Lesson Plan

Department: CSE		Date:
Academic Year: 2018-19	Year/Semester:	II/I
Name of the Faculty: G. SUNIL		
Course Name: CAO Course Code:		
Prerequisite:		
Course Outcomes:		
At the end of the course, the students will develop	ability to	
2. Define different number systems and perform	ession. different binary ari	thmetic operations.
3. Illustrate register transfer language using arithmetic, logic, shift micro operations.		
4. Explain processor organization and compare hardwired and micro programmed control unit.		o programmed control unit.
5. Discus input output devices organization, modes of transfer, pipelining and parallel processing.		lining and parallel processing.
6. Comprehend memory organization and hierar	chy.	

Lecture Schedule:

S.No	Topic of the Lecture	Name of the Activity & Instructional Aids	Tentative Date
1	UNIT 1:Basic Structure of Computers: Functional units	Group Writing	11-06-2018 12-06-2018
2	Basic operational concepts	Chalk & Talk	14-06-2018
3	Digital Logic Circuits: Logic Gates	Think-Pair-Share	18-06-2018
4	Boolean algebra	Think-Aloud Pair Problem Solving	19-06-2018 21-06-2018
5	Basic Map simplifications	Think-Aloud Pair Problem Solving	22-06-2018 25-06-2018
6	Combinational Circuits	Think-Aloud Pair Problem	26-06-2018

		Solving	
7	Decoders	Chalk & Talk	28-06-2018
8	Multiplexers	Chalk & Talk	29-06-2018
9	Sequential Circuits	Chalk & Talk	02-07-2018 03-07-2018
10	UNIT 2: Data Representation: Data Types	Think-Pair-Share	05-07-2018 06-07-2018
11	Complements	Chalk & Talk	09-07-2018 10-07-2018
12	Fixed Point Representation	Chalk & Talk	12-07-2018
13	Floating Point Representation	Chalk & Talk	13-07-2018
14	Register Transfer and Microoperations : Register Transfer	Case Study	16-07-2018 17-07-2018
15	Bus and Memory Transfers	Chalk & Talk	19-07-2018
16	Arithmetic Microoperations	Chalk & Talk	20-07-2018 23-07-2018
17	Logic Microoperations	Chalk & Talk	23-07-2018
18	Shift Microoperations	Chalk & Talk	24-07-2018
19	Arithmetic Logic Shift Unit	Chalk & Talk	26-07-2018
20	UNIT 3: Basic Computer Organization and Design: Instruction Codes	Group Writing	30-07-2018
21	Computer Registers	РРТ	31-07-2018 02-08-2018
22	Computer Instructions	PPT	03-08-2018
23	Timing and Control	РРТ	10-08-2018 13-08-2018
24	Instruction Cycle	PPT	14-08-2018
25	Central Processing Unit : Register Organization	РРТ	16-08-2018
26	Instruction Formats	PPT	17-08-2018
27	Computer Arithmetic: Addition, Subtraction	РРТ	20-08-2018 21-08-2018
28	Multiplication	РРТ	23-08-2018 24-08-2018
29	Division Algorithm	PPT	27-08-2018
30	UNIT 4: Input-Output Organization Peripheral Devices	PPT	28-08-2018 30-08-2018
31	Input-Output Interface	Chalk & Talk	31-08-2018
32	Asynchronous Data Transfer	Chalk & Talk	03-09-2018
33	Modes of Transfer, Priority Interrupt	Chalk & Talk	04-09-2018
34	Direct Memory Access	Chalk & Talk	06-09-2018

			07-09-2018
35	Pipelining Arithmetic pipeline	РРТ	10-09-2018 11-09-2018
36	Instruction pipeline	РРТ	13-09-2018
37	RISC Pipelining	РРТ	17-09-2018 18-09-2018
38	UNIT-5: Memory Organization Memory Hierarchy	Group Writing	20-09-2018
39	Main Memory, Auxiliary Memory	РРТ	24-09-2018 25-09-2018
40	Associative Memory	Chalk & Talk	27-09-2018
41	Cache Memory	PPT	28-09-2018
42	Virtual Memory	Chalk & Talk	01-10-2018
43	Memory Management Hardware.	Chalk & Talk	04-10-2018

