UNIVERSITY OF EMBU

2017/2018 ACADEMIC YEAR

SECOND SEMESTER EXAMINATIONS

FIRST YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN ANALYTICAL CHEMISTRY AND BACHELOR OF SCIENCE IN INDUSTRIAL CHEMISTRY

SCI 104: FOUNDATIONS OF COMPUTER SCIENCE

DATE: APRIL 9, 2018   TIME: 2:00 PM – 4:00 PM

INSTRUCTIONS:

Answer Question ONE and ANY other two Questions

QUESTION ONE (30 MARKS)

a) Using an example for each, differentiate between input and output devices as used in Computer system   (4 marks)

b) Using a sketch, differentiate between portrait and land scape orientation   (4 marks)

c) Explain any FOUR categories of system software   (8 marks)

d) Distinguish between a *function* and a *formula* as used in spreadsheet programs.

(2 marks)

e) Describe the THREE types of views in a PowerPoint presentation program.   (6 marks)

f) Suggest what the following domain types could be:

    i)   .gov   (2 marks)

    ii)   .edu   (2 marks)

g) Convert the following decimal numbers to their binary equivalent

    234   (2 marks)

QUESTION TWO (20 MARKS)

a) Village bank has a membership of 50000. The bank offers micro credit facility and handles over 10000 transactions daily. It now wants to modernize from using manual system to computerized system. Use this information to answer the following questions:

    i)   State any four computer system requirements   (8 marks)

    ii)   Explain the software necessary to run the bank system   (2 marks)

    iii)   Explain two measures that the bank can adopt to protect the system from any attack

                                               (4 marks)

b) Elizabeth bought a new computer so as to use it in her retail shop. Outline any THREE necessary measures she should consider to optimize the computer's performance

                                               (6 marks)

QUESTION THREE (20 MARKS)

Computer system plays an important role in an organization; many employees tend to shun away the idea of introducing the gadget to their ecosystem due to many reasons only well known to them. You as a computer professional the organization summoned you to the institution to teach and mentor those employees

    a)   What are some of the reasons why they were denying the gadget   (10 marks)

    b)   Discuss any five application areas where the computer system is used   (10 marks)

QUESTION FOUR (20 MARKS)

a) You are a data entry clerk at a media press on a four year contract. You perform your work on the computer system continuously throughout the period.

    i)   Explain any FIVE health issues arising from the nature of your work   (5 marks)

    ii)   Explain the remedial measures for each issue in (i) above   (5 marks)

b) Discuss the FIVE generations of computers as outlined in the evolution of computers

                                                   (10 marks)

QUESTION FIVE (20 MARKS)

a) The Table below shows Budget for computer items at the School of Hospitality in Gretsa University. All costs are subject to VAT. Use the information to answer questions that follow:

	A	B	C	D	E	F
1	SUPPLIER ITEM	UNIT PRICE	Quantity 1st Quarter	Quantity 2nd Quarter	Cost 1st Quarter	Cost 2st Quarter
2	Flash disks	800	7	6		
3	CD-RW	50	60	52		
4	3.5 Flopy	250	120	150		
5	Printing Paper	270	120	135		
6	Printing cartilage	1,500	10	20		
7						
8	VAT	16%				
9				TOTAL COST		

    i) Write a formula to calculate the anticipated cost of printing paper for the 1st quarter. (3 marks)

    ii) Due to increase in shipping costs the prices were increased by 20% in the 2nd quarter. Assuming that the percentage increase in prices is placed in cell B9, write a formula to calculate the new cost of flash disks in the 2nd quarter (3 marks)

    iii) Write a function that will calculate the total cost for 2nd quarter. (3 marks)

b) The following are different criteria of classifying computers. In each case discuss the different types of computers

    i)   Classification according to size of the computers (4 marks)

    ii)   Classification according to the type of data processed (3 marks)

c) Differentiate between a serial port and parallel port (4 marks)

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