

Patuakhali Science and Technology University

Faculty of Computer Science and Engineering

Final Examination of B. Sc. Engineering in CSE Level: 1 Semester: II Session: 2020-2021

Course Code
CCE-121

Course Title
Object Oriented Programming

July December 2021

Credit: 03
Time: 03 Hr
Marks: 70

Answer any 05 out of 06 Questions (Split answers are highly discouraged)

Dept. of Computer and Communication Engineering

1	[A]	Fill in the blanks in each of the following statements: i) If a class declares constructors, the compiler will not create a----- ii) The public methods of a class are also known as the class's ----- or ---- iii) Lists and tables of values can be stored in ----- and ----- . iv) The number used to refer to a particular array element is called the elements -----. v) A variable known only within the method in which it's declared is called a-----. vi) It's possible to have several methods with the same name that each operate on different types or numbers of arguments. This feature is called method -----. vii) Typically, ----- statements are used for counter-controlled repetition and ----- statements for sentinel-controlled repetition. viii) Methods that perform common tasks and do not require objects are called methods-----.	0.5*8 =4
	[B]	Write a Java statement or a set of Java statements to accomplish each of the following tasks: a) Sum the odd integers between 1 and 99, using a for statement. Assume that the integer variables sum and count have been declared. b) Print the integers from 1 to 20, using a while loop and the counter variable i. Assume that the variable i has been declared, but not initialized. Print only five integers per line. c) Repeat part (c), using a for statement.	3
	[C]	i) What gives Java its 'write once and run anywhere' nature? ii) What happens at runtime during Java compilation? iii) Can you save a Java source file by another name than the class name? iv) Can you have multiple classes in a java source file?	4
	[D]	Write a Java program to create and display unique three-digit number using 1, 2, 3, 4. Also count how many three-digit numbers are there.	3
2	[A]	What are the various access specifiers in Java? Write an example of public access modifier.	4
	[B]	Write the rules of Constructor. What is the purpose of a default constructor? Explain with example	4
	[C]	i) What is the output of the following Java program? <pre>public class Test { Test(int a, int b) { System.out.println("a = "+a+" b = "+b); } Test(int a, float b) { System.out.println("a = "+a+" b = "+b); } public static void main (String args[]) { byte a = 10; byte b = 15; Test test = new Test(a,b); } }</pre> ii) <pre>class Test { int i; } public class Main { public static void main (String args[]) { Test test = new Test(); System.out.println(test.i); } }</pre> iii) <pre>class Test { public static void main (String args[]) { for(int i=0; 0; i++) { System.out.println("Hello PSTU CSE"); } } }</pre>	3
	[D]	Write a Java program to print a pyramid using star pattern. Number of rows input from keyboard.	3
3	[A]	What is the static variable? Explain a java program with and without static variable.	3
	[B]	i) What is the difference between static (class) method and instance method? ii) What are the main uses of this keyword?	3

	[C]	Define Object and Class. Write Object and Class Example: main outside the class and main within the class	4
	[D]	Write a Java program to sort an array of given integers using the Bubble sorting Algorithm Original Array:[7, -5, 3, 2, 1, 0, 45] Sorted Array : [-5, 0, 1, 2, 3, 7, 45]	4
4	[A]	Differentiate between the throw and throws keyword.	3
	[B]	“Aggregation represents HAS-A relationship.”-explain with example.	3
	[C]	Is it possible to make any class read-only or write-only in java? How?	3
	[D]	What is the use of instance initializer block while we can directly assign a value in instance data member?	3
	[E]	How can you achieve abstraction in java?	2
5	[A]	Write a java program for demonstrating several thread states.	4
	[B]	“Java doesn't allow the return type-based overloading, but JVM always allows return type-based overloading.”- justify the statement with example.	4
	[C]	Multiple inheritance is not supported through class in java, but it is possible by an interface, why?	3
	[D]	Can we initialize blank final variable? How?	3
6	[A]	What will be the output of the following Java programs?	4
	1. i) class Dog { 2. public static void main(String args[]) { 3. Dog d=null; 4. System.out.println(d instanceof Dog); } }	1. ii) class A { 2. protected void msg(){System.out.println("Hello java");} 3. public class Simple extends A { 4. void msg(){System.out.println("Hello java");} 5. public static void main(String args[]) { 6. Simple obj=new Simple(); 7. obj.msg(); } }	
	1. iii)public class JavaExceptionExample1 { 2. public static void main(String args[]) { 3. try { 4. int data=100/0; 5. } catch(ArithmeticException e) { 6. System.out.println(e); 7. System.out.println("rest of the code..."); 8. } }	1. iv)class Animal { 2. void eat(){System.out.println("eating...");} } 3. class Dog extends Animal { 4. void bark(){System.out.println("barking...");} } 5. class Cat extends Animal { 6. void meow(){System.out.println("meowing...");} } 7. class TestInheritance3 { 8. public static void main(String args[]) { 9. Cat c=new Cat(); 10. c.meow(); 11. c.eat(); 12. c.bark();} }	
	[B]	How to access package from another package?	2
	[C]	What is the purpose of join method?	2
	[D]	How to perform two tasks by two threads?	2
	[E]	What is the Thread Scheduler and what is the difference between preemptive scheduling and time slicing?	4