



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

BED (SPECIAL NEEDS) Y1S1- SCHOOL BASED EXAMINATION

AUGUST 2013

Course Title: Spread sheet and databases

Course Code: SCS 114

INSTRUCTIONS:

- i. This paper contains five (5) questions.
- ii. Question ONE is Compulsory and any other TWO questions
- iii. Mobile in Exams rooms not allowed
- iv. Answer the questions on the booklet provided

Question one 30marks

- a) Explain the role of the various parts of a typical formula in an Ms excel spread sheet (4mk)
- b) Explain the fastest means of navigating to the following cells (6mk)
 - i. The last cell in row one
 - ii. First cell in row one
 - iii. Last cell of the last column
- c) Outline how the following chart types can be used in representation of data (12mk)
 - i. Exponential
 - ii. Linear
 - iii. Logarithmic
 - iv. Polynomial
 - v. Power
 - vi. Moving Average

d) Below is an extract of a spread sheet,use it to answer questions that follows:

	A	B	C	D	E	F	G
	EMPLOYEE	SEX	GROSS PAY	HOUSE ALLOWANCE	NHIF	NSSF	NET PAY
1	JOYCE	F	23900				
2	PATTY	F	12870				
3	CHARLEY	M	15450				
4	CHRIS	M	23900				
5	MORRIS	M	11000				
6	TERRY	F	8900				
7	BOB	M	17650				

- i. Using IF statement write the formulae that would calculate the house allowance, NHIF, NSSF, and NET PAY based on the instructions provided below (4mk)

Instructions

House allowance:males get 15% of their gross pay while females get 10%

NHIF:Those earning a gross of over 15000 pay 7% while the rest pay 6.2% of their gross

NSSF:Males pay 5% of their of their gross while the females pay 3.7% of their gross pay

NET PAY: Gross pay +House allowance- taxes

- ii. Explain how you will rewrite the table to sort the data in descending order based on the NSSF (2mk)
- iii. Re-write the table to filter males (2mk)

- iv. Explain the difference between Auto filter and advanced filter (4mk)

Question two 20marks

Using appropriate example explain how the following data types can be used in database design for an education management information system(20mk)

- i. Text
- ii. Number
- iii. Date
- iv. Memo
- v. Hyperlink
- vi. Yes/No
- vii. OLE Object
- viii. Look up Wizard
- ix. Currency
- x. Auto-number

Question Three 20marks

Discuss the short coming of a spread sheet application in statistical analysis (20mk)

Question Four 20marks

- a) What is query (2mk)
- b) Explain the difference between the following terms as used in database design
- c) Field, primary key, record, foreign key (4mk)
- d) Describe the factors to consider in acquiring a computer application package for use in a school (14mk)

Question Five

- a) Explain the difference between a works sheet and a workbook (2mk)
- b) Identify any three types of database management systems that can be installed and used by a school (3mk)
- c) By using school examination information system as an example explain how you can apply database forms and reports during database design (5mk)
- d) Explain the advantages of application packages over in-house packages (10mk)

JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

BED(Special Needs Education) Y1S1

Course outline

Spreadsheet and Databases

Course Lecturer: *AbilajamesOnyango*

Aim

The course aims at giving an understanding of the nature of spread sheets and Databases and acquire skills applicable for special needs Education.

Objectives:

The Course unit will enable learners to:

- i. Understand nature of spread sheets and Databases
- ii. Design business spread sheets and Databases

Course Content:

Types of Application packages

Spread sheet software applications in education

Parts of a spread sheet

Navigating skills in spread sheet

Data entry

Calculations; formula and functions

Formatting

Worksheet

Decision functions and formulae

Filtering

Referencing

Database

Advantages of DBMS

Designing databases

Normalization

Tables

Queries

Forms and reports

Learning Outcome

- i. Gain understanding of principles of spread sheet and databases
- ii. to be skilled in designing of spread sheet and databases for special needs education

Teaching Learning Materials/Resources

- i. Computers
- ii. Internet connectivity
- iii. Removable storage devices; Flash disks, CD-R.

Evaluation

i.	<i>Written Assignments</i>	<i>15%</i>
ii.	<i>Project</i>	<i>15%</i>
iii.	<i>Exams</i>	<i>70%</i>
iv.	<i><u>Total:</u></i>	<i><u>100%</u></i>

Reading List

Onunga (2010).*Introduction to computers*.Mariwapublishers .Nairobi

Connolly and Beig (2000).Database and database systems