4/21 30/4/21	
21,22	Data Enrichment and Consolidation and Device Management	1/5/21 3/5/21	
23,24	Gateway Ease of designing and affordability	4/5/21 5/5/21	
25	Tutorial	6/5/21	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III: Design Principles for the Web Connectivity for connected-Devices **CO3: Develop critical thinking skills** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
26,27	**UNIT-III:** Design Principles for the Web Connectivity for connected-Devices	7/5/21 8/5/21	Lecture interspersed with discussions
28,29, 30	Web Communication protocols for Connected Devices	10/5/21 11/5/21 12/5/21	
31,32 ,33	Message Communication protocols for Connected Devices	13/5/21 14/5/21 15/5/21	
34,35, 36	Web Connectivity for connected-Devices	17/5/21 18/5/21 19/5/21	
37	Tutorial	20/5/21	
UNIT-IV: Internet Connectivity Principles **CO4: Compare and contrast the threat environment based on industry and/or device type** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
38	**UNIT-IV** Internet Connectivity Principles	21/5/21	Lecture interspersed with discussions
39,40, 41	Internet connectivity	22/5/21 24/5/21 25/5/21	
42	Application Layer Protocols: HTTP	26/5/21	
43	HTTPS	27/5/21	

44	FTP	28/5/21	
45	Telnet	29/5/21	
46	Tutorial	31/5/21	
UNIT-V: Data Acquiring Organizing and Analytics in IoT/M2M Applications/Services/Business Processes **CO5: Gain knowledge on understanding Communication Protocols** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
47	**UNIT-V** Data Acquiring	1/6/21	Lecture interspersed with discussions
48,49	Organizing and Analytics in IoT/M2M	2/6/21 3/6/21	
50,51	Applications/Services/Business Processes	4/6/21 5/6/21	
52,53	IOT/M2M Data Acquiring and Storage	7/6/21 8/6/21	
54,55	Business Models for Business Processes in the Internet Of Things	9/6/21 10/6/21	
56,57 ,58	Organizing Data	11/6/21 12/6/21 14/6/21	
59,60, 61	Transactions	15/6/21 16/6/21 17/6/21	
62,63	Business Processes	18/6/21 19/6/21	
64,65	Integration and Enterprise Systems.	21/6/21 22/6/21	
66	Tutorial	23/6/21	
UNIT-VI: Data Collection Storage and Computing Using a Cloud Platform for IoT/M2M Applications/Services **CO5: Gain Knowledge about the internet of things using cloud infrastructure** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
67	**UNIT-VI** Data Collection	24/6/21	
68	Storage and Computing Using a Cloud Platform for IoT/M2M Applications/Services	25/6/21	
69	Data Collection	28/6/21	

70	Storage and Computing Using cloud platform Everything as a service and Cloud Service Models	30/6/21	Lecture interspersed with discussions
71	IOT cloud-based services using the Xively (Pachube/COSM)	1/7/21 2/7/21	
72	Nimbits and other platforms Sensor	3/7/21 5/7/21	
73	Participatory Sensing	6/7/21 7/7/21	
74	Actuator	8/7/21	
75	Radio Frequency Identification and Wireless	9/7/21	
76	Sensor Network Technology	12/7/21	
77	Sensors Technology	13/7/21 14/7/21	
78	Sensing the World	15/7/21	
79	Tutorial	17/7/21	

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SRK INSTITUTE OF TECHNOLOGY
Enikepadu, Vijayawada, 521108
Approved by AICTE, Affiliated to JNTUK, Kakinada
(ISO 9001:2015 Certified Institution)
Department of Computer Science and Engineering

TENTATIVE LESSON PLAN: R163205B
INTERNET OF THINGS

Course Title: Internet of Things (R163205B)		
Section : Sec B	Date : 06/04/2021	Page No : 01 of 04
Revision No : 00	Prepared By : M Naresh Babu	Approved By : HOD

