



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS
UNIVERSITY EXAMINATION FOR THE DEGREE IN EDUCATION.
SCHOOL – BASED.
2016/2017 ACADEMIC YEAR

COURSE CODE: SCS 3111.

COURSE TITLE: COMPUTER ORGANISATION AND APPLICATION.

EXAM VENUE: STREAM: EDUCATION.

DATE: EXAM SESSION: DECEMBER 2016

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) Define the following terms as used in computing. (2 marks)
- i. CPU.
 - ii. System bus.
- b) The third generation of computers experienced major technological development in the history of computing. Describe this technological developments and explain the impacts they had in shaping the history of computing. (4 marks)
- c) i. Explain the term 'computer program'. (1marks)
- ii. Briefly list and explain any four features of a word processor. (4 marks)
- d) i) Digital and Analog computers. (2 marks)
- ii) Explain any four types of optical disks. (2 marks)
- e) Define an Operating System and explain any three functions of an Operating system. (3 marks)
- f) Internet is a tool in the implementation of digital firms, in that it brings both tangible and intangible benefits to organization. Using relevant examples, discuss any TWO tangible and TWO intangible benefits of internet in organization. (4 marks)
- g) Convert the binary number, 110010111001001111
- i. Octal. (2 marks)
 - ii. Hexadecimal. (2 marks)
- h) The internet consists of multiple data system that were developed independently. Some of the popular and important systems are;
- i. E-mail
 - ii. Local Area Network.
 - iii. File transfer protocol.
 - iv. Intranet.
- Discuss the role of each of these systems. (4 marks)

QUESTION TWO

- a) It is now 2016. You are in Bsc.Agric Business Year 1 semester 1. you are required to defend your project proposal and the following are the preparations you need to make

Produce a word document that has the following

- i. A title page with no number
- ii. The margins should be 1' all round
- iii. Text that is justified, times new roman size 12
- iv. A project timeline (that breaks your tasks) in a word table
- v. Power point presentation file that has a maximum of 8 slides that would act as a visual aid in your presentation.

Describe the procedure of doing all the above as required in preparation for the proposal defense

(8marks)

- b) Examination officers normally create a mark sheet, which they use to record examination marks after students have sat for examinations at the end of the semester. The mark sheet includes the following columns in MS EXCEL in the order given

- i. STUDENT FIRST NAME
- ii. STUDENT MIDDLE NAME
- iii. STUDENT REG NO
- iv. STUDENT UNITS DONE
- v. ASSIGNMENT I
- vi. ASSIGNMENT II
- vii. CAT I
- viii. CAT II
- ix. TOTAL MARKS
- x. REMARKS

Required:

- i. Create a sketch of this tabulated data and include a sample of only three students (2marks)
- ii. Name and explain how you would use one of the functions provided by MS EXCEL to combine the first name and middle name columns into one column called “Names” which replaces the two columns (3 marks)
- iii. Establish the formulas that generate the column
 - 1) Total marks that includes the CATs and ASSIGNMENTS marks (2 marks)
 - 2) Mean score for the all the students that did the examination (2 marks)
 - 3) Remark(whose output is Grade A-E generated from the total mark where A is 70% and above, B is 60%-69%, C is 50%-59%, D is 40%-49% and E is below 40% (3 marks)

QUESTION THREE

- a) The internet is synonymous with the web. Is this true or false? Discuss (5 marks)
- b) Assume that you are about to graduate with your **BSC .AGRIC BUSINESS**. From your acquired knowledge in word processing, clearly explain how you invite 50 friends by sending them individually addressed letters through the use the available automated process (10 marks)
- c) The word browser is a term that is widely spoken about. Explain in your own words explain it, citing three examples of such.(5 marks)

QUESTION FOUR

- a) You have just started a small business and you want your customers to purchase products online .Through a sketch diagram and HTML tags, explain the procedure of creating an online form that contains the following
 - i. A field where users can identify themselves and enter their password
 - ii. Choose only one option of how the will pay money for products which are Cash, Debit Card, Credit Card, M-Pesa, Yu-Cash, Airtel-Money

- iii. Select only one or more email alerts they would be interested in when new products arrivals. The selection is handbags, shoes, jewelry, makeup and blouse
 - iv. A field where they can make suggestions on how better they can be served
 - v. A link called “Sign Up” that allows those who are not yet registered to register. This link leads to a file called *signupform.html* (10 marks)
- b) Discuss any four considerations that you should bear in mind when designing a Power Point Presentation (5 marks)
- c) Explain five sectors in which the internet has contributed to its development in Kenya (5 marks)

QUESTION FIVE.

