JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

UNIVERSITY UNDERGRADUATE EXAMINATIONS

1st YEAR 2nd SEMESTER 2016/2017 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: SCS 114

COURSE TITLE: INTRODUCTION TO SPREADSHEETS AND DATABASES

EXAM VENUE: **STREAM: SHSS**

DATE: **EXAM SESSION:**

TIME: 2.00 HOURS

INSTRUCTIONS:

1. **Answer Question 1 (Compulsory) and ANY other two questions**
2. **Candidates are advised not to write on the question paper**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room**

QUESTION ONE: (30 MARKS)

a) Explain the function of the following in Ms Access 2010 (6 marks)

i. Table
ii. Form
iii. Macro

b) Show how Ms Excel would evaluate the following expression
(5+2) * 2^ 3 – 1 (2 marks)

c) Explain the difference between currency and accounting number formats in Ms Excel (2 marks)

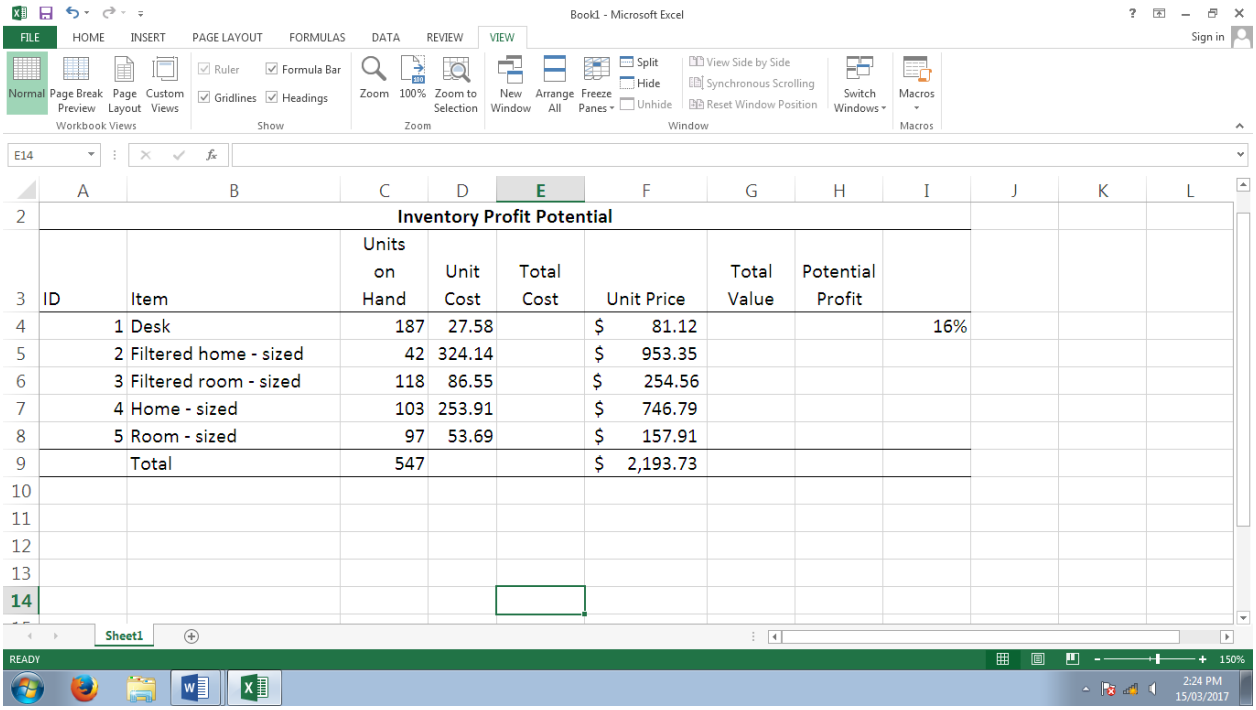
d) State five advantages of using Ms Access to strore data over Ms Excel (5 marks)

e) State and Explain the five different sections of an Ms Access report (5 marks)

f) Explain the role of the following Ms Excel 2010 field properties (10 marks)

i. AutoSum
ii. Sort and Filter
iii. Data Validation
iv. Freeze Panes
v. Pivot table

Use the spreadsheet screenshot below to answer question TWO and part of question THREE



QUESTION TWO: (20 MARKS)

a) State the command used to format cells A1 to I1 (2 marks)

b) Explain how you would enter values in A3:A12 range in an efficient manner (2 marks)

c) Write a function to calculate the total number of units at hand (2 marks)

d) Write a function/formula to determine average for total cost (2 marks)

e) Write a function/formula to determine average for total value (2 marks)

f) Write a function/formula to determine the second most expensive item (2 marks)

g) State and explain the output of the following **=MOD(D4:D8)** (2 marks)

h) Write a function/formula to rank items based on potential profits in descending order (2 marks)

i) To guard against inflation, the management has decided to increase the unit price by 16%. A formula is required such that it will be copied down to the other cells. With reference to cell I4, write a formula to determine new unit price for the third item (3 marks)