Tools: Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
Unit-1 The Internet of Things **CO1: Demonstrate knowledge and understanding of the security and ethical issues of the Internet of Things** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education**			
1	**UNIT-1:** The Internet of Things: An Overview of Internet of things	7/4/21	Lecture interspersed with discussions
2	Internet of Things Technology Behind IoTs	8/4/51	
3,4	Sources of the IoTs	9/4/21 10/4/21	
5,6,7	M2M Communication	12/4/21 13/4/21 14/4/21	
8,9	Examples OF IoTs	15/4/21 16/4/21	
10	Design Principles For Connected Devices	17/4/21	
11	Tutorial	19/4/21	
UNIT-II: Business Models for Business Processes in the Internet of Things **CO2: Conceptually identify vulnerabilities, including recent attacks, involving the Internet of Things** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
12	**UNIT-II:** Business Models for Business Processes in the Internet of Things	20/4/21	Lecture interspersed with discussions
13,14	IoT/M2M systems LAYERS AND designs standardizations	22/4/21 23/4/21	
15,16	Modified OSI Stack for the IoT/M2M Systems	24/4/21 26/4/21	
17,18	ETSI M2M domains and High-level capabilities	27/4/21	

		28/4/21	
19,20	Communication Technologies	29/4/21 30/4/21	
21,22	Data Enrichment and Consolidation and Device Management	1/5/21 3/5/21	
23,24	Gateway Ease of designing and affordability	4/5/21 5/5/21	
25	Tutorial	6/5/21	
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
UNIT-III: Design Principles for the Web Connectivity for connected-Devices **CO3: Develop critical thinking skills** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
26,27	**UNIT-III:** Design Principles for the Web Connectivity for connected-Devices	7/5/21 8/5/21	Lecture interspersed with discussions
28,29, 30	Web Communication protocols for Connected Devices	10/5/21 11/5/21 12/5/21	
31,32 ,33	Message Communication protocols for Connected Devices	13/5/21 14/5/21 15/5/21	
34,35, 36	Web Connectivity for connected-Devices	17/5/21 18/5/21 19/5/21	
37	Tutorial	20/5/21	
UNIT-IV: Internet Connectivity Principles **CO4: Compare and contrast the threat environment based on industry and/or device type** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
No. of Periods	**TOPIC**	**Date**	**Mode of Delivery**
38	**UNIT-IV** Internet Connectivity Principles	21/5/21	Lecture interspersed with discussions
39,40, 41	Internet connectivity	22/5/21 24/5/21 25/5/21	
42	Application Layer Protocols: HTTP	26/5/21	
43	HTTPS	27/5/21	

44	FTP	28/5/21	
45	Telnet	29/5/21	
46	Tutorial	31/5/21	
UNIT-V: Data Acquiring Organizing and Analytics in IoT/M2M Applications/Services/Business Processes **CO5: Gain knowledge on understanding Communication Protocols** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
47	**UNIT-V** Data Acquiring	1/6/21	Lecture interspersed with discussions
48,49	Organizing and Analytics in IoT/M2M	2/6/21 3/6/21	
50,51	Applications/Services/Business Processes	4/6/21 5/6/21	
52,53	IOT/M2M Data Acquiring and Storage	7/6/21 8/6/21	
54,55	Business Models for Business Processes in the Internet Of Things	9/6/21 10/6/21	
56,57 ,58	Organizing Data	11/6/21 12/6/21 14/6/21	
59,60, 61	Transactions	15/6/21 16/6/21 17/6/21	
62,63	Business Processes	18/6/21 19/6/21	
64,65	Integration and Enterprise Systems.	21/6/21 22/6/21	
66	Tutorial	23/6/21	
UNIT-VI: Data Collection Storage and Computing Using a Cloud Platform for IoT/M2M Applications/Services **CO5: Gain Knowledge about the internet of things using cloud infrastructure** **TB:" Internet of Things: Architecture, Design Principles And Applications, Rajkamal, McGraw Hill Higher Education"**			
67	**UNIT-VI** Data Collection	24/6/21	
68	Storage and Computing Using a Cloud Platform for IoT/M2M Applications/Services	25/6/21	
69	Data Collection	28/6/21	

