


Remedial T-2

 KONERU LAKSHMAIAH EDUCATION FOUNDATION <small>(Deemed to be University, Estd. u/s. 3 of UGC Act 1956)</small>						
B.Tech - Even Sem : Semester in Exam-II Academic Year:2019-2020 19cs1203 - OBJECT ORIENTED PROGRAMMING Set No: 1						
Time:		Max.Marks: 50				
S.NO	Answer All Questions	Choice	Marks	CO	CO BTL	COI BTL
1.	Create a class Animal with an abstract method numberOfLegs():int. The classes Dog, Human inherits from Animal. Dog has 4legs, Human has 2. Create 2 references of Animal and assign them the objects of Dog and Human. Invoke the method.		3Marks	CO3	3	3
2.	Explain the differences between method overloading and method overriding.		3Marks	CO3	3	3
3.	Predict the output of the following code and explain the answer <pre> class Test{ public static void main(String[] args){ try{ int a[]={1, 2, 3, 4}; for (int i = 1; i <= 4; i++){ System.out.println(a[i]); } } catch (Exception e){ System.out.println("error = " + e); } catch (ArrayIndexOutOfBoundsException e){ System.out.println("ArrayIndexOutOfBoundsException"); } } } </pre>		3Marks	CO4	3	2
4.	Develop a program to create a thread that displays even numbers upto a given number n.		3Marks	CO4	3	3
5.	Develop a class Point2D with private attributes x and y of type double and a class Point3D which inherits Point2D and has a private attribute z. Write constructors, toString() methods in both classes and a main() method to create object of Point3D to print all values of x, y and z.		5Marks	CO3	3	2
6.	Create a class Car with warranty (in terms of years), fuel(petrol/diesel) as attributes and an abstract method seats():int which return the number of seats. The subclass SUV and Audi have 8 and 5 seats respectively. Define the toString() method in all the classes. Define the parameterized constructors, toString() methods in the classes. The CarDemo class has main() method that assign the objects to Car reference and print the details.		5Marks	CO3	3	3
7.	Consider a set of years passed as command line arguments. Write a program that iterates through the values and handles an Exception when invalid year is found in the array.		5Marks	CO4	3	2
8.	Consider a set of car names given as inputs through command line and store in an ArrayList. The task is to sort them and print the sorted data.		5Marks	CO4	3	3

9.	Develop an abstract class Employee with ID, name and address as arguments and an abstract method computeSalary():double. The classes ContractEmployee and RegularEmployee inherit Person. ContractEmployee has hoursWorked and hourlyWage as its attributes and the RegularEmployee has basic and allowance as attributes. The rules for the computation of salary are as follows: 1. For Contract employees the salary is product of hoursWorked and hourlyWage. 2. For Regular employee the salary is basic + HRA(20 % of basic) + allowance. Write the Demo class with main() method to create objects of both ContractEmployee and RegularEmployee and compute the salary. Draw the class diagram.	choice Q-10	9Marks	CO3	3	3
10.	Develop an interface MyCalculator with 4 methods - add(), sub(), mul() and div(). Each of the above methods return an integer value. A class IntegerCalculator implements the interface and has 2 private attributes x and y. Write the main() method in CalculatorDemo class to demonstrate the abilities of IntegerCalculator.		9Marks	CO3	3	3
11.	Develop a program to create a class "ContactDictionary" that contains the following information. (a) Name of a person (b) Address (c) Mobile Number. The details are to be stored in an array list. The main() method of ContactDemo class must display a menu with the following operations:a) Add New Contact Information b) Print all Contact Details	choice Q-12	9Marks	CO4	3	2
12.	Assume a class Book the following private instance members a) ISBN (long) – 10 digits b) Title (String) – length must be less than 50 c) Price (double) – must be a positive value Define a parameterized constructor and setters to validate the inputs. The setters raise Exception. The exceptions must be handled in the main() method of BookDemo class during object instantiation.		9Marks	CO4	3	3

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