



SOUTH EASTERN KENYA UNIVERSITY

UNIVERSITY EXAMINATIONS 2017/2018

FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND BACHELOR OF INFORMATION TECHNOLOGY

BIT 211: Advanced object oriented programming

DATE: 7TH DECEMBER, 2017

TIME: 10.30 -12.30 PM

INSTRUCTIONS TO CANDIDATES

- a) Answer ALL questions from section A(Compulsory)

 - b) Answer ANY TWO questions from section B
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SECTION A (COMPULSORY)

Question One

- a) State one limitation of Abstract Window Toolkit. **(1 mark)**
- b) Name the classes extended by the following classes: **(2 marks)**
 - i) JTextField
 - ii) JPasswordField

- c) JDBC helps you to write Java applications that manage three programming activities. List the three programming activities. **(3 marks)**
- d) Using *showInputDialog* write a java program that will allow you to enter a number then output the square of the number on a JLabel **(6 marks)**
- e) Using java.io.File write a java code that will create file name “mytext.txt” in drive d: inside folder “notes” use file separator. If the file name already exists it should output “file name already exists” **(5 marks)**
- f) Describe three layout managers used in Java Swing. **(6 marks)**

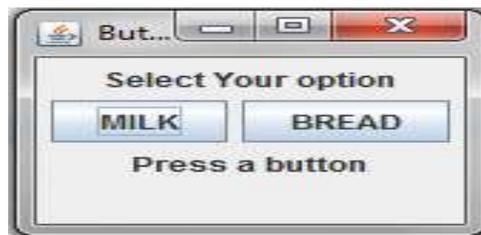
- g) i) Using JOptionPane write a java swing program that will allow you to enter a number then output the square of the number on a JLabel. **(5 marks)**
- ii) List two White-box test design techniques **(2 marks)**

SECTION B (40 MARKS)

Answer *two* questions from this section

Question Two

- a) Describe two ways Swing addresses the problems of AWT **(2 marks)**
- b) List two conventions used in package naming **(2 marks)**
- c) The JDBC API is a Java API that can access any kind of tabular data, especially data stored in a Relational Database. Describe four components of JDBC. **(4 marks)**
- d) Explain three reasons why the use of exception handling in code is necessary. **(6 marks)**
- e) Write a java swing code that will output the form below. When a user click on milk or bread button, it should display the name on the button through a showMessageDialog()
(6 marks)



Question Three

- a) Distinguish between white box and black box system testing technique. **(2 marks)**
- b) State three types of information that is found within an exception object **(3 marks)**
- c) Explain five errors in the code below. **(5 marks)**

```

importe javax.swing.JOptionPane;

public class MyName{

public static void main(String args[]){

int FNum;

FNum=JOptionPane.showMessageDialog(" Enter your Name");

JOptionPane.showInputDialog(null,"Hello"+Num,"Name",

JOptionPane.PLAIN_MESSAGE);

System.exit(0);

}}

```

- d) Explain two types of event listeners. **(4 marks)**
e) Using your own dimensions, write a java code that will output a circle. **(6 Marks)**

Question Four

- a) State two advantages and two disadvantage of inline documentation. **(4 marks)**
b) Java Swing application must have at least one container. List two types of top-level containers used in Java swing. **(2 marks)**
c) List three features of swing components that subclass Jcomponent **(3 marks)**
d) Explain the following terms as used in Advanced Object Oriented Programming:
i) Constructor
ii) Stream. **(4 marks)**
- e) Agnes wanted to learn how to code a JMenu for her fourth year java project, she come across a simple menu application with a Jmenu on JFrame show below, but she could not access the source code for the program. Write the source code for Agnes. **(7 marks)**

