

**CHUKA UNIVERSITY
DEPARTMENT OF COMPUTER SCIENCE**

EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF LAW

COSC 103: INTRODUCTION TO COMPUTER APPLICATIONS

STREAMS:

TIME: 2 HOURS

Candidate's Instructions

- Answer Question One and any other two questions
- Do not write on this question paper

Question One Compulsory (30 marks)

- (a). Explain the difference between a computer processor and a word processing application. (2 marks)
- (b). Define the following terms: (3 marks)
- (i) Bit
 - (ii) Application software
 - (iii) Server computer
- (c). State the use of the following keyboard shortcuts. (3 marks)
- (i) CTRL + F
 - (ii) CTRL + X
 - (iii) CTRL + Y
- (d). Explain three measures a computer user is required to take to ensure security of data stored in a computer system. (3 marks)
- (e). Jane an office assistant came to office on a Monday morning only for a desktop computer to start and hang. She tried to click anywhere on the screen to no avail. Frustrated, Jane called the computer specialist for help. In your opinion, explain what could have gone wrong in Jane's computer and what the computer specialist would do to restore normal operations for Jane's computer. (3 marks)
- (f). In another incidence, Jane saved an excel document she was working on in a hurry one evening so as not to be late in catching a bus to town. The following day, Jane struggles to locate where the file was saved so as to open and continue with work. Advice Jane on how to go about finding her excel document. (3 marks)
- (g). Explain three differences between Random Access memory (RAM) and Hard disk in a computer system. (3 marks)
- (h). Explain three roles of the operating system software in a computer system. (3 marks)

- (i). Convert 493_{10} to its binary equivalent. (3 marks)
- (j). Write the Microsoft formula and function to perform the following: (4 marks)
- (i) Get average of the cells C3, C4, C5, and C6
 - (ii) Get the total of the cells C3, B3, D3, E3, F3 and G3

Question Two (20 marks)

- (a). Discuss four signs that show that a computer may be infected by a virus. (4 marks)
- (b). All web browsers provide users with a variety of tools that enable them to navigate through complex collections of web pages. State any two and explain the function for each. (4 marks)
- (c). Perform the following number conversions. (6 marks)
- (i). 100111.011_2 to decimal equivalent
 - (ii). $F37_{16}$ to its binary equivalent
- (d). Fred is the head of a local Network consulting company. His company has won a contract to design and develop a network for a middle level college in Chuka. Explain three advantages the college will gain by implementing the network. (6 marks)

Question Three (20 marks)

- (a). Explain the difference between impact and non-impact printers. (3 marks)
- (b). Suppose a client approaches you for advice on acquiring a printer for the office, explain three issues the client will consider in acquiring the printer. (3 marks)
- (c). Discuss two advantages of using Microsoft PowerPoint over Microsoft word in creating a presentation for a large group of people. (4 marks)
- (d). Catherine was working on a presentation created using a presentation program and wished to insert a slide between slides 3 and 4. Outline the steps she would follow to achieve her objective. (4 marks)
- (e). Explain three advantages of electronic spreadsheets over manual filing systems (6 marks)

Question Four (20 marks)

- (a). Differentiate between intranet and extranet. (4 marks)
- (b). Explain four types of network topologies. (4 marks)
- (c). Explain the classification of computers according to their technology, purpose and size. (6 marks)

- (d). State the THREE broad classifications of Information security threats and discuss threats that falls under each category. (6 marks)

Question Five (20 marks)

- (a) Explain two uses of the log in prompt for user name and password in email services. (2 marks)
- (b) Using a well labeled diagram, discuss the five major hardware units in a computer system. Show how they interact. (6 marks)
- (c) Use the MS Excel sheet shown below to answer the questions that follow:

I18							
	A	B	C	D	E	F	G
1	student Name	Courses			Total Score	Average Score	Average Grade
2		COMP 101	COMP 102	COMP 103			
3	Gladys	65	45	48	158	#DIV/0!	
4	Kimaita	67	69	64		66.66666667	#NAME?
5	Chepkorol	45	70	55		56.66666667	
6	Kionyo	68	35	46		49.66666667	
7	Bob	90	56	89		78.33333333	
8	Gilbert	78	53	43		58	
9	Subject Average Score	69	55	#NAME?	#REF?		
10							
11		Grading System					
12		70 - 100	A				
13		60 - 69	B				
14		50 - 59	C				
15		40 - 49	D				
16		<40	F				

- (i) Explain the possible causes of errors in the cells G4, E9, and F3. (6 marks)
- (ii) Write a function to round the average score in cell F4 to 2 digits. (2 marks)
- (iii) Using the grading system provided above, explain whether to get the average grade of student you will use a simple IF function or embedded IF functions. (2 marks)
- (iv) Write a formula to calculate the total score of Bob. (2 marks)