1. Topic Name: Think-Pair-Share

Name of the Activity: Digital Logic Circuits construction, Binary Data representation

Description of the Activity:

Here the instructor will pose a question where the students can respond within 1-2 minutes of duration. The Student is supposed to share their ideas to others. They are supposed to build the basic target point and should be able to justify it. Other students can raise a topic for discussion. This discussion is on the key concept of Digital Logic Circuits construction which also enhances the thinking abilities of students on the Binary Data representation in the computer. Hereby the students can comprehend and reorganize the material.

2. Topic Name: Think-Aloud Pair Problem Solving:

Name of the Activity: Boolean Algebra, Basic Map Simplification, Combinational circuits.

Description of the Activity:

These topics involve students in problem solving. Instructor is supposed to form the pairs and explain the role of student. Solver is a student who can do the reasoning process while solving the problem. Listener can encourage problem solving and ask for clarification when needed.

From this activity, student can learn the simplification of Boolean algebra and Map simplification.

This improves the logical thinking abilities of students while solving the binary number calculations.

3. Topic Name: Group Writing:

Name of the Activity: Basic Computer organization, Memory Organization

Description of the Activity:

This learning activity allows instructor to give a course related topic to a group of students and are asked to prepare an optimal documentation.

From this activity student can develop and revise the ideas. They learn the abilities of reading and writing. Gathering the information about computer organization and Memory Organization helps them getting involved into the subject. This activity recommends the students to use a study guide for computer organization and Memory Organization topics.

4. Topic Name: Case Study:

Name of the Activity: Register Transfer and Micro Operation.

Description of the Activity:

Instructor can create case studies on Register Transfer and Micro Operations. Each case study can be assigned to a group of students where they are asked to analyze it. Every group can share their analysis on the case study that they have worked, to the other groups. This also builds inter group communication where they learn about different case studies. This analysis improves the knowledge on Computer organization and architecture.

Course Projects:

Prepared By: G. SUNIL REDDY, Md. SALLAUDDIN

Lesson Plan

Department: CSE Date: 07/06/2018		
Academic Year: 2018 – 19	Year/Semester: II / I	
Name of the Faculty: Ch. Sandeep, G. Roopa, .	J. Bhavana	
Course Name: DBMS	Course Code:	
Prerequisite:		
Course Outcomes:		
1. Design E-R diagram into RDBMS and fo	rmulate SQL queries on respective data.	
2. Implement design principles for logical d	esign of database.	
3. Apply normalization on data and transform it into forms that are most suitable to an application at hand.		
4. Understand the needs of database processing and learn techniques for controlling the consequences of concurrent data access.		
5. Analyze business requirements and produce a viable database model and implement the database to meet those requirements.		
6. Develop a database application by successfully implementing design principles.		

Lecture Schedule:

