

# JARAMOGI OGINGA ODINGA UNIVERSITY

UNIVERSITY EXAMINATION 2013/2014

*1<sup>ST</sup> YEAR 1<sup>ST</sup> SEMESTER EXAMINATION FOR THE BACHELOR OF SCIENCE PUBLIC HEALTH AND  
BACHELOR OF SCIENCE COMMUNITY HEALTH DEVELOPMENT*

*KISII LC*

COURSE CODE: SCS 3111

TITLE: COMPUTER ORGANIZATION AND APPLICATIONS

DURATION 2 HOURS

## INSTRUCTIONS

1. This paper contains 5 questions
2. Answer question **1(compulsory)** and **ANY** other 2 questions
3. Write all answers in the booklet provided

## QUESTION 1 30marks

- a) Define the term computer and explain any of its 4 classifications (10marks)
- b) With examples and a neat diagram explain the functional structure of a computer system (10marks)
- c) Distinguish between Data and Information (2marks)
- d) Distinguish between RAM and ROM with examples (4 marks)
- e) Convert the following decimal numbers into their binary equivalent
  - i) 25
  - ii) 71 ( 4marks)

## QUESTION 2 20marks

- a) Determine the decimal equivalent of the following binary numbers
  - i) 11011
  - ii) 110101
  - iii)1111 (6marks)
- b) Define the term software and explain its 2 types with examples (6 marks)
- c) Define the term spreadsheet (2marks)
- d) State 4 advantages of electronic spreadsheet over a traditional analysis ledger sheet (4 marks)
- e) Name any 2 security levels used for the protection of a document from system intruders (2 marks)

### **QUESTION 3**

- a) Define the term CPU (2marks)
- b) Describe the 3 function sub-units of the CPU (6marks)
- c) State any 4 applications of a computer (2marks)
- d) Distinguish between binary number system and octal number system with examples (6marks)
- e) Draw the table that shows the relation of binary, hexadecimal and decimal numbers (6 marks)

### **QUESTION 4**

- a) Distinguish between primary and secondary memory with examples (10marks)
- b) Define the term E-mail (2marks)
- c) State any 5 benefits of an E-mail (5marks)
- d) Define the following terms as used in the internet
  - i)TCP/IP
  - ii)FTP
  - iii)WWW ( 3marks)

### **QUESTION 5**

- a) Define the term programming language (2marks)
- b) State and explain 2 classifications of programming languages  
4 (marks)
- c) Differentiate between the analog and digital computers (4 marks)

d) Explain how to create,open,sort and filter data in MS excel worksheet (10marks)

# **JARAMOGI OGINGA ODINGA UNIVERSITY-KISII LC**

## **BACHELOR OF SCIENCE PUBLIC HEALTH AND BECHELOR OF SCIENCE COMMUNITY HEALTH DEVELOPMENT**

**COURSE TITLE: *COMPUTER ORGANIZATION AND APPLICATIONS***

**COURSE CODE *SCS 3111***

**Lecturer: *Mr. Manyange O Emmanuel***

### **Course outline**

#### **Purpose**

The course is designed for Bachelor of Science public health and Bachelor of Science community health development to increase the learners understanding of the fundamentals of computer organization and its application in real life situations. The course will also prepare learners for examinations for the award of university degree

#### **Course objective**

At the end of the course, learners are expected to asses the uses and applications of a computer in various real life situations. The learners should particularly be able to:

1. To be able to create ,open,save,rename and delete files in the application software
2. Apply the computer software's in real life situation example in business
3. To be able to distinguish and use the input and output devices of a computer
4. To be able to use the email facilities
5. To be able to set basic security levels of the personal computer
6. To write and use inbuilt functions of the spreadsheet

### **Course Assessment**

Candidates will be examined by continuous Assessments, Assignments or observations accounting for 30% and end of semester examination accounting for 70% of the final grade. The pass mark for BSC(public health and community health development ) is 40%.

### **Teaching Methodologies**

The course will be designed by lecturers, class/group discussion, library books and internet search engines.

### **Instructional and material/ equipment**

The following materials/equipments shall aid in teaching the course: chalkboard, whiteboard, slides, use of textbooks and search engines.

### **Course description**

1. Introduction to computer and its organization
2. Notion of programmable machine
3. Functional components (CPU, memory, I/O) and their logical organization
4. Number system and internal data representation

5. Applications of a computer
6. Office automation applications
8. Email and web documents
9. Basic first level security and maintenance issues
- 10) Ethical and societal issues

### **References**

1. Fundamentals of computer and information Technology by  
Dr. peer Mohamed  
Dr. Shazuli Ibrahim
2. computer organization and embedded system (6<sup>th</sup> edition) by Carl Hamacher, Zvonko Vranesic and Naraig Manjikian