Name of Faculty:Jyoti	Discipline:Computer Engineering
Semester:4th	Subject:Object Oriented Programming using Java
LESSON PLAN DURATION : - 15 weeks (from Jan-2019 to May- 2019)	WORK LOAD (LECTURE/PRACTICAL) PER WEEK (IN HOURS):- LECTURE-03, PRACTIACL-06

weeks	Theory		Practical	
	Lectures/hrs	Topics(including assisgnments & test)	Practical/hrs	Experiments
1			1	Consider we have a Class of Cars under which Santro Xing, Alto and Wagon R represents individual Objects. In this context each Car Object will have its own, Model, Year of Manufacture, Colour, Top Speed, etc. which form Properties of the Car class and the associated actions i.e., object
			2	
			3	
			1	Revision of Programme Performed
			2	
			3	
	1	Fundamentals of object oriented programming – procedure oriented programming Vs. object oriented programming (OOP)		
	2	Object oriented programming concepts – Classes, object, object reference, abstraction, encapsulation, inheritance, polymorphism		
	3	Object oriented programming concepts: abstraction, encapsulation,		
2			1	In a software company Software Engineers, Sr. Software Engineers, Module Lead, Technical Lead, Project Lead, Project Manager, Program Manager, Directors all are the employees of the company but their work, perks, roles, responsibilities differs. Create the Employee base class would provide the common behaviors of all types of employee and also some
			2	
			3	
			1	Suppose the Airport personals want to maintain records for the arrival and departure of the planes. Create a class Airport that has data like name, id, and address. Create two more classes for Arrival and Departure implementing Airport that will have track of planes (their name, id, arrival time or departure time and a counter to count the number of arrivals) also
			2	
			3	
	4	Object oriented programming concepts: inheritance, polymorphism		
	5	Introduction of eclipse (IDE) for developing programs in Java		
	6	Language Construct:variables, types and type declarations, data types, increment and decrement operators,		
			1	Create a whole menu driven hospital management system using concept of OOP like classes, inheritance. Include
			2	
			3	

				1	Revision of Programme Performed
				2	
				3	
3	7	Language Construct:variables, types and type declarations, data types, increment and decrement operators,			
	8	Language Construct: relational and logical operators; if then else clause; conditional expressions,			
	9	Language Construct::input using scanner class and output statement, loops			
4				1	Program using Access specifier:Create a class called Musicians to contain three methods string ( ), wind ( ) and perc ( ). Each of these methods should initialize a string array
				2	
				3	
				1	Revision of Programme Performed
				2	
				3	
	10	Language Construct:switch case.			
	11	Language construct:array Mehtods			
	12	Classes and Objects :Creation,			
5				1	Program using Multilevel Inheritence
				2	
				3	
				1	Program Using concept of Multiple Inheritence
				2	
				3	
	13	Accessing class members			
	14	Private Vs Public Vs Protected Vs Default			
	15	Assignment 1st			
6				1	Revision of Programme Performed
				2	
				3	
				1	program using class definitions, the constructors, set methods, get methods
				2	
				3	
	16	Sessional Ist			
	17				
	18	Constructors			
7				1	Revision of Programme Performed
				2	
				3	
				1	Revision of Programme Performed
				2	
				3	
	19	Introduction of Objects			
	20	Object reference			
	21	Inheritance:Definition of inheritance & its types			
				1	Revision of Programme

8				2	Performed
				3	
				1	Revision of Programme Performed
				2	
				3	
	22	Acess specifier:Protected			
	23	Acess specifier:Private			
	24	Access Specifier:Public			
9				1	Revision of Programme Performed
				2	
				3	
				1	Revision of Programme Performed
				2	
				3	
	25	constructor chaining			
	26	Assignment 2nd			
	27	Order of invocation of constructor			
10				1	Program of creating an array of object of animals
				2	
				3	
				1	create a program using interface
				2	
				3	
	28	Sessional 2nd			
	29	Type of Inheritance:Single			
	30	Type of Inheritance:Multilevel			
11				1	Revision of Programme Performed
				2	
				3	
				1	Revision of Programme Performed
				2	
				3	
	31	Type of Inheritance:Hierarchical			
	32	Type of Inheritance:Hybrid			
	33	Polymorphism			
12				1	Revision of Programme Performed
				2	
				3	
				1	Revision of Programme Performed
				2	
				3	
	34	Methods & constructor Overloading			
	35	Methods Overriding			
	36	up-casting and down-casting.			
13				1	Revision of Programme Performed
				2	
				3	
				1	Revision of Programme Performed
				2	
				3	
	37	Abstract class & Interface			
	38	Key points of Abstract class & interface			
	39	Difference between an abstract class & interface			

Week	No.	Topic	Sub	Description
14			1	Write a program with Student as abstract class and create derive classes Engineering, Medicine and Science from base class Student. Create the objects of the derived classes and process them and access them using array of pointer of type base class Student.
			2	
			3	
			1	Revision of Programme Performed
			2	
			3	
	40	Implementation of multiple inheritance through interface		
	41	Introduction to Exception Handling		
	42	Definition of exception handling, implementation of keywords like try, catch,		
15			1	Revision of Programme Performed
			2	
			3	
			1	Revision of Programme Performed
			2	
			3	
	43	Implementation of Keywords:throw,throws		
	44	Importance of exception handling in practical implementation of live projects.		
	45	Sessional test 3		