70	Storage and Computing Using cloud platform Everything as a service and Cloud Service Models	30/6/21	Lecture interspersed with discussions
71	IOT cloud-based services using the Xively (Pachube/COSM)	1/7/21 2/7/21	
72	Nimbits and other platforms Sensor	3/7/21 5/7/21	
73	Participatory Sensing	6/7/21 7/7/21	
74	Actuator	8/7/21	
75	Radio Frequency Identification and Wireless	9/7/21	
76	Sensor Network Technology	12/7/21	
77	Sensors Technology	13/7/21 14/7/21	
78	Sensing the World	15/7/21	
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TENTATIVE LESSON PLAN: R1642051

Course Title: DISTRIBUTED SYSTEM		
Section : CSE-A & B	**Date :** 06-04-2021	**A.Y:2020-21**
Revision No : 00	**Prepared By : D V SUBBA RAO ,Assoociate Professor**	**Approved By : HOD**

Tools : Black board, PPTs, Moodle

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-I Characterization of Distributed Systems, System Models **CO1:** Develop a familiarity with distributed file systems **TEXT BOOK:** George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication			
1	Characterization of Distributed Systems	06-04-2021	Lecture interspersed with discussions
2	Examples of Distributed Systems	07-04-2021	
3	Trends in distributed systems	08-04-2021	
4	Resource Sharing and the Web	09-04-2021	
5	Challenges	12-04-2021	
6	**System Models:** Introduction	15-04-2021	
7	Architectural Models, Software Layers	16-04-2021	
8	System Architecture, variations	17-04-2021	
9	Interface and Objects	19-04-2021	
10	Design Requirements for Distributed Architectures	20-04-2021	
11	Fundamental Models-Interaction Model	22-04-2021	
12	Failure Model	23-04-2021	
13	Security Model	24-04-2021	
14	Tutorial classes	26-04-2021	
UNIT-II Interprocess Communication **CO2:** Describe important characteristics of distributed systems and the salient architectural features of such systems **TEXT BOOK:** George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication			
15	**Interprocess Communication:** Introduction	27-04-2021	Lecture interspersed with discussions
16	The API for the Internet Protocols: The Characteristics of Interprocess communication	28-04-2021	
17	Sockets	29-04-2021	
18	Udp datagram communication	30-04-2021	
19	TCP Stream Communication	01-05-2021	
20	External Data Representation and Marshalling;	03-05-2021	
21	Client Server Communication;	04-05-2021	
22	Group Communication- IP Multicast implementation of group communication	05-05-2021	
23	Reliability and Ordering of Multicast.	06-05-2021	
24	Tutorial classes	07-05-2021	

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-III: Distributed Objects and Remote Invocation **CO3:** Describe important characteristics of distributed systems and the salient architectural features of such systems **TEXT BOOK:** George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication			
25	**Distributed Objects and Remote Invocation:** Introduction	10-05-2021	Lecture interspersed with discussions
26	Communication between Distributed Objects- Object Model	11-05-2021	
27	Distributed Object Model	12-05-2021	
28	Design Issues for RMI	13-05-2021	
29	Implementation of RMI	15-05-2021	
30	Distributed Garbage Collection	17-05-2021	
31	Remote Procedure Call	18-05-2021	
32	Events and Notifications	19-05-2021	
33	Case Study: JAVA RMI	20-05-2021	
34	Tutorial classes	21-05-2021	
UNIT-IV Operating System Support **CO4:** Describe the features and applications of important standard protocols which are used in distributed systems **TEXT BOOK:** George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication			
35	**Operating System Support:** Introduction	22-05-2021	Lecture interspersed with discussions
36	The Operating System Layer	24-05-2021	
37	Protection	25-05-2021	
38	Processes and Threads: –Address Space	26-05-2021	
39	Creation of a New Process	27-05-2021	
40	Threads.	28-05-2021	
41	Tutorial classes	29-05-2021	

