



**MURANG'A UNIVERSITY COLLEGE (MRUC)**  
**A constituent College of Jomo Kenyatta University of Agriculture & Technology**

FIRST YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF COMMERCE/BACHELOR OF  
BUSINESS INFORMATION TECHNOLOGY

**EXAM HBC 2106 FUNDAMENTALS OF COMPUTERS**

DATE: APRIL 2013

TIME: 2 HOURS

---

**INSTRUCTIONS:**

Answer questions one and any other two questions.

### Question one

- a) Define the following number of systems and state characteristics of each.
- i. Binary number system
  - ii. Octal number system
  - iii. Hexadecimal number system
  - iv. Decimal number systems [4 marks]
- b) Define the following computer terms
- i. BYTE
  - ii. Intranet
  - iii. Virus [3 marks]
- c) Differentiate the following terms used in computer systems.
- i. Application software and system software [2 marks]
  - ii. Random Access Memory (RAM) and Read Only Memory (ROM) [2 marks]
  - iii. Windows bar; that is, Menu bar, Status bar and Tool bar. [3 marks]
- d) Computers have evolved through many generations over the years. Describe the FIVE generations in evolution of computers. [5 marks]
- e) Describe the main functions of the computer central processing unit [2 marks]
- f) Describe shortcomings of computer software which are in the category of readymade applications as opposed to those categorized as tailor made applications. [4 marks]
- g) Use step by step procedure to demonstrate the difference between Turn Off and log Off in computer applications. [2 marks]
- h) Perform conversion of the following decimal number systems into their binary number equivalents. [3 marks]
- i. 11
  - ii. 12.15

## SECTION TWO CHOOSE ANY TWO QUESTIONS

### Q2 Word Processing

- a) Define the term Word processing [1 mark]
- b) State the two different page orientations a word processed document can be set to. [2 marks]
- c) Describe how you would carry out the following word processor operations; [6 marks]
- i. Opening an existing document
  - ii. Creating a new document
  - iii. Creating a new folder
- d) Justify why sometimes its necessary to change the size of the margins of a word processed documents such as a letter or a report. [2 marks]
- e) i. Justify the need of styles while formatting date in word processing [2 marks]
- ii. Outline steps to follow while including styles in word processing [5 marks]

### Q3 spreadsheets

- a) Explain what the following spreadsheet functions do. Illustrate your answer with an example of how the function could be used:
- i. SUM
  - ii. AVERAGE
  - iii. COUNT
- b) The image below shows a partially completed spreadsheet that will be used for creating invoices. An individual Item Total is calculated by multiplying price and quantity. The Items Total figure is calculated by adding up all the individual Item Figures.

The Tax (10%) figure is calculated s 10% of the Items Total Figure. The invoice Total is calculated by adding the Items Total and the Tax (10%) figure together.

	A	B	C	D	E	F
1				<b>Invoice</b>		
2						
3						
4						
5						
6	<b>Product code</b>	<b>Item</b>	<b>Price</b>	<b>Quantity</b>	<b>Item Total</b>	
7	1234	Spreadsheets- all you need to know	12.93	2	25.86	
8	2345	Word Processing - the answers	13.1	3	39.3	
9	3456	Databases - harness the power	20	5	100	
10						
11						
12				<b>Items Total</b>	<b>165.16</b>	
13				<b>Tax(10%)</b>	<b>16.516</b>	
14				<b>Invoice Total</b>	<b>181.676</b>	
15						

- i. State a formula that correctly calculates the Item Total figure in E7. [2 marks]
- ii. State what the most efficient formula is to calculate the Items Total figure in E12. [2 marks]
- iii. State a formula that correctly calculates the Tax (10%) figure in E13. [2 marks]
- iv. State a formula that correctly calculates the Invoice Total figure in E14 [2 marks]
- c) Suggest a change to the formatting of the spreadsheet in order to improve the presentation of the spreadsheet. [1 mark]
- d) Suggest a suitable folder name and file name for saving the spreadsheet. [2 marks]

#### Q4 Database

- a) Explain what the following database terms mean:-
- Record (also called row) [2 marks]
  - Field (also called column) [2 marks]
  - Table [2 marks]
- b) Describe an example of one of the database in a business organization. [2 marks]

c) State the most appropriate data type for storing each of the items of data listed below.

i. +44(0)20 83292930

[1 mark]

ii. 21 July 1969

[1 mark]

iii. 3.1415

[1 mark]

d) Below is a screenshot of part of a database. Refer to it when answering the questions below the database.

