University of Sargodha

MScIT-2nd Term Exam 2015

Subject: M.Sc.IT   Course: Object Oriented Programming (CMP-2123)

Time Allowed: 2:30 Hours   Maximum Marks: 60

Objective Part   Compulsory

Q. 1   Note: Attempt all questions each question carry equal marks? (12 × 2 = 24)

1. What are instance variables?
2. How can a GUI component handle its own events?
3. What is the difference between method overriding and overloading?
4. Which package is imported by default and why?
5. What is the difference between interface and abstract class?
6. Can an abstract class be declared final?
7. What do you understand by private, protected and public?
8. How are this() and super() used with constructors?
9. What is encapsulation in object oriented programming?
10. What is difference between Array and ArrayList?
11. What is a java class? Explain with simple example.
12. If a method is declared as protected, where may the method be accessed?

[Subjective: (9 × 4 = 36)]

Note: Attempt any four questions. All questions carry equal marks

Q. 2   Define a class Weight to represent a weight in tons, kilograms, and grams, and include a range of methods and constructors. Demonstrate this class by creating and combining some class objects.

Q. 3   Write a java program that has two classes Point and Circle. Circle class is the subclass of the Point class. Demonstrate upcasting and downcasting by using Circle class?

Q. 4   Person class has two subclass Employee and Manager. Develop a program by create and using these classes to demonstrate polymorphic behavior.

Q. 5   What is exception handling in java. Write a java program to handle following multiple exceptions DivideByZeroException, NullReferenceException, RuntimeException, and Exception by using single try block and multiple catch blocks.

Q. 6   Implement a class ShowFile with a single static utility method that reads characters from a text file, byte by byte, and displays the contents of the file on the screen. Construct a second class that demonstrates the capability of ShowFile

Q. 7   Design a GUI application consisting of a single frame with three buttons labeled Hello, Goodbye, and Exit. Pressing the Hello button displays the string "Hello" in the frame, pressing the Goodbye button displays "Goodbye", and pressing the Exit button closes the frame and terminates the application.

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