No. of Periods	TOPIC	Date	Mode of Delivery
UNIT-V Distributed File Systems, Coordination and Agreement **CO 5:** Describe the features and applications of important standard protocols which are used in distributed systems **TEXT BOOK:** George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication			
42	**Distributed File Systems:** Introduction	31-05-2021	Lecture interspersed with discussions
43	File Service Architecture	01-06-2021	
44	Peer-to-Peer Systems: Introduction	02-06-2021	
45	Napster and its Legacy	03-06-2021	
46	Peer-to-Peer Middleware	04-06-2021	
47	Routing Overlays	05-06-2021	
48	Tutorial classes	07-06-2021	
49	**Coordination and Agreement:** Introduction	08-06-2021	
50	Distributed Mutual Exclusion	09-06-2021	
51	Algorithm for Mutual Exclusion	10-06-2021	
52	Elections(ring based)	11-06-2021	
53	The Bully algorithm	14-06-2021	
54	Multicast Communication.	15-06-2021	
55	Ordered multicast	16-06-2021	
56	Tutorial classes	17-06-2021	
UNIT-VI Transactions & Replications **CO6:** Gaining practical experience of inter process communication in a distributed environment. **TEXT BOOK:** George Coulouris, Jean Dollimore, Tim Kindberg, "Distributed Systems- Concepts and Design", Fourth Edition, Pearson Publication			
57	**Transactions & Replications:** Introduction	18-06-2021	Lecture interspersed with discussions
58	System Model	19-06-2021	
59	Group Communication	21-06-2021	
60	Time ordering concurrency control	22-06-2021	
61	Optimistic concurrency control	23-06-2021	
62	Distributed Dead Locks	24-06-2021	
63	Transaction priorities	25-06-2021	
64	Transaction Recovery; Replication-Introduction	26-06-2021	
65	Passive (Primary) Replication	28-06-2021	
66	Active Replication.	29-06-2021	
67	Tutorial classes	30-06-2021	

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TENTATIVE LESSON PLAN

Course Title: MANAGEMENT SCIENCE (R1642052)		
Section: CSE-A	**Date:** 07-04-21	**Page No:** 01 of 02
Revision No: 00	**Prepared By:** G. KIRAN	**Approved By: HOD**

Tools: Black board, PPT'S

No. of Periods (Actual Taken)	TOPIC	Date (Taught on)	Mode of Delivery
UNIT –I Introduction to Management **CO 1:** Able to understand the concept and nature of management, evaluation of management theories, motivation, and leadership styles. **TB:** Dr. A. R. Aryasri, Management Science' TMH 2011.			
1	Introduction to management	From 07/04/21 To 23/04/21	Online classes in MS TEAMS
2	Nature & importance of management		
3	Generic function of management		
4	Evaluation of management thoughts		
5	Motivation theories		
6	Decision making process		
7	Designing organization structure		
8	Principles & types of organization		
9	Organization typology		
10	Global leadership		
11	Principals and types of management		
UNIT –II Operations Management **CO 2:** Able to equip with concepts of operations, project management and inventory control. **TB:** Dr. A. R. Aryasri, Management Science' TMH 2011.			
12	Work study	From 24/04/21 To 04/05/21	Online classes in MS TEAMS
13	Statistical quality control		
14	Control charts		
15	Problems On Control Charts		
16	Material Management		
17	Need For Inventory Control		
19	EOQ And ABC Analysis		
20	Problems On EOQ		
21	Other Methods Of EOQ		
UNIT-III: Functional management **CO 3:** Able to understand the different functional areas in an organization and their responsibilities-product life cycle and channels of distribution. **TB:** Dr. A. R. Aryasri, Management Science' TMH 2011			
22	Concept of HRM, HRD and PMIR	From 05/05/21 To 10/05/21	Online classes in MS TEAMS
23	Functions of HRM		
24	Wage payment plans		
25	Job evolution Vs merit rating		
26	Marketing management functions		
27	Marketing strategies based on plc		
28	Channels of distribution		
29	Operational change management		
30	Functions of marketing		

