COMSATS Institute of Information Technology (CIIT)
Islamabad Campus
Object Oriented Programming
Final Exam. BCS-2(A). Spring 2010

Part B

Instructor: Dr. Zia-ud-Din   Total Marks: 64   Allocated Time: 2 hrs 20 min

Name: _____   Registration Number: _____

Note: Attempt all questions. The exam consists of two parts. This is Part B. Part B has to be solved on the answer sheet.

Q. 3: Write notes on each of the following. Elaborate your answers with appropriate code examples. (6*4=24)

1. Copy constructor
2. Exception handling
3. Abstract classes
4. Friend functions

Q. 4: Write a C++ program with the following specifications. (20)

Write a class Student containing 3 non-static data members id, gpa and name. The class also contains a static data member count. Write appropriate constructor(s) to initialize its data members. Write a destructor that dynamically deallocates the memory for Student objects. Inherit a class MSStudent from the Student class. MSStudent contains an additional data member thesisTitle. Write appropriate constructor(s) and destructor for MSStudent class. In your main program, create an array of Student pointers. Fill the array by creating a few objects of Student and MSStudent on the heap. Display the data members of these objects by writing a showData function in both classes. Also display the number of student objects in the program (using count). Use appropriate data types for all data members.

Q. 5: This question is based on your semester project. Write the title of your project, your project partner's name and names of the classes you used in your project along with their relationships. The actual grading for this question will consider your overall performance in the semester project including the in time submission of the code, your presentation, demo and response to oral questions during the presentation. (20)

********************************* Good Luck *********************************