

Name: _____

CS5000 Summer 2016 FINAL Exam (Sunday edition)

1 (5)	2 (10)	3 (15)	4 (25)	5 (10)
6 (20)	7 (20)		Total (105)	

1. _____ (5pts) Write java code to create a boolean variable, called `amISmart` and assign it the value `true`.

2. _____ (10 pts) Write a function called `isOddOrGreaterThan10` that takes an `int` and returns a `boolean`; the function returns `true` if the number is odd or grater than 10 (or both) and `false` otherwise (remember the `%` operator returns the remainder of the integer division of two numbers).

3. _____ (15 pts) Write a function called `fizzBuzz` that takes an `int` and returns a `String`. The function should return `"FizzBuzz"` if the number is divisible by 3 and 5, `"Fizz"` if it's just divisible by 3, `"Buzz"` if it's just divisible by 5 and the number (as a string; you can use the `toString` method of the `Integer` class) if it's divisible by neither.

4. _____ (25 pts) Given the interface IStudent (on the last page), create a class Student that implements said interface (define fields as convenient);
- a. the Student constructor takes two parameters, one for name and one for GPA;
5. _____ (10 pts) Given your Student class above, write code to create a variable s1 of type Student, and assign it to a new Student named Orlando and with 3.8 GPA

6. _____ (20pts) Write a function `averageGPA`. that takes an array of `IStudents` (the interface on the last page, not your class) and returns a double, the average GPA of the students (return 0 if the array is empty).
7. _____ (20pts) Write a function `valedictorian`, that takes a List of `IStudents` and returns an `IStudent`, the student with the highest GPA (return the first student with the highest GPA if there is a tie). Return null if the list is empty.

```
Interface IStudent {  
    void setName(String name);  
    String getName();  
    public setGPA(double GPA);  
    double getGPA();  
}
```