

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

SECOND YEAR EXAMINATION FOR THE AWARD OF DEGREE
OF BACHELOR OF SCIENCE IN COMPUTER SCIENCE

COSC 103: INTRODUCTION TO COMPUTER APPLICATIONS

STREAMS: BSC (COMP. SCI) Y2S2

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 17/4/2019

11.30 A.M. – 1.30 P.M.

**INSTRUCTIONS: ANSWER QUESTION ONE AND ANY OTHER TWO
QUESTIONS.**

Question One (30 marks)

- (a) Explain two types of computer viruses. (2 marks)
- (b) Explain the following terms: (4 marks)
- (i) Bit
 - (ii) Processor
 - (iii) Computer network
 - (iv) Word processor application
- (c) Differentiate between the following: (4 marks)
- (i) Star network topology and bus network topology
 - (ii) Operating System software and spreadsheet software
- (d) Explain what footer in word document is. Briefly detail the procedure of inserting footer in a word document. (4 marks)
- (e) Suppose you are given a storage space of a totaling to 8 GB. How much space will remain unutilized after storing 10 files of approximately 512 MB each? (4 marks)
- (f) Given that organizations are digitizing their service delivery processes, explain two measures you would advise clients on online services requests and delivery. (4 marks)

COSC 103

(g) Use the excel sheet shown below to answer the following questions:

	A	B	C	D	E	F	G	H
1	Student name	Course				Total score	Average Score	Grade
2		COSC 100	COSC 101	COSC 102	COSC 103			
3	Joy Kiambu	45	67	80	43			
4	Steve Naivasha	67	68	95	55			
5	Jacque Boid	78	23	67	66			
6	Mildred Justus	65	70	77	77			
7	Holiday Nyawendo	56	42	55	88			
8								
9	Subject average							
10	Subject Grade							
11	Highest score							
12	Lowest score							
13								

- (i) Write the formula to compute total score for Jacque Boid. (2 marks)
- (ii) Write the function to compute average score for COSC 102. (2 marks)
- (iii) Write the function to compute the lowest score in COSC 103. (2 marks)

(h) Briefly, outline the procedure of saving an open word document in the folder “Assignments” that is a sub-folder in the “COMP 101 tasks” folder in Local Disk D: (3 marks)

(i) Perform the following operation (show your working)

Convert 111001.111_2 to Octal (3 marks)

Question Two (20 marks)

- (a) Discuss the following types of computer networks. (6 marks)
 - (i) LAN
 - (ii) WAN
 - (iii) Internet
- (b) Discuss six indicators of a virus infected computer. (6 marks)
- (c) Explain the relevance of communications protocol in computer networks. State the main communications protocol and discuss its use. (4 marks)
- (d) The Jubilee government rolled a service delivery platform dubbed “huduma center”. Discuss how network capability has influenced this service. (4 marks)

Question Three (20 marks)

- (a) Computing knowledge is relevant in almost every area of life today. With a view point of a learning institution, justify this statement. (8 marks)
- (b) Communication media is categorized as either wired or wireless. Explain the difference between the two and give two examples of each. (6 marks)
- (c) Discuss three steps (in order) you would take to if you suspect your desktop computer is infected by a computer virus. (6 marks)

Question Four (20 marks)

- (a) Every computer system has special software the “operating system software”. Explain four reasons why this software is critical for every computer system. (8 marks)
- (b) Perform the following number conversions.
 - (i) 457.25_{10} to binary (3 marks)
 - (ii) 110011101.011_2 to Hexadecimal (3 marks)
- (c) Explain the role of the following keyboard shortcuts in Microsoft Windows. (6 marks)
 - (i) ALT + F4
 - (ii) ALT + TAB
 - (iii) CTRL + Z
 - (iv) CTRL + Y
 - (v) CTRL + S
 - (vi) CTRL + V

Question Five (20 marks)

- (a) Computer users interact with applications software to perform desired tasks. When acquiring these applications software, explain four considerations they may take into account. (8 marks)
 - (b) Passwords are critical in the current online community.
 - (i) Explain the role of the password (2 marks)
 - (ii) Discuss three measures of securing a password (6 marks)
 - (c) Discuss the concept of file management in a computer system. (4 marks)
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