

**W1-2-60-1-6**

## JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

**UNIVERSITY EXAMINATIONS 2016/2017**

**YEAR 2 SEMESER 1 EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY**

**ICS 2201: OBJECT ORIENTED PROGRAMMING II (JAVA)**

**DATE: JULY 2017 TIME: 2 HOURS**

INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO

QUESTION ONE (30 MARKS)

1) Explain the following terms used in object oriented programming;

i) Classes

ii) Applets

iii) Objects (6 marks)

2) “JAVA is a fully object oriented programming language” explain the statement (6 marks)

3) Write a java programme which allow the user to input five intergers, it then compute and output maximum of all the intergers (4 marks)

4) Briefly state the role of the following classes in Java programming imported from library of classes (6 marks)

i) Java applets and standalone application

ii) Static and local variable

QUESTION TWO (20 MARKS)

a) Explain five advantages of graphical user interface (GUI) over character user interface (CUI) (10 marks)

b) Consider the following job application form with the following fields;

* Application full name – Text field
* Telephone numbers – Text field
* Gender – Option button
* Position Applied –Drop list menu
* Salary – Text Field
* Submit and resent Button

i) Draw the appearance of GUI interface for the job application (2 marks)

ii) Using swing package, write the code for application form. Using relevant layout manager (10 marks)

QUESTION THREE (20 MARKS)

a) Applets have many different activities that correspond to various major events in the life cycle of the applets. Briefly state and explain five applet life cycle methods (10 marks)

b) Given a = write a program that allow the user to enter the values of x and y and give output of a (10 marks)

QUESTION FOUR (20 MARKS)

a) Briefly explain the role Graphics class in applets (6 marks)

b) Discuss two methods supported by the graphics class and show how they are used (8 marks)

c) Assume that every employee gets 20% house allowance. Assume also that those earning at least 10,000 pay some tax at the rate of 10%. Write a java code to input the gross salary and output net salary.

NB Net –salary =gross salary + house allowance –tax (8 marks)

QUESTION FIVE (20 MARKS)

a) With an aid of a clear diagram and Java codes explain five jcomponents of a swing class (13 marks)

b) Write a Java program that computes compound interest (compounded yearly) Using formula

A=P(i+r)n P is original amount invested, r is annual interest, n is the number of years, A is the amount at end of nth year. The users enters P, r, and n, The results for various years are displayed on the screen

(7 marks)