S.No	Topic of the Lecture	Name of the Activity &	Tentative Date
		Instructional Aids	
	UN	IT-I	
1.	Introduction : Data base System Vs	Brainstorming	11/06/2018
	File System		11/00/2018
2.	View of Data, Data Abstraction	Chalk & Talk	12/06/2018
3.	Instances and Schemas, Data Models	Chalk & Talk	13/06/2018
4.	Database Languages	Chalk & Talk	14/06/2018
5.	Database System Structure	Chalk & Talk	18/06/2018
6.	Database Design and ER Diagrams	РРТ	
	Beyond ER Design Entities		19/06/2018
7.	Attributes and Entity sets Relationships	PPT	20/06/2010
	and Relationship sets		20/06/2018
8.	Additional features of ER Model	PPT	21/06/2018
9.	Concept Design with the ER Model	PPT	25/06/2018
	UNI	T-II	
10		0 0 1	27/06/2010
10.	Introduction to the Relational Model	Case Study	27/06/2018
11.	Ouerving Relational Data	Chalk & Talk	28/06/2018
12.	Logical Database Design	Case Study	2/07/2018
13.	Introduction to Views	PPT	3/07/2018
14.	Destroying /Altering Tables and Views	РРТ	4/07/2018
15.	Relational Algebra – Selection and	Chalk & Talk	5/07/2018
1.6	Projection		c/07/2010
16.	Set operations, Renaming	Chalk & Talk	6/07/2018
1/.	Joins, Division		//0//2018
10	I-N	IID Challe & Talle	00/07/2018
10.	Examples of Algebra overviews		10/07/2018
<u>19.</u> 20	Tuple Relational Calculus	DDT	11/07/2018
20.	Domain Relational Calculus	PPT	12/07/2018
21.		Г-Ш	12/07/2010
	UII		
22.	Introduction to Schema Refinement -	Case Study	16/07/2018
	Problems Caused by Redundancy		10/07/2010
23.	Decompositions - Problem related to Decomposition	PPT	17/07/2018

24.	Functional Dependencies - Reasoning	PPT	18/07/2018
	about FDS		10/07/2010
25.	Normal Forms - FIRST, SECOND	PPT	19/07/2018
	THIRD Normal forms		17/07/2010
26.	Normal Forms - FIRST, SECOND,	PPT	23/07/2018
	THIRD Normal forms		25/07/2010
27.	BCNF - Properties of Decompositions -	PPT	24/07/2018
28.	Loss less Join Decomposition	Chalk & Talk	25/07/2018
29.	Dependency preserving Decomposition	Chalk & Talk	26/07/2018
30.	Schema Refinement in Database Design	Chalk & Talk	30/07/2018
31.	Multi valued Dependencies	Chalk & Talk	31/07/2018
32.	FOURTH Normal Form	PPT	1/08/2018
	UNI	T-IV	
33.	Transaction Concept - Transaction	Chalk & Talk	2/08/2018
	State		_,,
34.	Implementation of Atomicity and	Chalk & Talk	06/08/2018
	Durability		
35.	Concurrent – Executions	Chalk & Talk	07/08/2018
36.	Serializability - Recoverability	Chalk & Talk	08/08/2018
37.	Testing for Serializability	Chalk & Talk	13/08/2018
	UNI	[T-V	
38.	Lock-Based Protocols – Timestamp	Chalk & Talk	21/08/2018
	Based Protocols		21/08/2018
39.	Validation- Based Protocols.	Chalk & Talk	22/08/2018
40.	Recovery and Atomicity	Chalk & Talk	23/08/2018
41.	Log - Based Recovery	PPT	27/08/2018
42.	Recovery with Concurrent Transactions	PPT	28/08/2018
43.	Buffer Management	Chalk & Talk	29/08/2018
	UNI	T-VI	
44.	Overview of Storage and Indexing:	Chalk & Talk	3/00/2018
	Data on External Storage		5/09/2018
45.	File Organization and Indexing	PPT	4/09/2018
46.	Hash Based Indexing	Chalk & Talk	10/09/2018
47.	Tree base Indexing	Chalk & Talk	11/09/2018
II-Mid Exams			

1. Topic Name: Data base System Vs File System

Name of the Activity: Brain Storming

Description of the Activity: Students will be given with an introduction of what actually a Database system is and they are asked to compare the existing File system with this Database system. Students should bring out the major differences, advantages and disadvantages between a database system and file system.

2. Topic Name: Introduction to the Relational Model

Name of the Activity: Case Study

Description of the Activity: Students are given with an example study of an Organization where currently no database is being maintained but are willing to create a new database. The description contains all the requirements of that company on what model of database they are expecting. Students are asked to come up with a suitable relational model according to the company's requirements.

