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 1
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 1   (30 marks)

a). Bits n' Pieces limited is a company that sells consumer electronics. The company has sales personnel operating in major towns in Kenya. Until now, whenever a sales person wants to make an inquiry about availability of stock or to find the detailed specification of a product, they have to make a telephone call to the head office so that the products can be searched and information relayed over the phone. This causes delays for sales people when they have many responses to deal with. Additionally, the sales people would like to make decisions about the stock items that should be reordered, and also to make projections of anticipated sales from marketing campaigns that they carry out so as to try and meet sales targets while staying within budget. The sales people on the ground would thus like to interact with the head office databases directly and require both software and hardware to enable this. The IT department wants to set up an automated system that will allow sales people to carry out their inquiry and analysis activities. This project will be rolled out to all sales people scattered country wide. You have been asked to recommend the type of hardware and software that could be used in this setup:

i. Recommend at least three pieces of hardware that could be used in this setup giving a reason

for each. [6Marks]

ii. Suggest two types of information systems that could be used to enable the service to run effectively. [4 Marks]

iii. Propose four information system resources that should be present in order for the whole setup to function effectively giving examples for each and state how each integrates into the system. [16Marks]

b). Increased uses of social networking forums such as face book and chat rooms have clear benefits and disadvantages. State two benefits and two limitations of these forums [4 marks]

Question 2   (20 marks)

a)A multinational organization has offered to donate computers to your organisation. The Board of Governors has requested you to advice on the operating system to be used by providing answers to the following questions.

   i.   What is an operating system? [2 mark]

  ii.   State and briefly explain any **two** types of operating systems. [4 marks]

  iii.   Briefly explain any **three** functions of an operating system. [6 marks]

b) A member of the board has heard of windows file systems.

i) Define windows file system. [2marks]

ii) Bring out clearly the two types of file systems supported by windows and recommend with supporting facts the best the organisation can adopt. [6marks]

Question Three   (20 marks)

a). i). Define the term directory [2marks]

b). Briefly explain how files are generally organized in a Windows operating system.

[2marks]

c). Bit rate and bandwidth tell us about the speed of data communication. What is the relationship between bit rate and bandwidth? [4 marks]

b) An example of a Universal Resource locator (URL) is http://www.tum.edu What do the terms http and www mean? [4 marks]

c) What type of application software is required to access the World Wide Web? [2 mark]

d) Using a relevant example, illustrate the benefits of accessing the world-wide web (www) to the student community in a university?   [4 marks]

e)The formula = K20 + P$18 was typed in cell L21 and then copied to cell M24 of a spreadsheet. Write the formula as it appears in cell M24.   [2 marks]

Question Four   (20 marks)

a) Differentiate between a database and a database management system.   [4marks]

b) Describe the general organization of a relational database.   [2marks]

c) A client has requested the list of users who have accessed a confidential file. State the type of file that would contain the required information?   [2marks]

d) A closed-question survey has been developed to obtain feedback from 3000 customers whose details are in a company database. Suggest and justify the most efficient method of conducting the survey.   [4marks]

d) i) List TWO maintenance procedures that may be undertaken on a hard disk drive.
        [2marks]
ii) Describe the basic operations of the utilities you suggest in question d) i) above. [2 marks]
e) Give two reasons that manufacturers have for providing updates to their software?
        [2marks]
f) Explain any two text editing features in a word processor   [2marks]

Question Five   (20 marks)

a) Illustrate the functional components of the CPU clear showing the flow of program instructions, flow of control and flow of data signals   [6 marks]

b) Give **three** advantages of a computerised database system   [3 marks]

c) The first column in the table below contains the formulae as stored into the cell F10 of a spreadsheet. Enter the formulae as they would appear when copied to cell M20 of the same spreadsheet.   [3marks]

Formula in F10	Formula in M20
= D10*E10	
= A$25	
= D13	

d) A company wishes to update its current paper-based user documentation to online

documentation. Provide advice to the management regarding the benefits to the company of online documentation.   [4marks]

e) Explain the following terms:
    i) Firmware
    iii) Utility programs   [4marks]