

MASENO UNIVERSITY UNIVERSITY EXAMINATIONS 2013/2014

FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE, BACHELOR OF EDUCATION AND BACHELOR OF ARTS WITH INFORMATION TECHNOLOGY

(HOMA BAY CAMPUS)

SCS 114: INTRODUCTION TO SPREADSHEETS & DATABASES

Date: 29th November, 2013

Time: 11.00 a.m. - 1.00 p.m.

INSTRUCTIONS:

- Answer Question 1 (COMPULSORY) and any other TWO questions.
- Start a new question on a new page.

Question One (Compulsory, 30 Marks)
Define the following Ms Excel 2007 terminologies: (i) Name box (ii) Autofill (iii) Present value (6 marks) (b) Distinguish between: (i) Workbook and worksheet (ii) Relative and absolute cell reference (4 marks) State and explain eight different data types supported by Ms Access (c) (4 marks) State and explain four components that make up the new look MS Excel window, (d)

Use the spreadsheet screenshot below to answer question TWO

State four applications of spreadsheets

(e)

(8 marks)

(8 marks)

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Question Two (20 Marks)

(a) State the command used to format cells A1 to I1.

(2 marks)

- (b) Explain how you would enter the values in the A3:A12 range and in an efficient manner (2 marks)
- (c) Write a function to calculate the total in cell G5

(2 marks)

- (d) Write formula to determine the average score for Eng subject which is stored in cell C13. (2 marks)
- (e) Write formula/function to determine the score with the highest frequency for Kisw subject which is stored in cell G14.
 (2 marks)
- (f) Due to poor performance, the school's management decides to increase each student's total score by 25%. Using the value entered in cell K2, write the formula for cell H6. (4 marks)
- (g) An Excel function is used to grade the scores, using the grading system below. State the formula for cell D6.
 (6 marks)

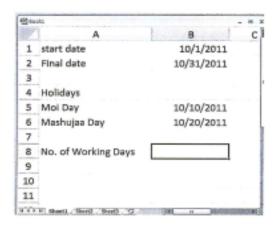
Mark	Grade
70-100	A
60-69	В
50-59	С
40-49	D
0-39	F

Question Three (20 Marks)

(a) Write a function to display yesterday's date.

(3 marks)

- (b) A project is started on 14/1/2012 and requires four hundred (400) working days to complete. Write a function that will return the day that the project is to be completed. (3 marks)
- (c) With reference to the screenshot below, write a function in cell B8 to determine the number of working days in the month of October 2011. (4 marks)



- (d) As a financial consultant of a client on various bank account investments, write functions to return the present values given the details below:
 - i) a \$10,000 investment after one year earning 5 percent annual interest

(5 marks)

a \$10,000 investment after two years earning 5 percent interest per annum compounded monthly
 (5 marks)

Use the table below to answer question Four

EMPLOYEEDETAILS

DATEOFEMP	NAME	CATEGORY	RATE/HR	EMP_ID
22/02/2001	Joseph Peter	Senior	500	2034
15/01/2003	Mark James	Junior	250	2021
04/05/2004	Mary Magdy	Senior	3200	2022
17/06/2004	Musa Juma	Junior	2000	2100
14/12/2006	Paul Jones	Junior	260	2123

AYROLL AYROLLNUM	HOURS	EMP_ID	SALARY
001.	50,000	2034	
002.	25,000	2021	
003.	32,000	2022	
004.	20,000	2100	
005.	26,000	2123	

Question Four (20 Marks)

Suca		
	Nominate the bested suited field to be the primary key of the database and justify	your choice.
(a)	Nominate the bested suited field to be all printing	(3 marks)
	1 11 - touchura decien	(5 marks)
(b)	State five principles of good table structure design.	(8 marks)
(c)	Design a database structure to hold the data above.	
	. Ma Appens 2007	(3 marks)
(d)	State the steps for inserting a primary key in Ms Access 2007.	(6 marks)
d).	State six advantages maintaining data in Ms Access over Ms Excel	0.7
Que	estion Five (20 Marks) Explain the following concepts, stating their usefulness in a database design	(6 marks)
8278	i) Validity integrity	
	ii) Entity integrity	
	iii) Referential integrity	(6 marks)
b)	Explain the role of the following Ms Access 2007 field properties.	0.0000000000000000000000000000000000000
	i) Caption	
	ii) Input mask	
	iii) Validation rule	
c)	State and explain four types of database architectures	(8 marks)