3. Topic Name: Introduction to Schema Refinement - Problems Caused by Redundancy

Name of the Activity: Case Study

Description of the Activity: : Students are given with an example study of an Organization where currently a database is being maintained but are willing to refine their database in order to delete redundant data and thereby create a new database. The description contains all the requirements of that company on what model of database they are expecting. Students are asked to come up with a suitable normalization techniques to eliminate anomalies and create new database according to the company's requirements.

Course Projects: Online Flight reservation system, Online library management, Online attendance system, Online Movie ticket reservation system.

Prepared By: Ch. Sandeep, G. Roopa, J. Bhavana

(CS101) MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE

COURSE OBJECTIVES:

Students will be able to

- 1. To interpreting the mathematical logic with concepts of truth tables, normal forms and quantifiers.
- 2. To inferring the predicates and rules of inference for automatic theorem proving, set theory and lattice systems.
- 3. To organizing the algebraic structures, elementary combinatory for making proofs for the mathematical principles.
- 4. To executing the recurrence relations and its characteristics.
- 5. To explaining the concepts of graph theory

COURSE OUTCOMES:

At the end of the course, the students will develop ability to

- 1. Analyze the problem and identify the structures required to generate the mathematical solution.
- 2. Apply the mathematical logic, predicate rules to design an abstract system for theorem proof.
- 3. Apply mathematical foundations, algorithmic principles in modeling and design in computer based system.
- 4. Understand sets, relations, functions, connectives, truth tables, and discrete structures..
- 5. Apply logical reasoning to solve a variety of problems.
- 6. Apply the concepts of graph theory in solving practical engineering problems
- 7. Develop the ability to solve problems involving recurrence relations and generating functions
- 8. Visualize and simplify situations using graphs and trees as tools

LESSON PLAN

Name of the Faculty: Nagendar Yamsani		Academic Year: 2018 - 2019		
Course Number	: CS101	Course Name	e:MFCS	
Program	: B.Tech	Branch	: CSE	
Year / Semester	: II / I	Section	: A	

S.No	Торіс	Proposed Date	Actual Date
	UNIT – I		
	Mathematical Logic:		
	Statements and notations	11&13-06-18	
	Connectives	14&15-06-18	
	Well formed formulas, Truth tables	18&19-06-18	
	Tautology	20-06-18	
	Equivalence implication	21-06-18	
	Normal Forms	22-06-18	
	Predicates :		
	Predicative logic	23-06-18	
	Fire & Bound variables	28-06-18	
	Rules of interference	29&30-06-18	
	Consistency, Proof of contradiction	2&3-07-18	
	Automatic Theorem Proving.	4-07-18	
	Content Beyond the Syllabus		
	Minimal set, Functionally Complete set		

UNIT – II		
Set Theory:		
Introduction, Sets and Elements, Subsets	5-07-18	
Venn Diagrams, Set Operations	6-07-18	
Power Sets, Partitions	7-07-18	
Relations :		
 Introduction, Product Sets	11-07-18	
Relations, Pictorial Representatives of Relations, Composition of Relations	12&13-07-18	
Types of Relations, Closure Properties, Equivalence Relations, compatibility	14&17-07-18	
Partial Ordering Relations	18&19-07-18	
Ordered Sets:		
Ordered Sets, Hasse Diagrams of Partially Ordered Sets	20&21-07-18	
Supremum and Infimum	24-07-18	
Isomorphic (Similar) Ordered Sets, Well-Ordered Sets	25&26-07-18	
Lattices and its Properties	27-07-18	
Content Beyond the Syllabus		
Equivalence classes, Partitions, Blocks		
 UNIT – III		
Functions:		
Introduction, Functions, One-to-One, Onto and Bijective Functions	28&31-07-18	
Invertible Functions, Recursive Functions	1&2-08-18	
Techniques of Counting:		

