

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE AWARD OF BACHELOR OF APPLIED  
COMPUTER SCIENCE

ACSC 101: INTRODUCTION TO INFORMATION TECHNOLOGY

STREAMS: BSC (APP COMP. SCI) Y1S1

TIME: 2 HOURS

DAY/DATE: MONDAY 14/12/2020

8.30AM – 10.30AM

**INSTRUCTIONS**

- Answer QUESTION ONE and any other TWO questions.
- This is a CLOSED BOOK exam. No reference materials are allowed in the exam room.
- No mobile phone is allowed in the exam room (*make sure to switch it off and leave it with the invigilator if you carried one*).
- Write your answers legibly and use your time wisely

**SECTION A (COMPULSORY) [30 MARKS]**

**QUESTION ONE (COMPULSORY) [30 marks]**

(a) Define the following terms: [6marks]

(i) Computer systems

(ii) Bit

(iii) Internet

(b) Differentiate between the following: [4 marks]

i) Computer Software and Computer hardware

ii) Systems software and application software

- (c) With the aid of a well labeled diagram, explain the basic functional components of a computer system. [6 marks]
- (d) Discuss the differences in functionalities between RAM and hard drive of a computer system. [4 marks]
- (e) Perform the following operations (show your working)
- i) Convert  $147_{10}$  to binary. [2 marks]
  - ii) Convert  $1050_8$  to decimal. [2 marks]
- (f) Describe why a word processing application is important to an organization and state any two word processing software application you would recommend for use. [4 marks]
- (g) Classify the following applications as either system software or application software. [2 marks]
- i) Microsoft Excel
  - ii) Linux
  - iii) Internet Explorer
  - iv) Adobe reader

**SECTION B (ANSWER ONLY TWO QUESTIONS FROM THIS SECTION)**

**QUESTION TWO [20 MARKS]**

- (a) Explain the importance of the following communications protocols. [4 marks]
- i) TCP/IP
  - ii) http
- (b) Using relevant examples, explain three types of networks. [6 marks]
- (c) “Office computers have attracted work vices that need to be tamed.” Discuss. [10 marks]

**QUESTION THREE [20 MARKS]**

- (a) In Kenya vision 2030, explain how knowledge on the use and importance of computers can be used to:
- i) Reduce corruption on our Kenyan roads. [3 marks]
  - ii) Enhance national cohesion and integration. [3 marks]
  - iii) Enhance free and fair elections. [3 marks]

- (b) What is a search engine? Explain the importance of this facility in conducting research. Give relevant examples. [4 marks]
- (c) In computer networks, explain what communications media is. Explain the two major types of communications media and give at least two examples of each. [7 marks]

**QUESTION FOUR [20 MARKS]**

(a) 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 an embedded IF function. [2 marks]
  - iv. Write a formula to calculate the total score of Bob. [2 marks]
- (b) Using relevant illustrations, explain any four (4) functions of the operating system software in a computer system. [8 marks]

**QUESTION FIVE [20 MARKS]**

- (a) Explain any five symptoms of a computer infected by virus. [10 marks]
- (b) State and explain any five factors that you would consider when acquiring business software. [5 marks]
- (c) Explain the importance of passwords in computing and possible ways of keeping your passwords safe. [5 marks]