- i. Discuss the Generations of Computers and Computer languages (5marks)
- ii. Discuss the difference between Utility software and system software (2marks)
- iii. Discuss Advantages of Computers and disadvantages of computers(4marks)
- iv. Explain functionality and Components of a computer system (4marks)
- v. Using examples explain some of **FIVE** application software used in computer system (5marks)

MARKING SCHEME

JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

UNIVERSITY EXAMINATION 2016/2017

BSC ANIMAL SCIENCE, AGRIC EXTENTION.

SCS 112: INTRODUCTION TO COMPUTER APPLICATIONS

QUESTION ONE (Compulsory 30 Marks)

- a) Word processing offers several ways to view a document for editing or reading, explain any four different document views you are aware of (4 marks)

Print Layout view is the default view for creating, editing, and formatting a Word document.

Full Screen Reading view displays the document in the largest amount of screen space and is useful when reviewing and commenting on a document you are sharing with others.

Draft view is a view in which you can quickly key and enter text, but cannot see how the text actually appears on individual pages.

In **Print Preview**, you can set document margins, specify paper size and orientation, zoom the document, and print it.

Web Layout view used to view the document as it would appear in web browser

- b) The internet consists of multiple data systems that were developed independently. Some of the popular and important systems are. Some of the most popular and important systems are.

E-mail- electronic mails (sending and receiving electronic mails)

Newsgroup- newsgroup is like an electronic public notice board on a particular subject

File Transfer Protocol- FTP takes care of transmission of files between computers.

Telnet- Telnet offers users the capability of running programs remotely and facilitates remote administration

- c) Discuss the role of each of these data systems (8 marks)
- d) Discuss the MS EXCEL electronic spreadsheet under these particular topics (8 marks)
- i. Workbook and worksheet
 - ii. The three cell references
 - iii. Function and formulas citing examples

iv. Error messages citing examples

e) Explain the importance of each line in the HTML code shown below (7marks)

<HTML> starts the HTML document

```
2          <HEAD>start header
3          <TITLE> SHOPPING </TITLE> provides the page title, displays on the title
bar
4          </HEAD> end starter
5          <BODY> start the body part of the page
6          <H1> MY SHOPPING LIST</H1> header 1 (heading 1)
7          <P> paragraph tag
8          <UL> starts unordered list
9          <LI> Coffee </LI> list items
10         <LI> MILK </LI> list items
11         </UL>end unordered list
12         </P> paragraph tag
13         </BODY>close body tag
14        </HTML>close document
```

f) Discuss the function of the following features of ms power point application window (3 marks)

- i) theme gallery
- ii) text placeholder

A **theme** is a color-coordinated set of colors, fonts, and special effects that you can apply all at one time to slides to give your presentation a unified, professional appearance, theme gallery is a collection of themes

Text placeholder-Place to enter text in the Ms PowerPoint window

QUESTION TWO

c) It is now 2016. You are in stage III semester I. you are required to defend your project proposal and the following are the preparations you need to make

Produce a word document that has the following

- vi. A title page with no number
- vii. The margins should be 1' all round

- viii. Text that is justified, times new roman size 12
- ix. A project timeline (that breaks your tasks) in a word table
- x. Power point presentation file that has a maximum of 8 slides that would act as a visual aid in your presentation.

Describe the procedure of doing all the above as required in preparation for the proposal defense

(8marks)

d) Examination officers normally create a mark sheet, which they use to record examination marks after students have sat for examinations at the end of the semester. The mark sheet includes the following columns in MS EXCEL in the order given

- xi. FIRST NAME
- xii. MIDDELE NAME
- xiii. REG NO
- xiv. UNITS DONE
- xv. ASSIGMENT ONE
- xvi. ASSIGNMENT TWO
- xvii. CAT ONE
- xviii. CAT TWO
- xix. TOTAL MARKS
- xx. REMARKS

Required:

- iv. Create a sketch of this tabulated data and include a sample of only three students (2marks)
- v. Name and explain how you would use one of the functions provided by MS EXCEL to combine the first name and middle name columns into one column called “Names” which replaces the two columns (3 marks)- **concatenate function**
- vi. Establish the formulas that generate the column

- 4) Total marks that includes the CATs and ASSIGNMENTS marks (2 marks)
- 5) Mean score for the all the students that did the examination (2 marks)
- 6) Remark(whose output is Grade A-E generated from the total mark where A is 70% and above, B is 60%-69%, C is 50%-59%, D is 40%-49% and E is below 40% (3 marks)