Introduction, Basic Counting Principles	3-08-18	
Permutations	4&7-08-18	
	08-08-18	
I- Mid Examination	То	
	10-08-18	
Combinations	11-08-18	
The Pigeonhole Principle and its applications, The Inclusion–Exclusion Principle	16&17-08-18	
Combinations with Repetitions	18-08-18	
Binomial and Multinomial Theorems	20-08-18	
Algebraic structures:		
Algebraic systems Examples and general properties	21&23-08-18	
Semi groups, Monoids, Groups, Ring and Fields	24&28-08-18	
sub groups' homomorphism, Isomorphism	29-08-18	
Content Beyond the Syllabus		
Real time counting problems		
UNIT – IV		
Recurrence Relation:		
Generating Functions, Function of sequences	30-08-18	
Calculating Coefficient of generating function	31-08-18	
Recurrence relations	1-09-18	
Solving recurrence relation by substitution and Generating functions	4-09-18	
Characteristics root solution of In homogeneous Recurrence Relation	5-09-18	

C	ontent Beyond the Syllabus		
Cose	onversion of Generating Functions and Function of equences		
	UNIT – V		
G	braph Theory :		
Re	epresentation of Graphs, Basic Concepts	6&7-09-18	
Ba Pr	asic types of Graphs and their roperties	8&11-09-18	
Ise	comorphism and Sub graphs, Multi graphs	12&14-09-18	
Ει	uler circuits	15&17-09-18	
Ha	amiltonian graphs	18&19-09-18	
Cl	hromatic Numbers	20&22-09-18	
D	FS, BFS	25&26-09-18	
Tı	rees, Spanning Trees	3&4-10-18	
Pl	lanar Graph	5&6-10-18	
Pr	rim's and Kruskal's Shortest Path	8&10-10-18	
C	content Beyond the Syllabus		
U: im	sage of equivalence classes concept for Prim's program		
II	I- Mid Examination	12th,13th &16th Oct - 2018	

Time Table:

Monday	:	3	Thursday	:	1
Tuesday	:		Friday	:	1
Wednesday	:	4	Saturday	:	4

Lesson Plan

Department: CSE		Date:08 June 2018	
Academic Year: 2018-2019	Year/Semester: II/I		
Name of the Faculty: S.Naresh Kumar / T.Sampath kumar / K.Sudheer			
Course Name: OOPC (Java)	ourse Name: OOPC (Java) Course Code: CS104		
Prerequisite:			
Programming Knowledge using any one Language(Preferably C), Mathematical Knowledge (*)			
Thinking ability(*)			
Logical Skills			
Enthusiastic to learn			
Course Outcomes:			
1. Summarize the fundamentals of programming such as variables, conditional and iterative			
constructs, methods, etc.	ad programming in	Java including defining	
2. Understand fundamentals of object-oriented programming in Java, including defining classes, invoking methods, using class libraries, etc.			
3. Examine use of members of classes in the Java API.			
4. Design a GUI application for complex problems.			
6. Summarize the framework and architecture for MVC's			

Lecture Schedule:

S.No	Topic of the Lecture	Name of the Activity &	Tentative Date
		Instructional Aids	
	UNIT -I		
1	History of Java, Java buzzwords,	Catch up - Black Board /PPT	11-06-2018
2	Data types, variables, scope and life time of variables, simple java program.	Learning together - Live Demonstration, PPT	12-06-2018
3	Arrays, operators, expressions	Catch up - Live Demonstration, PPT	13-06-2018
4	Control statements, type conversion and casting,	Case Study- Live Demonstration, PPT	14-06-2018
5	Concepts of classes, objects, constructors,	Catch up - Black Board /PPT	18-06-2018 19-06-2018
6	Methods, access control, this keyword,	Live Demonstration, Black Board/PPT	20-06-2018
7	Garbage collection, overloading methods and constructors, parameter passing recursion.	Live Demonstration, Black Board/PPT	21-06-2018
8	String handling.	Think Pair Share- Black Board/PPT	25-06-2018 26-06-2018
	UNIT -II		
9	Inheritance- hierarchical abstractions, Base class object, subclass, subtype, benefits of inheritance	Catch up Black Board/PPT	27-06-2018
10	Member access rules, super uses, using final with inheritance	Think Pair Share- Black Board/PPT	28-06-2018
11	Polymorphism- method overriding,	Learning together - Live Demonstration, PPT	29-06-2018
12	Abstract classes.	Catch up - Black Board /PPT	02-07-2018
13	Defining, Creating and Accessing a Package	Learning together - Live Demonstration, PPT	03-07-2018
14	Understanding CLASSPATH, importing packages	Learning together - Live Demonstration, PPT	04-07-2018

