MACHAKOS UNIVERSITY COLLEGE

(A Constituent College of Kenyatta University)

University Examinations 2013/2014

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FIRST YEAR FIRST SEMESTER EXAMINATION FOR DEGREE IN BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

SIT 101: FOUNDATION OF INFORMATION TECHNOLOGY

Date: 11/12/2014　　　　　　　　　　　　　　　　**Time: 8:30 – 10:30 am**

Instructions: Answer **question ONE and any other TWO questions**

Question One (30 Marks)

a) Define the following terms in reference to computers　　　　　(4 marks)
   i) Hardware
   j) Software
   k) Information
   l) Data

b) List and discuss any four types of application software that may be installed in a microcomputer. Briefly explain what each type of software does and give an example of its use.　　(8 marks)

c) With the help of examples, distinguish between volatile and non-volatile memory(4 marks)

d) What is the function of the fill ☐ handle in Ms Excel?　　　　　(2 marks)

e) Describe the procedure of performing the following tasks in Ms Word
   a. Creating a Drop Cap at the start of a paragraph　　　　　(1 marks)

   b. Spell checking a document　　　　　(1 marks)

f) Describe two ways through which a worksheet can be renamed in Ms Excel　　(4 marks)

g) Perform the following calculations. Show your workings:　　　　　(6 marks)
   a. Convert 127_{10} to its binary equivalent
   b. Convert 175_8 to its decimal equivalent
   c. Convert $CE5_{16}$ to decimal equivalent

Question Two (20 Marks)

a) Describe how to create a new folder called student on the desktop　　　　(3 marks)

b) Explain five functions of the Operating Systems   (5 marks)

c) How do you insert columns to existing ones in a worksheet in Ms Excel?   (4 marks)

a) The prices of super petroleum product in the first half of the year 2011 for some selected towns were collected and recorded in an excel worksheet as shown below.

	E	F	G	H	I	J	K	L	M	N	O	P
3			Months									
4		Town	Jan	Feb	Mar	Apr	May	Jun				
5		Mombasa	112.09	113.55	115.48	116.77	119.50	116.66				
6		Kilifi	112.29	114.96	115.75	116.93	121.61	116.76				
7		Likoni	112.42	115.69	115.89	117.31	122.84	117.59				
8		Embu	112.43	115.35	116.47	117.79	127.87	120.20				
9		Narok	112.92	115.48	115.68	118.29	116.43	117.54				
10												
11												
12												

State the cell and hence write the formula that may be used to determine the following

a) The mean of the prices in Mombasa for the first half of the year   (1 mark)

ii) The variance of the prices in January of 2011   (1 mark)

iii) The total number of observed prices in the first half of the year in all towns   (1 mark)

iv) The maximum price recorded in the first half of the year in all towns   (1 mark)

v) List the steps that may be used to select the data and create a pie chart for the prices of all the towns in the month of March   (4 marks)

QUESTION THREE (20 MARKS)

a) Discuss any **FIVE** Data types used in a database   (10 marks)

b) Outline the steps you would follow to carry out the following operations: (4 marks)
   i. Set a password to protect your database
   ii. Set a particular field to be the primary key.
   iii. Define a relationship.
   iv. Insert a column

c) The following data is of employees at a local university. The Management would like the data stored in a database. Write the design of the table structure that may be used to create the table below in Microsoft Access   (6 marks)

ID NUMBER	FIRST NAME	SURNAME	DEPARTMENT	SALARY	MARRIED
EMP 001	Purity	Wangui	Accounts	16,000	Yes
EMP 002	Catherine	Mueni	Salary	6,500	No
EMP 003	Joseph	Kimani	Administration	9,000	Yes
EMP 004	Kioko	Mwikali	Personnel	6,412	Yes
EMP 005	Samuel	Kioni	Security	6,500	No
EMP 006	Anthony	Wairia	ICT	3,993	No

Question Four (20 Marks)

a) Define the following
    a. Network
    b. Browser
    c. Search engine
    d. FTP   (4 marks)

b) Networks can be classified according to geographical area covered. Explain using three examples.
               (6 marks)

c) State and explain three basic topologies used in network designs   (6 marks)

d) State the difference between the following sets of terms: (4 marks)
    a. Softcopy and hardcopy
    b. Microcomputers and mainframes

Question Five (20 marks)

a) Analyze the following HTML code and identify the output   (6 marks)

```
<UL>
<LI>MBA
<LI>MSC
<LI>PHD
</UL>
<LI>BIT
<LI>BCOM
<LI>BBIT
<LI>BAS
</UL>
<LI>DIT
<LI>CIT
</UL>
</UL>
```

b) Define a web browser and give three examples of web browsers   (4 marks)

c) Mail merge is a feature in MS Word. Define the term mail merge and describe the importance of mail merge   (2 mark)

d) Explain the difference between Save As and Save in Microsoft Office Applications
               (4 marks)

d) Using examples, explain the meaning of the following terms: (4 marks)
    i)   Icon
    ii)   GUI
    iii)   Menu
    iv)   Folder