



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL INFORMATICS AND INNOVATIVE SYSTEMS
UNIVERSITY EXAMINATION FOR THE DIPLOMA IN LINUX ENGINEERING
2ND YEAR 1ST SEMESTER 2013/2014 ACADEMIC YEAR
CENTRE: KISUMU

COURSE CODE: ICT 2212

COURSE TITLE: INTRODUCTION TO JAVA PROGRAMMING

EXAM VENUE: AH

STREAM: Dip. Linux Engineering

DATE: 4/12/2013

EXAM SESSION: 9.00 – 10.30 AM

TIME: 1 ½ HOURS

Instructions:

- 1. Answer question 1 (Compulsory) and ANY other 2 questions.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

Question 1 (20 Marks)

- a) List any four key advantages of Java over many conventional programming languages. (4 marks)
- b) Explain the following terms in Java programming. (10 marks)
 - i. Class
 - ii. Inheritance
 - iii. Encapsulation
 - iv. Exception
 - v. Applet
- c) Hence or otherwise, state two main advantages of implementing java encapsulation in code .. (2 marks)
- d) With the aid of flow charts, show the difference in process flow of generating a java class and an executable code in a procedural programming language (4 marks)

Question 2 (20 Marks)

- a) Using either the while... or the switch... statements in Java flow control, develop a java class to accept 2 CAT marks out of 20 each, a project score out of 10 and final exam out of 50 for a class of 40 students. (16 marks)
- b) State any two points at which you would implement an error trap. (4 marks)

Question 3 (20 Marks)

- a) Distinguish between Object Oriented Programming and Functional/Procedural programming . (2 marks)
- b) State two advantages of the following java components in a program. (4 marks)
 - i. Interfaces
 - ii. Exceptions
- c) State any two points at which you would implement an error trap. (4 marks)

Question 4 (20 Marks)

- a) Interpret the following Java Statement: 01 if(x < 10) x = 10; (2 marks)
- b) Write two alternative ways of writing the same statement without syntax error or distortion of meaning. (4 marks)
- c) What is a Java Object? (2 marks)

- d) State two basic characteristics that real world objects share, giving an example (2 marks)
- e) State any three design relationships between objects and their classes in Object-oriented programming context. (3 marks)
- f) Differentiate between the two statements type at the C prompt in a Java development Environment
 - a. Javac payroll.java and java payroll (4 marks)
- g) Interpret the purpose of the following code: (3 marks)

Question 5 (20 Marks)

- a) Define a bytecode. (1 mark)
- b) Explain the implications of the java class introductory words. (8 marks)
 - i. **public** ii) **static** iii) **void** iv) **main()**
- c) Distinguish between the following Java Operators (4 marks)
 - i. && and AND
 - ii. ++ and !
- d) Write assignment statements that would initialize the values of: Overweight as True, nationality as Kenyan. (3 marks)
And Monthly Earning as 39000.
- e) Explain any four key features of a fully implemented Java Platform. (4 marks)