15	Differences between classes and interfaces, defining an interface, implementing interface	Catch up - Black Board /PPT	06-07-2018
16	Applying interfaces, variables in interface and extending interfaces.	Catch up - Black Board /PPT	09-07-2018
17	I/O Streams	Case Study- Live Demonstration, PPT	10-07-2018 11-07-2018
	UNIT –III		
18	Concepts of exception handling, benefits of exception handling	Think Pair Share- Black Board/PPT	12-07-2018
19	Exception hierarchy, usage of try, catch, throw, throws and finally	Think Pair Share- Black Board/PPT	16-07-2018
20	Built in Exceptions Examples	Case Study - Live Demonstration	17/07/2018
21	Creating own exception,	Team Based Learning- Black Board, Live Demonstration	18/07/2018
22	Exception Propagation	Catch up - Black Board /PPT	19/07/2018
23	Differences between multithreading and multitasking, thread life cycle	Case Study- Live Demonstration, PPT	24/07/2018
24	Creating threads	Black Board	26/07/2018
25	Synchronizing threads, daemon threads, thread groups.	Team Based Learning- Black Board/PPT	01/08/2018
26	Inter Thread Communication, Deadlocks	Case Study - Live Demonstration/Black Board/PPT	03/08/2018
	UNIT -IV		
27	Event Handling: Events, Event sources, Event classes, Event Listeners	Catch up - Black Board /PPT	13/08/2018
28	Delegation event model, handling mouse and keyboard events	Group problem solving- Live Demonstration,PPT	17/08/2018 20/08/2018
29	Adapter classes, inner classes.	Case Study- Live Demonstration,PPT	21/08/2018
30	The AWT class hierarchy, user interface components- labels, button	Team Based Learning- Black Board/PPT	23/08/2018
31	Canvas, scrollbars, text components	Team Based Learning-	24/08/2018

		Black Board/PPT	
32	Check box, check box groups, choices	Case Study- Live Demonstration, PPT	27/08/2018
33	Lists panels – scroll pane, dialogs,	Case Study- Live Demonstration, PPT	28/08/2018
34	Menu bar, graphics	Case Study- Live Demonstration, PPT	29/08/2018
35	Layout manager types – boarder, grid,	Team Based Learning- Black Board/PPT	30/08/2018
36	Layout manager -flow, card and grid bag	Team Based Learning- Black Board/PPT	31/08/2018
	UNIT –V		
37	Swings: Introduction, limitations of AWT, MVC architecture	Catch up - Black Board /PPT	01/09/2018
38	Components, Containers,	Catch up - Black Board /PPT	04/09/2018
39	Exploring Swings - JApplet, JFrame and JComponent	Case Study- Live Demonstration,PPT	05/09/2018
40	Icons and Labels, text fields,	Case Study- Live Demonstration,PPT	06/09/2018
41	Buttons – The JButton class	Case Study- Live Demonstration,PPT	10/09/2018
42	Check boxes, Radio buttons	Case Study- Live Demonstration,PPT	11/09/2018
43	Combo boxes	Case Study- Live Demonstration,PPT	12/09/2018
44	Tabbed Panes, Scroll Panes.	Case Study- Live Demonstration,PPT	17/09/2018
45	Trees, and Tables	Case Study- Live	18/09/2018
		Demonstration, PPT.	19/09/2018