UNIT-IV: Project Management

CO 4: Able to equip with different techniques in project management, i.e., PERT and CPM and project crashing

TB: Dr. A. R. Aryasri, Management Science' TMH 2011

31	Introduction to PERT and CPM	From 19/05/21 To 09/06/21	Online classes in MS TEAMS
32	Development of network diagram		
33	Difference between pert and CPM		
34	Identifying critical part		
35	Probability		
36	Project crashing simple problems		
37	Problems		

UNIT-V: Strategic Management

CO 5: Able to equip with the concept and practical issues relating to strategic management.

TB: Dr. A. R. Aryasri, Management Science' TMH 2011

38	Vision, mission, goals and strategy	From 10/06/21 To 24/06/21	Online classes in MS TEAMS
39	Elements of corporate planning process		
40	SWOT analysis		
41	Steps in strategic formulation and implementation		
42	Generic strategy and global strategy		
43	Theories of MNCs		
44	Environmental scanning		

UNIT-VI: Contemporary Management Practices

CO 6: Able to equip with the contemporary management practices.

TB: Dr. A. R. Aryasri, Management Science' TMH 2011

45	Basic concepts of MIS	From 25/06/21 To 09/07/21	Online classes in MS TEAMS
46	Total quality management		
47	Six sigma		
48	Supply chain management		
49	Enterprise resource planning		
50	Business process outsources		
51	Business process re-engineering		
52	Bench Marking		
53	Balanced Score Card		
54	Material Requirement Planning		
55	Total quality management		

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TENTATIVE LESSON PLAN

Course Title: MANAGEMENT SCIENCE (R1642052)		
Section: CSE-B	**Date:** 07-04-21	**Page No:** 01 of 02
Revision No: 00	**Prepared By:** SRINIVAS. V	**Approved By: HOD**

Tools: Black board, PPT'S

No. of Periods (Actual Taken)	TOPIC	Date (Taught on)	Mode of Delivery
UNIT –I Introduction to Management **CO 1:** Able to understand the concept and nature of management, evaluation of management theories, motivation, and leadership styles. **TB:** Dr. A. R. Aryasri, Management Science' TMH 2011.			
1	Introduction to management	From 07/04/21 To 23/04/21	Online classes in MS TEAMS
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3	Generic function of management		
4	Evaluation of management thoughts		
5	Motivation theories		
6	Decision making process		
7	Designing organization structure		
8	Principles & types of organization		
9	Organization typology		
10	Global leadership		
11	Principals and types of management		
UNIT –II Operations Management **CO 2:** Able to equip with concepts of operations, project management and inventory control. **TB:** Dr. A. R. Aryasri, Management Science' TMH 2011.			
12	Work study	From 24/04/21 To 04/05/21	Online classes in MS TEAMS
13	Statistical quality control		
14	Control charts		
15	Problems On Control Charts		
16	Material Management		
17	Need For Inventory Control		
19	EOQ And ABC Analysis		
20	Problems On EOQ		
21	Other Methods Of EOQ		
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25	Job evolution Vs merit rating		
26	Marketing management functions		
27	Marketing strategies based on plc		
28	Channels of distribution		
29	Operational change management		
30	Functions of marketing		

