**Ahsanullah University of Science and Technology**

**Course Title: Object Oriented Programming Lab**

**Course Number: CSE1206**

**Online: 2 Date: 28 January , 2019 Group: A2 Time: 35 minutes Marks:20**

**Set- A**

1. Open a project called AccountDemo which will contain a class called **Account**. (1)
2. This class contains:

* Three private instance variables: id (of the type String), name(of the type String), balance (of the type int) and numberOfTransactions (of the type int). (2)
* Two *overloaded* constructors - a *default* constructor with two arguments for setting id and name and it sets the balance value to 0, and a constructor which takes three arguments for setting every instances of that class with the same name as the member instances. (2)
* One public methods: credit() which takes an integer amount as parameter and add that to the balance of the account and returns the balance. Increase numberOfTransactions by 1. (2)
* One public methods: debit() which takes an integer amount as a parameter and subtracts that from the balance of the account and returns the balance and increase numberOfTransactions by 1. Otherwise it returns the balance with an message to inform the user about insufficient balance.(2)
* One public method compareMoreActiveAccount() which will take an account object as parameter which will print which account is more active- based on th number of transactions. The print message will be like <Account id of name> is more active than <Account id of name>. If the transactions number is equal, print “Both <account id - name > and <account id-name> are active.” (3)
* This well-designed Java class should contain a public method called toString() that returns a short description of the instance (in a return type of String) in “Employee [id=?, Name= ?, balance=?]” format. (2)
* Write necessary getter and setter methods maintaining the private and public instances with proper use of this. (3)
* In AccountDemo.java, declare an object of Account with its default values and then print information about that account. Then create another object of that class with user given values. Perform multiple debit and credit operations. After every debit and credit operation, print the account balance with proper messages. Also compare which account is more active. (3)