



**MASENO UNIVERSITY**  
**UNIVERSITY EXAMINATIONS 2013/2014**

**FIRST YEAR SECOND SEMESTER EXAMINATIONS FOR THE  
DEGREE OF BACHELOR OF SCIENCE IN PUBLIC HEALTH WITH  
INFORMATION TECHNOLOGY  
(CITY CAMPUS - WEEKEND)**

**SCS 114: SPREADSHEETS AND DATABASE**

*Date: 29<sup>th</sup> November, 2013*

*Time: 5.30 -7.30pm*

**INSTRUCTIONS:**

- Answer ALL questions in Section A and any other TWO questions from section B.
- Write your registration number on all sheets of the answer book used.
- Use a new page for every question attempted, and indicate the question number on the space provided on each page of the answer sheet.

**Question One (Compulsory, 30 Marks)**

(a) Explain the following Database terms [6 Marks]

- i). Table
- ii). Record
- iii) Field

(b) Explain the following Spreadsheet terms [4 Marks]

- i). Worksheet
- ii). Cell

(c) State and explain four objects that make up an Ms Access database.(8 marks)

(d) State four applications of DATABASES (8 marks)

(e) Explain the difference between a 'formula' and a 'function', illustrating your answer with suitable examples of each.(4 marks)

*Use the spreadsheet screenshot below to answer questions TWO and THREE*

Form Four Examination Results								
RegNo	Name	Eng	GRD	K/low	GRD	Total	New Total	Rank
001	John	45	D	66		111	138.75	
002	Mary	56	C	54		110	137.5	
003	Orieno	77		55		132	165	
004	Musa	60	B	55		115	143.75	
005	Were	54	C	67		121	151.25	
006	Kipchumba	78	A	89		167	208.75	
007	Wamalwa	23	F	78		101	126.25	
008	Kansau	45	D	23		68	85	
009	Musau	60	B	22		82	102.5	
010	Juma	68	B	45		113	141.25	
Mean								
Mode								
MAXIMUM								
5th Lowest		56						
Median								
2nd Highest								
50% and above								

**Question Two (20 Marks)**

- (a) State the command used to format cells A1 to I1. (1 marks)
- (b) Explain how you would enter the values in the A3:A12 range and in an efficient manner (4 marks)
- (c) State the formula for grading Musa's score in Kiswahili. (6 marks)

Write a formula to calculate the total in cell G7(2 marks)

Write formula/function to determine mean score for Eng subject which is stored in cell C13.

(2 marks)

- (d) 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.(5 marks)

**Question Three (20 Marks)**

- (a) State the function for calculating the median score for Kisw (2 marks)
- (b) State the function that is used to determine the second highest score for Eng (3 marks)
- (c) Write formula/function to determine 5<sup>th</sup> lowest score for Eng subject. (3 marks)
- (d) The values in column H are to be rounded off to whole numbers. State the formula/function for cell H5.

(3 marks)

- (e) Write formula/function to determine the number of students who scored 50 and above in Eng

(3 Marks)

- (f) State cell addresses whose values would change on the worksheet when the contents of cell C4 are changed.

(6 Marks)

*Use the tables below to answer questions Four and Five*

**EMPLOYEEDETAILS**

DATEOFEMP	NAME	CATEGORY	RATE/HR	EMP_ID	PAYROLLNUM	HOURS	EMP_ID	SALARY
22/02/2001	Joseph Peter	Senior	500	2034	001.	50	2034	
15/01/2003	Mark James	Junior	250	2021	002.	25	2021	
04/03/2004	Mary Magdy	Senior	3200	2022	003.	32	2022	
17/06/2004	Musa Juma	Junior	2000	2100	004.	20	2100	
14/12/2006	Paul Jones	Junior	260	2123	005.	26	2123	

**Question Four (20 Marks)**

- (a) Design a table structures to hold the table above. (10 marks)
- (b) Nominate the bested suited field to be the primary key for each table. (4 marks)
- (c) Explain why it is more desirable to maintain database in Ms Access over Ms Excel(6 marks)

**Question Five (20 Marks)**

- (a) Write a query to retrieve worker who earn at least KSh. 2000/hour. (2 marks)
- (b) Write a query to retrieve employees employed between 1/1/2004 and 31/12/2004. (4 marks)
- (c) State and explain four principles of designing a good table structure. (4 marks)
- (d) State and explain five types of database architectures (10 marks)