UNIT-IV: Project Management **CO 4:** Able to equip with different techniques in project management, i.e., PERT and CPM and project crashing **TB:** Dr. A. R. Aryasri, Management Science' TMH 2011			
31	Introduction to PERT and CPM	From 19/05/21 To 09/06/21	Online classes in MS TEAMS
32	Development of network diagram		
33	Difference between pert and CPM		
34	Identifying critical part		
35	Probability		
36	Project crashing simple problems		
37	Problems		
UNIT-V: Strategic Management **CO 5:** Able to equip with the concept and practical issues relating to strategic management. **TB:** Dr. A. R. Aryasri, Management Science' TMH 2011			
38	Vision, mission, goals and strategy	From 10/06/21 To 24/06/21	Online classes in MS TEAMS
39	Elements of corporate planning process		
40	SWOT analysis		
41	Steps in strategic formulation and implementation		
42	Generic strategy and global strategy		
43	Theories of MNCs		
44	Environmental scanning		
UNIT-VI: Contemporary Management Practices **CO 6:** Able to equip with the contemporary management practices. **TB:** Dr. A. R. Aryasri, Management Science' TMH 2011			
45	Basic concepts of MIS	From 25/06/21 To 09/07/21	Online classes in MS TEAMS
46	Total quality management		
47	Six sigma		
48	Supply chain management		
49	Enterprise resource planning		
50	Business process outsources		
51	Business process re-engineering		
52	Bench Marking		
53	Balanced Score Card		
54	Material Requirement Planning		
55	Total quality management		

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SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA	**SRK INSTITUTE OF TECHNOLOGY** **Enikepadu, Vijayawada 521108** **Department of Computer Science Engineering** **TENTATIVE LESSONPLAN**

TENTATIVE LESSONPLAN: R1642053
MACHINE LEARNING

Course Title: MACHINE LEARNING		
Section : IV BTECH	Date : 06/4/21	Page No : 01 of 03
Revision No : 00	Prepared by: D.ANUSHA	Approved by : HOD

Tools: MS Teams,PPTs, Moodle

No. of periods	TOPIC	Date	Mode of Delivery
UNIT- I : The ingredients of machine learning, Tasks **CO1 : Familiarity with a set of well-known supervised, unsupervised and semi-supervised** **TB : "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge**			
1	The ingredients of machine learning	From 07/04/21 To 23/04/21	Online class with MS Teams
2	The problems that can be solved with machine learning		
3	The output of machine learning		
4	Features		
5	The workhorses of machine learning		
6	Binary classification		
7	Related tasks		
8	Classification		
9	Scoring		
10	Ranking		
11	Class probability estimation		
12	Tutorial		
UNIT – II : Beyond binary classification **CO 2 : Familiarity with a set of well-known supervised, unsupervised and semi-supervised** **TB : "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge**			
13	Beyond binary classification	From 24/04/21 To 04/05/21	Online class with MS Teams
14	Handling more than two classes		
15	Regression		
16	Unsupervised learning		
17	Descriptive learning		
18	Concept learning		

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Department of Computer Science Engineering

TENTATIVE LESSONPLAN

No. of periods	TOPIC	Date	Mode of Delivery
19	The hypothesis space	From 24/04/21 To 04/05/21	Online class with MS Teams
20	Paths through the hypothesis space		
21	Beyond conjunctive concepts		
22	Tutorial		
UNIT – III : Tree models **CO 3 : learning algorithms** **TB : "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge**			
23	Tree models	From 05/04/21 To 18/05/21	Online class with MS Teams
24	Ranking and Probability estimation trees		
25	Tree learning as variance reduction		
26	Learning ordered rule lists		
27	Learning unordered rule sets		
28	First-order rule learning		
29	Tutorial		
UNIT IV : Linear models **CO 4: The ability to implement some basic machine learning algorithms** **TB : "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge**			
30	The least-squares method	From 19/05/21 To 09/06/21	Online class with MS Teams
31	The perceptron: a heuristic learning algorithm for linear classifiers		
32	Support vector machines		
33	obtaining probabilities from linear classifiers		
34	Going beyond linearity with kernel methods		
35	Distance Based Models: Introduction,		
36	Neighbours and exemplars		
37	Nearest Neighbours classification		
38	Distance Based Clustering		
39	Hierarchical Clustering		
40	Tutorial		
UNIT V : Probabilistic models **CO 5: The ability to implement some basic machine learning algorithms** **TB : "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge**			

