

**CHUKA**



**UNIVERSITY**

**UNIVERSITY EXAMINATIONS**

**EXAMINATION FOR THE AWARD OF DEGREE OF BACHELOR OF EDUCATION  
(ARTS), BACHELOR OF SCIENCE (BIOCHEM, BMET, NURSING, AGECE, AGBM)**

**COSC 103: INTRODUCTION TO COMPUTER APPLICATIONS**

**STREAMS: DIP. COMPSCI Y2S2**

**TIME: 2 HOURS**

**DAY/DATE: WEDNESDAY 13/12/2017**

**2.30 P.M – 4.30 P.M**

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**INSTRUCTIONS:**

- **Answer question one and any other two questions**

**Question One (30 marks)**

- (a). Discuss three differences between computer processor and computer software. [3 marks]
- (b). Explain the difference between a file and a folder in a computer system. [3 marks]
- (c). Explain the differences between the following terms:
- (i) Bit and Byte [2 marks]
  - (ii) Impact and non-impact printer [2 marks]
  - (iii) LAN and the Internet [2 marks]
- (d). Suppose you are to store files of data each of average size 5KB. How many such complete files would be stored in a memory capacity of 250 GB? [3 marks]
- (e). Explain three measures a computer user is required to take to ensure security of data stored in a computer system. [3 marks]
- (f). Explain the difference in functionality between spreadsheet software and word processing software. [3 marks]
- (g). Convert  $235_{10}$  to its binary equivalent. [3 marks]
- (h). Ms. Gloria a purchasing assistant is to purchase an office computer, outline some of the main features she should consider? [3 marks]
- (i). Explain two functions of the operating system software in a computer system. Give two examples. [3 marks]

**Question Two (20 marks)**

- (a) Safari land Ltd is in the process of computerizing the operations of its firm. Explain **three** general considerations that the management would prefer when purchasing computer software. (6 Marks)
- (b) Software can be classified into **two** major categories. State and explain these categories. (4 Marks)
- (c) Describe the following terms as used in computing:
- (i) Computer hardware (2 Marks)
  - (ii) Computer software (2 Marks)
  - (iii) Peripheral devices (2 Marks)
- (d) Explain the four types of computers in relation to their computing power. (4 Marks)

**Question Three (20 marks)**

- (a) Explain the three major differences between main memory and hard disk in a computer system. [6 marks]
- (b) Perform the following number conversions. [6 marks]
- (i).  $100111.011_2$  to decimal equivalent
  - (ii).  $533_{10}$  to its binary equivalent
- (c) 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 four benefits the college will gain by implementing the network. [8 marks]

**Question Four (20 marks)**

- (a). Using a well labeled diagram, discuss the five major hardware units in a computer system. Show how they interact. [6 marks]
- (b). Discuss four security precautions that one should take in online shopping and in any other online activities. [8 marks]
- (c). Discuss four uses of computers in a learning institution that would necessitate every student to having basic computing skills. [8 marks]

**Question Five (20 marks)**

- (a). Discuss five symptoms of a computer infected with a virus. [5 marks]
- (b). Explain the importance of passwords in computing and possible ways of keeping your passwords safe. [6 marks]
- (c). The table below shows bonus points for staff members at Good Luck Limited.

Index	A	B	C	D	E
	Name	Month 1	Month 2	Month 3	Month 4
1	James	48	89	65	89
2	Mary	54	76	68	80
3	Korir	17	88	76	86
4	John	99	60	65	58

Use the information above to answer the questions below.

(i). Write a formula in MS Excel that would calculate the mean score for Mary. [3 marks]

(ii). Write a function in MS Excel that would compute the highest score in month 3. [3 marks]

(iii). Write a function in MS Excel to compute the average score for Month 2. [3 marks]

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