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**JOMO KENYATTA UNIVERSITY**

**OF**

**AGRICULTURE AND TECHNOLOGY**

 **UNIVERSITY EXAMINATIONS 2015/2016**

**YEAR III SEMESTER II EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS INFORMATION TECHNOLOGY**

**BIT 2203: ADVANCED PROGRAMMING**

**DATE: AUGUST 2016 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO QUESTIONS**

**QUESTION ONE (30 MARKS)**

1. Find the errors in each of the following statements, and explain how to correct it (them);
2. buttonName = JButton(“caption”); [2 marks]
3. Label a label, Jlabel; || create reference. [2 marks]
4. Extfield = new JTextField (50, “Default”); [2 marks]
5. Briefly discuss the THREE common super classes of the swing components. [3 marks]
6. Normally an applet comes from anther machine java routine environment, outline restrictions applet enforce. [4 marks]
7. Describe how polymorphism is used. [3 marks]
8. Write a program that counts the number of each per type. [4 marks]
9. Define the term interfaced stating its uses in programming. [5 marks]
10. Explain line per line what the following code does;

 ArrayList <string> GroupNames;

 GroupNames = new ArrayList <string> C);

 GroupNames.add (“mark”);

 GroupNames.add (“Andrew”);

 GroupNames.add (Beth”); [3 marks]

1. Explain why it is important to define constructors when defining classes. [2 marks]

**QUESTION TWO (20 MARKS)**

1. Explain the following JAVA library;

(i) Input stream and reader

(ii) Output stream and writer [6 marks]

1. Discuss the factors we consider while choosing a container [3 marks]
2. In Java we can use new Keyword in different context. Explain [5 marks]
3. Using Java create an array at string. Objects and assign to each element, point the array by using a for loop. [6 marks]

**QUESTION THREE (20 MARKS)**

1. List and explain the major THREE components at a method. [6 marks]
2. Differentiate the following terms;

(i) CompareTo method and equal method. [4 marks]

(ii) Accessor method and mututor method [4 marks]

(iii) Superclass and subclass [4 marks]

(iv) Upcasting and downcasting [2 marks]

**QUESTION FOUR (20 MARKS)**

1. Write a java program at a simple class. [5 marks]
2. Java defines three main interfaces collections. State and explain. [6 marks]
3. Briefly write what a class can do and can’t do [4 marks]
4. Write a java program that demonstrates multi-level inheritance named classes; class A, Class B and class C. [5 marks]

**QUESTION FIVE (20 MARKS)**

1. Access modifiers specify accessibility to changing variables, methods, and class. State and explain FOUR access modifiers in Java. [8 marks]
2. Write a programming code in java that takes FirstName and secondName and finally joins them. [6 marks]
3. Differentiate between applets and applications. [2 marks]
4. Object oriented language provide basic facilities for class reuse. Discuss the different ways of reusing classes. [4 marks]