SRK INSTITUTE OF TECHNOLOGY VIJAYAWADA	**SRK INSTITUTE OF TECHNOLOGY** **Enikepadu, Vijayawada 521108** **Department of Computer Science Engineering** **TENTATIVE LESSONPLAN**

No. of periods	TOPIC	Date	Mode of Delivery
41	The normal distribution and its geometric interpretations	From 10/06/21 To 24/06/21	Online class with MS Teams
42	Probabilistic models for categorical data		
43	Discriminative learning by optimising conditional likelihood Probabilistic models		
44	Features: Kinds of features		
45	Tutorial		
46	Feature transformations		
47	Feature construction		
48	Feature selection		
49	Model ensembles: Bagging		
50	random forests		
51	Boosting		
52	Tutorial		
UNIT VI : Probabilistic models **CO 5: The ability to implement some basic machine learning algorithms** **TB : "Machine Learning: The art and science of algorithms that make sense of data", Peter Flach, Cambridge**			
53	Dimensionality Reduction	From 25/06/21 To 09/07/21	Online class with MS Teams
54	Principal Component Analysis (PCA)		
55	Implementation		
56	Demonstration		
57	Artificial Neural Networks		
58	Introduction to Neural network representation		
59	Appropriate problems for neural network learning		
60	Multilayer networks and the back propagation algorithm		
61	Tutorial		

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TENTATIVE LESSON PLAN: R164205C

OPERATIONAL RESEARCH

Course Title: Operational Research		
Section:A	**Date: 06/4/21**	**Page No: 01 of 04**
Revision No: 00	**Prepared By: A. RADHIKA**	**Approved By: HOD**

Tools: MS Teams, PPTs, Moodle

No. of Periods	Topic	Date	Mode of Delivery
Unit-1: Introduction To Operations Research **CO1: Identify and develop operational research models from the verbal description of the real system.** **TB:" P. Sankara Iyer,"Operations Research", Tata McGraw-Hill, 2008 "**			
1	**Introduction To Operations Research**	**From 07/04/21 To 23/04/21**	**Online class with MS Teams**
2	Scope and objectives of OR		
3	Phases of OR		
4	Models of OR		
5	Limitations of OR		
6	Linear Programming Formulation		
7	Linear Programming Problem		
8	Graphical Solution of LPP		
9	Simplex method		
10	Artificial vVariables		
11	Big-M Method		
12	Two Phase method		
13	Degeneracy		
15	Unbound Solution		
16	Tutorial		
UNIT-II: Transportation Problem **CO2: Understand the mathematical tools that are needed to solve optimization problems for transportation problem** **TB:" P. Sankara Iyer," Operations Research", Tata McGraw-Hill, 2008 "**			
17	Transportation Problem	**From 24/04/21 To 04/05/21**	**Online class with MS Teams**
18	Formulation		
19	Balanced Transportation Problem		
20	Unbalanced Transportation Problem.		
21	Finding Basic Feasible Solutions: Northwest Corner Rule		
21	Least Cost Method		
22	Vogel's Approximation Method		

