



MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2015/2016

**FIRST YEAR SECOND SEMESTER EXAMINATION FOR THE DEGREE
OF BACHELOR OF EDUCATION WITH INFORMATION TECHNOLOGY**

CITY CAMPUS - SCHOOLBASED

**UCI 104: INTRODUCTION TO DATA ANALYSIS WITH
SPREADSHEETS**

Date: 17th December, 2015

Time: 2.00 –4.00pm

INSTRUCTIONS:

- Attempt Question ONE (Compulsory) and any other TWO questions.
- Start each question on a new page
- Use of mobile phone is prohibited in the examination room.



Question One (Compulsory, 30 Marks)

- (a) Define the following returns (4 marks)
- Spreadsheets
 - Application package
- (b) Distinguish between a function and a formula (2 marks)
- (c) Explain different data types supported by spreadsheets (4 marks)
- (d) State four applications of spreadsheets (4 marks)
- (e) State five elements of the MS Excel 2007 window (5 marks)
- (f) Distinguish between a workbook and a worksheet. (4 marks)
- (g) State two ways in which the Currency number format differs from the Accounting format (2 marks)
- (h) State the output of the following functions: (2 marks)
- =POWER(2,3)
 - =ROUNDUP(1.1,0)
- (i) Name three spreadsheets packages in the market (3 marks)

Use the spreadsheet screenshot below to answer questions TWO and THREE

	A	B	C	D	E	F	G	H	I	J	K	L
1	Examination Results											
2	Tahidi High School											
3	Form Four Examination Results											
4	RegNo	Name	Fee Paid	Eng	Grd	Kisw	grd	Math	grd	TOTAL	Posn	Remark
5	001	John	45000	45		66		44				
6	002	Mary	12000	56		54		30				
7	003	Otlano	5000	40		55		56				
8	004	Musa	40000	56		55		78				
9	005	Woro	56000	54		67		55				
10	006	Kipchumba	34000	78		89		66				
11	007	Wamalwa	12000	23		78		34				
12	008	Kamau	10000			23		33				
13	009	Musau	20000	60		22		73				
14	010	Juma	50000	68		45		60				
15	best score											
16	worst score											
17	No. of std											
18	2nd best											
19	3rd worst											
20	Mean											
21	Median											
22	Standard Dev											
23												

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Question Two (20 Marks)

Write function to obtain the following:

- (a) Highest score in MATH (2 marks)
- (b) Lowest student in ENG (2 marks)
- (c) Third worst student in KISW (2 marks)
- (d) The grade the students' average score based on the Maseno University grading system below. Write function to grade the fifth student in MATH (6 marks)

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

- (e) Find the median score in ENG subject (2 marks)
- (f) Find the modal score in KISW (2 marks)
- (g) 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 J4. (4 marks)

Question Three (20 Marks)

- (a) State the function for calculating the median score for Kisw (2 marks)
- (b) The values in column J are to be rounded off to whole numbers. State the formula/function for cell J5. (5 marks)
- (c) Write function to determine the average of students who have paid Ksh 20000 and above. (2 marks)
- (d) Write formula/function to determine the number of students who scored 50 and above in Eng (3 Marks)
- (e) Write formula/function to determine the number of students taking Eng subject (2 marks)
- (f) State cell addresses whose values would change on the worksheet when the contents of cell D5 are changed. (6 Marks)

Question Four (20 Marks)

- (a) State two reasons why we format numbers (2 marks)
- (b) State and explain five number formats (5 marks)
- (c) Explain the cause of the following error messages and give a solution to each: (10 marks)
 - i) #VALUE!
 - ii) #NAME?
 - iii) #NUM!
 - iv) #REF!
 - v) #N/A

Question Five (20 Marks)

Use the screenshot below to answer the questions in this section where applicable.

	A	B	C	D	E	F	G	H	I	J
1	Finding Number of working days in December 2014			Project Schedule			Day	Day of the week		
2	start Date	12/1/2014			Start Date	11/24/2014		3/10/2015		
3	End Date	12/31/2014			Duration	45		3/11/2015		
4								3/12/2015		
5	Holidays				Holiday range			3/13/2015		
6	Jamuhuri	12/12/2014			Jamuhuri	12/12/2014		3/14/2015		
7	X-mas	12/25/2014			X-mas	12/25/2014		3/15/2015		
8	Boxing	12/26/2014			Boxing	12/26/2014		3/16/2015		
9					New Year	1/1/2015		3/17/2015		
10	No. of working Days:				Delivery			3/18/2015		
11								3/19/2015		
12										
13										
14										
15										
16										
17										

- (a) State the output of the formulae below:
 - (i). =B2-3 (2 marks)
 - (ii). = MONTH(B3) (2 marks)
 - (iii). =MIN(B6:B8) (2 marks)
- (b) Write function to determine the number of working days in the month of December. (3 marks)
- (c) Write function to determine a projects end date given the information above. (2 marks)
- (d) State and explain 3 elements of a chart (3 marks)

(e) Describe the following charts and state what kind of information they are used to convey.

(6 marks)

- i). Stock
- ii). Cylinder
- iii). Pyramid