QUESTION THREE: (20 MARKS)

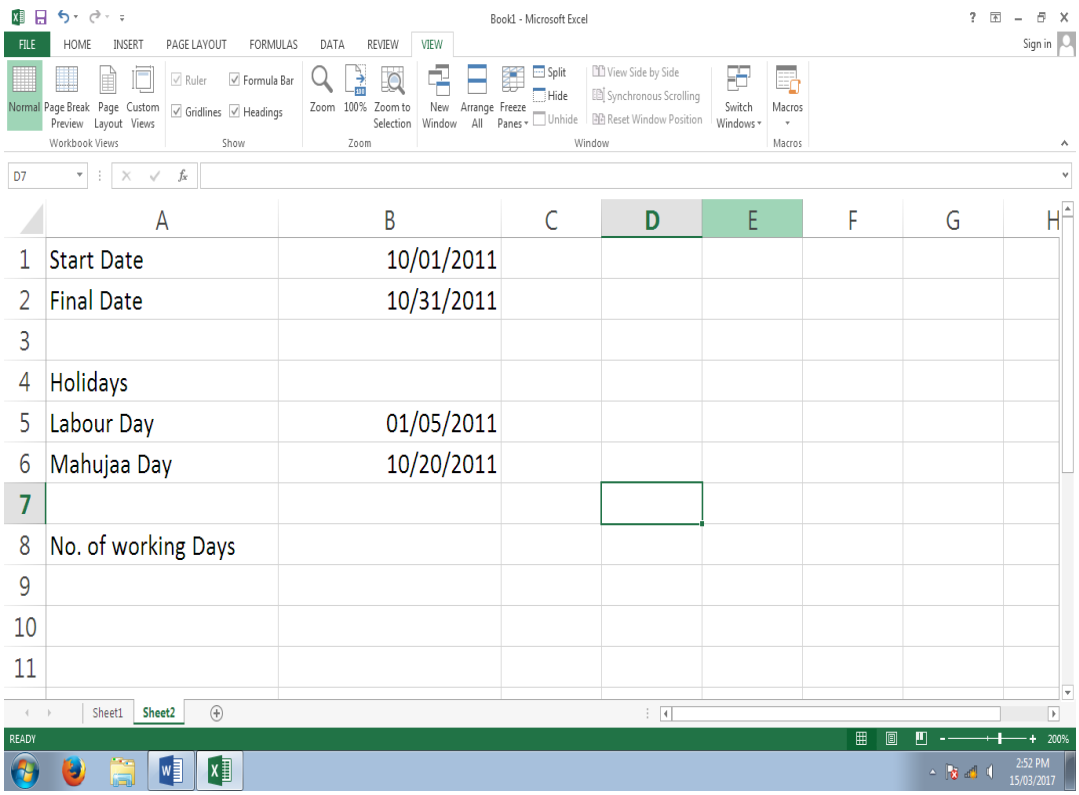
a) Using the table below, write a function to remark on the items appropriately as indicated and based on the logics. (4 marks)

Units	Remarks
0 – 40	Unpopular
41 – 80	Average
81 – 120	Popular
Over 120	Top Brand

b) The report above is to be released in 20 days' time. Write a function to display the date. (3 marks)

c) A project commenced on 3/03/2017 and requires 400 days to complete. Write a function that will return the date the project is to be completed. (3 marks)

d) 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)



e) As a functional consultant of a client on various bank loans, write a formula to return the monthly payment amount for a $5,000 loan with a 6 percent annual percentage rate. The loan has a term of four years (3 marks)

f) Write a formula to calculate the payment periods for a $5,000 loan that has a monthly payment amount of $117.43. the loan has a 6 percent annual interest rate. (3 marks)

QUESTION FOUR (30 MARKS)

a) State the steps for inserting a primary key in Ms Access 2010 (3 marks)

b) State five principles of good table design structure (5 marks)

c) Explain the role of the following Ms Access 2010 field properties (6 marks)

i. Caption
ii. input mask
iii. Validation rule

d) State and explain six advantages maintaining data in Ms Access over Ms Excel 2010 (6 marks)

QUESTION FIVE (30 MARKS)

Use the table below to answer question five

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*

a) Design a database structure to hold the data above. (8 marks)
b) Norninate the best suited field to be the primary key for the table (2 marks)
c) For each question below. copy the Query Design View grid below into your answer to answer the following questions:

Use the table bellow to answer the questions

Field					
Table					
Sort					
Show					
Criteria					
OR:					

a. Design a query to show EMP_lD, category and date of employrnent and retrieve employees who were employed between 15/01/2O13 and 17/06/2004, both years inclusive. Sort the records using EMP lD field (3 marks)
b. Design a query to retrieve€ employees who earn over 1000 per hour or have worked for more than 20 hours and show all the fields (2 marks)
c. Design a query to display EMP_ID, category, and hours worked and include a calculated field to show total earnings per employee. (3 marks)
d. Design a query to show EMP_lD, category and second name for employees whose second name starts with "J" and are senior employees. (2 marks)