QUESTION THREE

- d) The internet is synonymous with the web. Is this true or false? Discuss (5 marks)
- e) Assume that you are about to graduate with your Bachelors degree in I.T. From your acquired knowledge in word processing, clearly explain how you invite 50 friends by sending them individually addressed letters through the use the available automated process (10 marks)
- f) The word browser is a term that is widely spoken about. Explain in your own words explain it, citing three examples of such.(5 marks)

QUESTION FOUR

- d) You have just started a small business and you want your customers to purchase products online .Through a sketch diagram and HTML tags, explain the procedure of creating an online form that contains the following
 - vi. A field where users can identify themselves and enter their password-**text field**
 - vii. Choose only one option of how the will pay money for products which are Cash, Debit Card, Credit Card, M-Pesa, Yu-Cash, Airtel-Money-**radio button**

viii. Select only one or more email alerts they would be interested in when new products arrivals. The selection is handbags, shoes, jewelry, makeup and blouse –**check box**

ix. A field where they can make suggestions on how better they can be served-**text area**

x. A link called “Sign Up” that allows those who are not yet registered to register. This link leads to a file called *signupform.html*- **link tag/anchor tag**

(10 marks)

e) Discuss any four considerations that you should bear in mind when designing a Power Point Presentation (5 marks)

Plan the presentation; gather materials you want to include

Create the presentation by creating slides, entering text, and editing and arranging the slides

Apply a presentation design if you wish

Add objects to the presentation

Apply and modify transitions, animation effect, and links for electronic presentations

Create audience materials and speakers notes

Rehearse and add slide timings

Present the presentations

f) Explain five sectors in which the internet has contributed to its development in Kenya (5 marks)

Education; e.g multimedia, e-books, journals, lists of colleges and universities etc

Financial eg banks, insurances

Service sector eg tourist, reservations, hotels industry

Entertainment e.g games, movies, videos etc

Communication eg emails

Transport .eg google maps

Agriculture e,g weather forecast

QUESTION FIVE.

i)Discuss the Generations of Computers and Computer Languages(5 marks)

FIRST GENERATION

The first generation computers were bulky in size. They were able to execute

hundreds of instructions per second and were expensive

SECOND GENERATION

The second-generation computers were smaller in size as compared to the first generation computers. These were capable of executing thousands of instructions per second, with a transistor as its main component.

THIRD GENERATION

The third generation computers were more advanced and used integrated circuits. These computers contained thousands of components per circuit.

FOURTH GENERATION

The fourth generation computers used complex circuits like the large scale integrated circuits called microprocessors or chips, which surprisingly cost less than the third generation computers. These computers were able to execute millions of instructions per second.

FIFTH GENERATION

These computers work on artificial languages (AI) like LISP, PROLOG etc. They use super/ultra large-scale integrated circuits which is also called parallel processing method.

PROGRAMMING LANGUAGE

ii) Discuss the Application software and system software (2marks)

a) Application software is the end user software. The programs written under application software are designed for general purpose and special purpose applications. An example of application software is Microsoft Internet Explorer.

b) System Software enables an application software to interact with the computer hardware. System software is the 'background' software that helps the computer to manage its internal resources. The most important system software is the operating system. The system software performs important tasks such as running the program, storing data, processing data etc. Windows XP is an example of system software

iii) Discuss Advantages of Computers and disadvantages of computers(8marks)

- High accuracy
- Superior speed of operation
- Large storage capacity
- User-friendly features

iii) Explain some of this application software (5marks)

WORD PROCESSING SOFTWARE

Word processing software is used for creating documents. Drafts, letters, reports, essays,

write-upsetc can be created using word processing software.

SPREADSHEETS

Spreadsheet is a computer application that simulates a paper worksheet. It displays multiple cells that together, make up a grid consisting of rows and columns, each cell containing either alphanumeric text or numeric values. Spreadsheets are frequently used for financial information because of their ability to re-calculate the entire sheet automatically after a change to a single cell is made.

MICROSOFT EXCEL

Microsoft had been developing Excel on the Macintosh platform for several years to the point, where it has developed into a powerful system.

PRESENTATION PROGRAMS

Microsoft PowerPoint is a presentation program developed by Microsoft. It is part of the Microsoft Office suite and runs on Microsoft Windows and Apple's Mac OS X computer operating systems.

GRAPHICS PROGRAMS

Computer graphics are graphics, which are created with the aid of computers and the representation and manipulation of pictorial data by a computer.