TECHNICAL UNIVERSITY OF MOMBASA

Institute of Computing & Informatics

UNIVERSITY EXAMINATION FOR:

BTIT/SEP 2014Y2S2, BSIT/SEP 2014/J-FT Y2S1, BMCS 14S Y2S2, BFSQ 15S/ BTMB 15S

EIT 4150/ EIT 4152 INTRODUCTION TO INFORMATION TECHNOLOGY/ INFORMATION TECHNOLOGY I

END OF SEMESTER EXAMINATION

SERIES: APRIL 2016

TIME: 2 HOURS

Paper 2
Instructions to Candidates
You should have the following for this examination
-Answer Booklet, examination pass and student ID
This paper consists of Five questions. Attempt Question One and any two other
Do not write on the question paper.

Question One (30 Marks)

a) A 5-year-old laptop with a recently formatted hard drive needs to have an operating system installed.
i) Define an operating system   [2marks]
ii) Discuss five function of an operating system.   [10marks]
iii) Describe TWO factors about the laptop's hardware that would influence the choice of an operating system.   [4marks]
iv) A decision has been made to undertake a FULL installation of the operating system software. What are the consequences of this decision for the laptop and its users? In your answer consider other more suitable installation options.   [4marks]

b) List and explain any three windows systems tools.   [6marks]

c) Discuss any four factors one should consider when purchasing a computer   [4marks]

Question Two (20 Marks)

a) A logo is to be added to the top of every page of a large document. Which option should be

selected to best achieve this?   [2marks]

b) A confidential file needs to be deleted from a workstation. Explain the most effective way to
achieve this.   [2marks]

c) A company has a large number of computers, varying in type and age. Discuss the most cost-
effective commercial licensing option for this company?   [2marks]

d)What is a relational database?   [2 marks]

e) The spreadsheet extract is used to calculate wages for John's Computing Supplies company.

	A	B	C
1	Jo's Computing Supplies – Wages Sheet		
2			
3	Employee	Hours worked	Wage
4	J. Lee	10	=B4*B10
5	B. Su	20	
6	A. Jones	30	
7			
8	Total hours	=Sum(B4:B6)	=Sum(C4:C6)
9			
10	Hourly Rate	$4.60	
11			

    i.   The value of hours worked for J. Lee is increased from '10' to '15'. Identify, using cell
references, other cells in which values will change as a result of this increase.
[2marks]

    ii.   The formula in cell C4 is copied into cell C6. Write the formula that would now
appear in cell C6.   [2marks

    iii.   Jo uses a word processor to write a report on the wages paid to the employees.
Describe the processes required to create and incorporate a graph into the report.
[5marks]

f) Justify any three criteria to be considered when recommending vendors and software.
[3marks]

Question Three 20 Marks

a) Kilifi county council is in the process of outsourcing for a database system to manage its community development projects. As a community development officer provide insights on the following issues.

    i) Two softwares that can be used to develop such a system [2marks]
    ii) Explain the purpose of data validation in a database [3 marks]
    iii) Provide examples of **THREE** types of validation checks [6 marks]
    iv) Indicate the limitation of such checks [2marks]

f) Explain four reasons why an organisation should move away from manual type writing and adopt an electronic word processor [4marks]

g) Justify why some instructions are held in the ROM [3marks]

Question Four   (20 Marks)
a) Andrew, Jane, David and Zablon had tea, sausages and bananas for breakfast. They took one sausage, two sausages, three sausages and one sausage respectively. In addition, they each took a cup of tea and two bananas. Tea, sausages and bananas cost Ksh. 10, 15, and 5 respectively.
By naming columns A, B, C, …… and rows 1, 2, 3 ……
    (a) Construct a worksheet showing the above information. [6 marks]
    (b) state the expression you would use to obtain:
        (i)   Total expenditure by David. [4 marks]
        (ii)   Total number of sausages taken. [2 marks]
        (iii)   The cost of the cheapest item. [2 marks]
        (iv)   What is a relational database? [2 marks]
b) Bit rate and bandwidth tell us about the speed of data communication. What is the relationship between bit rate and bandwidth? [4 marks]

Question Five   (20 marks)
a) Discuss the classification of computers according to generations and highlight the technology that was used in each generation. [8marks]
b) Illustrate the functional components of the CPU clear showing the flow of program instructions, flow of control and flow of data signals [6 marks]
c) Using a relevant example, illustrate the benefits of accessing the world-wide web (www) to the student community in a university? [4 marks]

d) Differentiate between system software and application software. [2marks]