JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL INFORMATICS AND INNOVATIVE SYSTEMS

UNIVERSITY EXAMINATION FOR THE DEGREE OF SCIENCE

1ST YEAR 2ND SEMESTER 2013/2014 ACADEMIC YEAR

CENTRE: MAIN

COURSE CODE: SCS 3123

COURSE TITLE: FUNDAMENTALS OF PROGRAMMING

EXAM VENUE: AH **STREAM:**

DATE: 19/12/2013 **EXAM SESSION: 11.30 – 1.30 PM**

TIME: 2 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 ONE

a) Draw a flowchart to convert the length in feet to centimeter. (10 Marks)

b) Explain the two kinds of programming (6 Marks)

c) List **FIVE** examples of high level languages (5 Marks)

d) Differentiate the following language translators;

i). Compiler (3 Marks)

ii). Assembler (3 Marks)

iii). Interpreter (3 Marks)

QUESTION TWO

Identify and highlight the importance of each stages in the program development cycle

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(20 Marks)

QUESTION THREE

State the characteristics of the following programming languages;

i). Machine Language (5 Marks)

ii). Assembly Language (5 Marks)

iii). High Level Language (5 Marks)

iv). 4 GLs (5 Marks)

QUESTION FOUR

a) Discuss the role of the following steps in programming;

i). Algorithms (5 Marks)

ii). Pseudocode (5 Marks)

iii). Flowcharts (5 Marks)

b) Describe the main structure of a pascal program (5 Marks)

QUESTION FIVE

a) Write an algorithm to determine a student's final grade and indicate whether it is passing or failing. The final grade is calculated as the average of four marks. (10 Marks)

b) Define the following terms;

i). Identifier (5 Marks)

ii). Variable Declaration (5 Marks)