



TECHNICAL UNIVERISTY OF MOMBASA

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:
BACHELOR OF TECHNOLOGY IN MICROBIOLOGY & BIOTECHNOLOGY
(BTMB 12J)

ICS 2215: INFORMATION TECHNOLOGY II

END OF SEMESTER EXAMINATION

SERIES: DECEMBER 2013

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consists of **FIVE** questions. Attempt question **ONE** and any other **TWO** questions

Maximum marks for each part of a question are as shown

This paper consists of **TWO** printed pages

Question One (Compulsory)

a) Provide definitions for the following terms/phrase:

- (i) System program
- (ii) Application program
- (iii) Algorithm

(6 marks)

b) Define the following terms:

- (i) Internet
- (ii) Extranet
- (iii) WWW
- (iv) Internet

(6 marks)

c) Describe **FOUR** types of Network topologies

(6 marks)

d) Formulate an algorithm to calculate average of three numbers

(4 marks)

- e) Represent the Algorithm above using a flow chart (4 marks)
- f) Write a pseudo code for the algorithm above (4 marks)

Question Two

- a) Describe the following syntax in C language (5 marks)
- (i) { }
 - (ii) []
 - (iii) ;
 - (iv) “ ”
 - (v) ()
- b) List FOUR types of variables used in C language (4 marks)
- c) Write a C program that prompts the user for two numbers and gets the sum (5 marks)
- d) Name and describe FOUR inbuilt functions in C (6 marks)

Question Three

- a) Illustrate TWO types of comments in C (2 marks)
- b) State FOUR functions of comments in programming (4 marks)
- c) Describe FOUR software that form the program development environment (6 marks)
- d) Describe FOUR types of Network topologies (8 marks)

Question Four

- a) Write a C program that prompts the user for the first initial of his/her name and prints the output. (4 marks)
- b) Distinguish between the following programming languages giving ONE advantage and ONE disadvantages of each. (6 marks)
- (i) Assembly language
 - (ii) Machine language
 - (iii) High level language
- c) Define the term data communication (2 marks)
- d) Identify FIVE different forms of information carried by data communication (5 marks)
- e) List THREE types of network according to geographic spun (3 marks)

Question Five

- a) What is stepwise refinement? (2 marks)
- b) Describe the process of stepwise refinement (4 marks)
- c) List FOUR advantages of stepwise refinement (4 marks)
- d) Define the term network protocol (2 marks)

- e) Describe FOUR types of Network Protocol **(5 marks)**
- f) Distinguish between bounded media and unbounded media. **(3 marks)**