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**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

**MAIN CAMPUS
UNIVERSITY EXAMINATIONS
2021 / 2022 ACADEMIC YEAR
SEMESTER TWO EXAMINATIONS**

**FOR THE DEGREE
OF**

BACHELOR OF SCIENCE (ECONOMICS/STATISTICS)

COURSE CODE: BIT 113

COURSE TITLE: FUNDAMENTALS OF COMPUTING

DATE: 20/04/2022


TIME: 8:00A.M-10:00A.M

INSTRUCTIONS TO CANDIDATES

Section (A) is compulsory
Answer Any Two (2) questions in Section B

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of 3 Printed Pages. Please Turn Over. 

Question One (30 Marks)

- a) Outline any THREE examples of formulae used in Microsoft excel [3marks]
- b) A digital computer is an electronic device that carries out various functions. Briefly Outline the FOUR functions [4marks]
- c) Outline FOUR features of word processing as an application software [4marks]
- d) What is primary memory?, State THREE uses of primary memory [4marks]
- e) Explain FOUR parts of a composed inbox of an electronic-mail address [4marks]
- f) Describe the first generation of computers in relation to year of invention , technology , storage , speed and performance, computer type , size of computer [4marks]
- g) Using examples explain the features of non-impact printers [3marks]
- h) Perform the following calculations as specified [4marks]
 - i) Convert 237_{10} to binary
 - ii) Convert 1101100_2 to decimal
 - iii) Convert $9BCD_{16}$ to binary
 - iv) Convert 11101011_2 to hexadecimal

Question Two (20 Marks)

- a) Explain FIVE features of secondary memory [5 marks]
- b) What is a database management system? Discuss FOUR functions of DBMS [5 marks]
- c) COVID-19 protocols led to the adoption of various ICT and technology use. Discuss with examples FIVE platforms used for meetings during this time [10Marks]

Question Three (20 Marks)

- (a) MMUST Students are by default assigned corporate mails during admission as a requirement by the institution. Describe FOUR benefits of a cooperate mail to an organisation [8 marks]
- (b) Using illustrations define the meaning of the term network topology. Explain FOUR advantages of star topology [6 marks]
- (c) Compare and contrast dot-matrix printer and LaserJet printer [6 Marks]

Question Four (20 Marks)

- a) You have an interest to contest for MMUSO election and the best way to communicate and reach a larger number is by using ICT to produce your manifesto. Using relevant examples on software applications describe the following , two applications you will use to design the manifesto , how you will send it to voters , how you will produce the hardcopy for the voters [8 Marks]

b) Outline THREE secondary devices you can use to backup your data [3 marks]

c) Evaluate the following number systems

i) $110\ 0001_2 + 100\ 1111_2$ [3 marks]

ii) $6343_8 - 2135_8$ [3 marks]

iii) $11001101_2 - 110011_2$ [3 marks]

Question Five (20 Marks)

a) Describe THREE basic components of a communications network [6 marks]

b) Distinguish between Mini computers and Mainframe computers as classified [4 marks]

c) Discuss using illustration FIVE basic computer operations that are used for converting raw input data into information [10 Marks]