VIT
Vellore Institute of Technology

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING
Continuous Assessment Test – 1
FALL SEMESTER 2019-20

Course Name: Java Programming
Class Numbers: 1242/1249/1832/3606/4115/6680/ 7429
Slot: A1+TA1
Exam Duration: 90 Minutes

Code: CSE1007

Maximum Marks: 50

Answer All The Questions (5 * 10 = 50 Marks)

1 a. Given a positive integer n. Write a program using java to print the pyramid pattern as described in the example below. [5 Marks]

```
Input: n = 5
Output:
1
3*2
4*5*6
10*9*8*7
11*12*13*14*15
```

1. b. Write a Java Program that reads a set of integers, and then prints the sum of the even and odd integers. [5 Marks]

```
Input: 3 4 5 2 1
Output: Sum of even numbers = 6 Sum of odd numbers = 9
```

2. Differentiate between StringBuffer and StringBuilder in Java programming using suitable examples. [10 Marks]

3. Create an employee class with employ id, name and salary as members and initialize the values using default and parameterized constructors. Also create an array of employee objects of size three in main method and print the total salary of all three employee through a method defined in the class by passing this array as an argument. [10 Marks]

4. Write a Java program to accomplish the following process: [10 Marks]

a. Define a class Account with accountNumber and balance as members. Develop methods to get and set value for members and print the account details.
b. Define two classes SavingsAccount and CurrentAccount which derive the accountNumber class. Both classes having member minBalance. Design Getter methods and setter methods for theses two classes.
c. Define method Deposit which allows to add money into balance.
d. Also, design method WithDraw which allows deducting money from the balance and making sure that after withdrawal the minimum balance should be maintained.
e. Print details after every transaction.
f. Create a class Demo to test the above process. Create necessary array of objects, call the required methods and give necessary outputs.

5. a. Explain how to create packages using suitable example. [5 Marks]

5. b. Explain ArithmeticException and ArrayIndexOutOfBounds Exception with the program. [5 Marks]