University Examinations 2024/2025

SECOND YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE BACHELOR OF SCIENCE IN AGRICULTURAL EXTENSION AND EDUCATION AND BACHELOR OF SCIENCE IN AGRICULTURE

CIA 3215: COMPUTER TECHNOLOGY AND D ATA PROCESSING

DATE: JANUARY 2025   **TIME: 2 HOURS**

INSTRUCTIONS: *Answer question **one** and any other **two** questions*

QUESTION ONE (30 MARKS)

a) The computer's output devices can be of varying types, briefly discuss any three video output devices [3 Marks]

b) Outline any five functions of an operating systems [5 Marks]

c) Distinguish between the following terms [4 Marks]

     i) Printer and Scanner

     ii) RAM and ROM

d) Application software is as important as the system software. Discuss the importance of the application software, giving their appropriate applications in business [6 Marks]

e) Briefly describe any three revolutionary changes caused by the computer networks on the Kenya's economy [6 Marks]

f)   Briefly describe any three precautionary measures that a computer user should take to keep computer systems safe from possible insecurities   [6 Marks]

QUESTION TWO (20 MARKS)

a) Briefly describe the following concepts;

   i. Random access properties   [2 Marks]

   ii. Data manipulation instructions   [2 Marks]

   iii. Optical storage devices   [2 Marks]

b) Mr. Sengo is a music producer and a video editor. Advise him on the best external storage devices to use in his career. Justify your advice   [4 Marks]

c) Computer's RAM is limited, hence the need to expand it dynamically. Explain how virtual memories has been used to expand the RAM capacity.   [4 Marks]

d) What ergonomic issues would arise from placing the monitor and the keyboard at a place higher than the line-of-sight and the elbow level, respectively?   [6 Marks]

QUESTION THREE (20 MARKS)

a)   Computers have evolved from very simple devices to very complicated and powerful devices. Briefly discuss the technological advancement of computers

[10 Marks]

b)   Discuss any five sectors that have been greatly influenced by the computer technology, provide the exact computer technology that has been applied.

[10 Marks]

QUESTION FOUR (20 MARKS)

a)   Briefly describe any four networking topologies [Hint: Use diagrams]   [6 Marks]

b)   Kiegoi Tea Factory has created Ms-Excel spreadsheet to capture tea farmers' production (in kgs) for the month between Jan and June 2024.

	A	B	C	D	E	F	G	H	I	J
1	NAME	JAN	FEB	MAR	APRIL	MAY	JUN	TOTAL	AVRG	RMRS
2	Dante	700	900	500	550	880	800			

3	Tomno	800	800	800	660	980	890			
4	Mercy	480	700	600	770	890	980			
5	Agneta	700	800	500	880	780	870			
6	Ashley	680	800	700	660	860	780			
7	Dotie	610	700	600	770	790	790			
8	Zax	800	850	880	550	850	860			
9	Erick	600	590	660	660	480	790			
10	Brian	500	800	770	770	890	890			

i.   Describe how to calculate **TOTAL production (H)** for all the farmers in Ms-Excel [3 Marks]

ii. Describe how to calculate **AVERAGE production (I)** for the farmers in Ms-Excel {3 Marks}

iii. Describe a function used to add a remark on the **J2(RMRS**) cell and copy it to the entire **column J**, remarks should be either **Excellent if the average is over 80%, Good if the average is over 50% or improve for any average below 50%** [4 Marks]

iv. Provide a Bar chart showing each member's TOTAL production [Include total production and farmers] [4 Marks]

QUESTION FIVE (20 MARKS)

a) Computers can be classified using numerous criteria. Briefly explain any four classifications of computers [8 Marks]

b) Differentiate the following terms;
   (i) Button and Ribbon [2 Marks]
   (ii) Ms-Excel and Ms-Word. [2 Marks]

c) Explain what you understand by the following MS-Word terms,
   i.   Orientation. [2 Mark]
   ii. Margins [2 Marks]
   iii.   Mail merging [2 Marks]

d) Describe the following PowerPoint presentation features
   i. Animation [1 Mark]
   ii. Slide show [1 Mark]