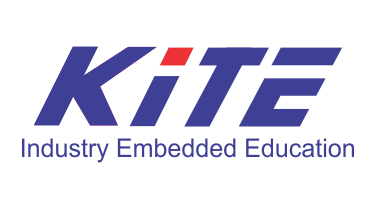
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| **Roll Number** |  |  |  |  |  |  |  |

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**KGiSL INSTITUTE OF TECHNOLOGY**

**COIMBATORE - 641 035**

**DEPARTMENT OF INFORMATION TECHNOLOGY**

**Answer Key**

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| **CLASS:** | **:** | **II B.Tech IT** | **MAX MARKS** | **:** | **25** |
| **SEMESTER:** | **:** | **III** | **DURATION** | **:** | **0:50 Hrs** |
| **SUBJECT:** | **:** | **Object Oriented Programming** | **CODE** | **:** | **IT8392** |
| **COURSE NO** | : | **C204** | **DATE** | **:** |  |
| **ACADEMIC YEAR** | : | **2019 – 20 (ODD)** | **EXAM** | **:** | **SLIP TEST 2** |

|  |  |  |
| --- | --- | --- |
| **I** | **ANSWER ALL QUESTIONS** | |
|  | 1. | **What is Constructor?**  Constructor is a block of code that initializes the newly created object.  A constructor resembles an instance method in java but it’s not a method as it doesn’t have a return type. |
|  | 2. | **Write a java program to compute BMI of a person.**  import java.util.Scanner;  public class Example {  public static void main(String args[]) {  Scanner sc = new Scanner(System.in);  System.out.print("Input weight in kilogram: ");  double weight = sc.nextDouble();  System.out.print("\nInput height in meters: ");  double height = sc.nextDouble();  double BMI = weight / (height \* height);  System.out.print("\nThe Body Mass Index (BMI) is " + BMI + " kg/m2");  }  } |

|  |  |  |
| --- | --- | --- |
|  | 3. | **Give a short note on static members.**  The static keyword in Java is used for memory management mainly. We can apply java static keyword with variables, methods, blocks and nested class. The static keyword belongs to the class than an instance of the class.  The static can be:   * Variable (also known as a class variable) * Method (also known as a class method) * Block * Nested class |
|  | 4. | **Define packages.**   * A java package is a group of similar types of classes, interfaces and sub-packages. * Package in java can be categorized in two form, built-in package and user-defined package. * There are many built-in packages such as java, lang, awt, javax, swing, net, io, util, sql etc. |
|  | 5. | **Define arrays.**   * An array is a collection of similar type of elements that have a contiguous memory location. * Java array is an object which contains elements of a similar data type. It is a data structure where we store similar elements. We can store only a fixed set of elements in a Java array. * Array in java is index-based, the first element of the array is stored at the 0 index. |

**PART – B ( 1 X 15 = 15 Marks )**

**ANSWER ALL QUESTIONS**

**6. (a)** **Write a java program that receives basic details of students [Name, RollNo, Three Subject Marks] and computes the following [Total and average] and displays appropriate grades.**

/\*

Objective: Student Information Management

Author: Rajasekaran S

Email: proffraja@gmail.com

\*/

import java.io.\*;

class Student{

String name;

int rollNo;

String dept;

int mark1;

int mark2;

int mark3;

int total;

double avg;

String grade;

Student(String name, int rollNo, String dept, int mark1, int mark2, int mark3){

this.name = name;

this.rollNo = rollNo;

this.dept = dept;

this.mark1 = mark1;

this.mark2 = mark2;

this.mark3 = mark3;

}

void computeGrade(){

this.total = this.mark1 + this.mark2 + this.mark3;

this.avg = total/3;

if(avg>90)

this.grade = "O";

else if(avg>80 && avg<=90)

this.grade = "A";

else if(avg>70 && avg<=80)

this.grade = "B";

else if(avg>60 && avg<=70)

this.grade = "C";

else if(avg>50 && avg<=60)

this.grade = "E";

else

this.grade = "F";

}

void displayDetails(){

System.out.println("Student Details");

System.out.println("---------------");

System.out.println("Student Name:"+this.name);

System.out.println("Student RollNo:"+this.rollNo);

System.out.println("Student Department:"+this.dept);

System.out.println("Mark 1:"+this.mark1);

System.out.println("Mark 2:"+this.mark2);

System.out.println("Mark 3:"+this.mark3);

System.out.println("Total :"+this.total);

System.out.println("Avg :"+this.avg);

System.out.println("Grade :"+this.grade+"\n");

}

}

public class Main{

public static void main(String[] args){

Student aStudent = new Student("Raja",12,"IT",86,90,92);

aStudent.computeGrade();

aStudent.displayDetails();

Student bStudent = new Student("Bala",20,"IT",55,53,60);

bStudent.computeGrade();

bStudent.displayDetails();

}

}

<https://cyber-dojo.org/review/show/egPTDq?was_index=4&now_index=5&filename=undefined>

**(b) Explain about access specifiers supported in java.**

* It is a set of keywords that used to restrict the scope of a class, constructor , variable , method or data member.
* It is also known as access modifiers
* There are 4 modifiers.
  + Public
  + Private
  + Protected
  + Default

