**Philadelphia University**

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**Faculty of Information Technology**

**Department of Software Engineering**

**Examination Paper**

**Lecturer : Ms. Enas Al-Naffar**

**Coordinator : Dr. Samer Hanna**

**Internal Examiner: Dr. Ali Fouad**

**Object-Oriented Programming 721220 First Exam 2nd semester** **2012-2013**

**Date: 4th April 2013**  **Section: 1**  **Time**: **50 Minutes**

**Information for Candidates**

1. *This examination paper contains 3 questions. The total is 20.*
2. *The marks for parts of questions are shown in round brackets.*

**I. Basic Notions**

*Objectives: The aim of the question is to evaluate your knowledge and skills concerning with the basic concepts of* ***OOP****.*

**Question 1: [4 Marks, 1 Mark each]**

Fill in the blank with the correct answer:

1. The operator *new* calls the .................
2. A blueprint for a software object is called a .....................

3- The following constructor has an error, which is ..............................

 *Public* *int Employee( ) { empID = 100; }*

1. The following diagram is called ..............................



### II. Familiar Problems Solving

### *Objectives: The aim of the question is to evaluate your basic knowledge of the key aspects of the lectures material and your ability to solve familiar problems.*

**Question 2:** **[8 Marks]**

Write a simple class called *Counter* that represents a counter that counts integer values starting from Zero (1 mark)

1. This class has one instance variable representing the value of the counter. (1 mark)
2. Write a proper constructor for the class (2 marks)
3. Create two Methods:
*increment( )* that adds one to the counter value*.* (2 marks ) *getValue( )* that returns the current counter value. (2 marks )

**Question 3: [8 Marks]**

Study the following class, then answer the questions below:

using System;

 public class Employee

 {

 private string name;

 private double salary;

 public double Sal

 {

 get { return salary; }

 set { if (value > 0) salary = value; }

 }

 public Employee( string n)

 {

 Sal=50;

 name=n;

 }

 }

 public class TestEmployee

 {

 public static void Main()

 {

 ……………………………

emp.Sal= -400;

emp.name = "Enas";

Console.WriteLine("Salary = {0}", emp.Sal);

 }
 }

1. Create an object of class Employee called *emp* (2 marks).
2. The Main method conatins an error. Try to locate that error and correct it. (2 marks)
3. What is the output of the last statement? (2 marks)
4. Extend the class by adding a method called *Bonus( ).*

This method asks users to input the number of bonus hours. It then calcucates the bonus value where the employee will be paid 10$ per hour (2 marks)

Good Luck ☺