23	Optimality Test: The Stepping stone Method		
24	MODI Method		
25	Tutorial		
UNIT-III: Assignment Model **CO3: Understand the mathematical tools that are needed to solve optimization problems for Assignment model** **TB:" P. Sankara Iyer," Operations Research", Tata McGraw-Hill, 2008 "**			
26	**Assignment Model**	**From 05/04/21 To 18/05/21**	**Online class with MS Teams**
27	Formulation		
28	Hungarian Method For Optimal Solution		
29	Solving Unbalanced Problem		
30	Traveling Salesman Problem And Assignment Problem		
32	Sequencing Models		
33	Solution Of Sequencing Problem		
34	Processing N Jobs Through 2 Machines		
35	Processing N Jobs Through 3Machines		
36	Processing 2 Jobs Through M Machines		
37	Processing N Jobs Through M Machines		
38	TUTORIAL		
UNIT-IV: Dynamic Programming **CO4: Understand the Dynamic Programming problems and game theory Problems** **TB:" P. Sankara Iyer,"Operations Research", Tata McGraw-Hill, 2008 "**			
39	**UNIT-IV: Dynamic Programming**	**From 19/05/21 To 09/06/21**	**Online class with MS Teams**
40	Characteristics Of Dynamic Programming		
41	Dynamic Programming Approach For Priority Management		
42	Employment Smoothening		
43	Capital Budgeting		
44	Stage Coach/Shortest Path		
45	Cargo Loading And Reliability Problems		
46	Games Theory.		
47	Competitive Games		
48	Rectangular Game		
49	Saddle Point		
50	Minimax (Maximin) Method Of Optimal Strategies		
51	Value Of The Game		
52	Solution Of Games With Saddle Point		
54	Dominance Principle		
55	**Rectangular Games Without Saddle Point .**		
56	**Mixed Strategy For 2 X 2 Games**		

57	**TUTORIAL**		
UNIT-V: Replacement Models **CO5: Understand the Replacement problems** **TB:" P. Sankara Iyer,"Operations Research", Tata McGraw-Hill, 2008 "**			
58	**Replacement Models**	**From 10/06/21 To 24/06/21**	**Online class with MS Teams**
59	Replacement Of Items That Deteriorate Whose Maintenance Costs Increase With Time Without Change In The Money Value.		
60	Replacement Of Items That Fail Suddenly		
61	Individual Replacement Policy		
62	Group Replacement Policy		
63	Tutorial		
UNIT-VI: Inventory Models **CO6: Understand Inventory Models** **TB:" P. Sankara Iyer,"Operations Research", Tata McGraw-Hill, 2008 "**			
64	**Inventory Models**	**From 25/06/21 To 09/07/21**	**Online class with MS Teams**
65	Inventory Costs		
66	Models With Deterministic Demand-Model		
67	(A) Demand Rate Uniform And Production Rate Infinite, Model		
68	(B) Demand Rate Non-Uniform		
69	Production Rate infinite, Model		
70	Demand Rate Uniform		
71	Production Rate Finite		
72	Tutorial		

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TENTATIVE LESSON PLAN: R164205C

OPERATIONAL RESEARCH

Course Title: Operational Research		
Section:B	**Date: 06/4/21**	**Page No: 01 of 04**
Revision No: 00	**Prepared By: A. RADHIKA**	**Approved By: HOD**

Tools: MS Teams, PPTs, Moodle

No. of Periods	Topic	Date	Mode of Delivery
Unit-1: Introduction To Operations Research **CO1: Identify and develop operational research models from the verbal description of the real system.** **TB:" P. Sankara Iyer,"Operations Research", Tata McGraw-Hill, 2008 "**			
1	**Introduction To Operations Research**	**From 07/04/21 To 23/04/21**	**Online class with MS Teams**
2	Scope and objectives of OR		
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5	Limitations of OR		
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7	Linear Programming Problem		
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15	Unbound Solution		
16	Tutorial		
UNIT-II: Transportation Problem **CO2: Understand the mathematical tools that are needed to solve optimization problems for transportation problem** **TB:" P. Sankara Iyer," Operations Research", Tata McGraw-Hill, 2008 "**			
17	Transportation Problem	**From 24/04/21 To 04/05/21**	**Online class with MS Teams**
18	Formulation		
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25	Tutorial		
UNIT-III: Assignment Model **CO3: Understand the mathematical tools that are needed to solve optimization problems for Assignment model** **TB:" P. Sankara Iyer," Operations Research", Tata McGraw-Hill, 2008 "**			
26	**Assignment Model**	**From 05/04/21 To 18/05/21**	**Online class with MS Teams**
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28	Hungarian Method For Optimal Solution		
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71	Production Rate Finite		
72	Tutorial		

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