ID_Students	Forename	Surname	Age
1	Chris	Smith	42
2	Fazia	Bibi	31
3	Gemma	James	20
4	James	Brown	7
5	James	Nkonde	58
6	Kamran	Khan	64
7	Les	Jones	14
*	(New)		

i. Explain what the problem with this design is.

[2 marks]

ii. Describe what changes you would make to improve the design of this database [2 marks]

e) For queries on the data shown above

i. How many records would be displayed if a criterion of >50 was set for the age field?

[1 mark]

ii. What criteria would you use to display records of people aged from 20 to 45 years inclusive?

[2 marks]

iii. What criteria would you use to display records of people that are younger than 21 years or with the forename James?

[2 marks]

### **Q5 Electronic Mail**

- a) Explain what the following e-mail terms mean;
- i. Junk mail (also known as spam) [2 marks]
  - ii. Zip [2 marks]
  - iii. CC (also known as Carbon copy) [2 marks]
  - iv. Reply to All [2 marks]
- b) Describe two precautions you should take when using e-mail and explain why each precaution is necessary. [4 marks]
- c) Reply and forward are two very useful e-mail commands;
- i. Explain one similarity between Reply and Forward. [2 marks]
  - ii. Explain one difference between Reply and Forward. [2 marks]
- d) Name two internet software and internet browsers. [4 marks]



**MURANG'A UNIVERSITY COLLEGE(MRUC)**  
A Constituent College of Jomo Kenyatta University of Agriculture and Technology

**BACHELOR OF COMMERCE**

**END OF SEMESTER EXAMS**

**SUPPLEMENTARY HBC 2106 FUNDAMENTALS OF COMPUTER SYSTEMS**

**DATE: MAY 2013**

**TIME: 2 HOURS**

### Question one

- a) Define the following number systems and state characteristics of each
- i. Hexadecimal number system
  - ii. Decimal number systems [2 marks]
- b) Describe two precautions you should take when using e-mail and explain why each precaution is necessary. [2 marks]
- c) Define the following computer terms:-
- i. BIT
  - ii. Internet
  - iii. Virus [3 marks]
- d) Differentiate the following terms used in computer systems;
- i. Application software and system software [2 marks]
  - ii. Random Access Memory (RAM) and Read Only Memory (ROM) [2 marks]
  - iii. Windows bars; that is, Menu bar, status bar and Tool bar [2 marks]
- e) Computers have evolved through many generations over the years. Describe the five generations in evolution of computers. [6 marks]
- f.i) Describe the main functions of the computer central processing unit. [2 marks]
- ii. Describe shortcomings of computer software which are in the category of readymade applications as opposed to those categorized as tailor made applications. [4 marks]
- g) Use step by step procedure to demonstrate the difference between Turn Off and Log Off in computer application. [2 marks]
- h) Perform conversion of the following decimal number systems into their binary number equivalents. [3 marks]
- i. 11
  - ii. 12.15

## SECTION TWO CHOOSE ANY TWO QUESTIONS

### Q2 Word Processing

- a) Define the term Word processing [1 mark]
- b) State the two different page orientations a word processed document can be set to. [2 marks]
- c) Describe how you would carry out the following word processor operations; [6 marks]
- i. Opening an existing document
  - ii. Creating a new document
  - iii. Creating a new folder
- d) Justify why sometimes it's necessary to change the size of the margins of a word processed documents such as a letter or a report. [2 marks]
- ii. Name two word processing tools which can be proofread a document [2 marks]
- e) i. Justify the need of styles while formatting date in word processing [2 marks]
- ii. Outline steps to follow while including styles in word processing [5 marks]

### Q3 spreadsheets

- a) Explain what the following spreadsheet functions do. Illustrate your answer with an example of how the function could be used:
- iv. SUM
  - v. AVERAGE
  - vi. COUNT
- b) The image below shows a partially completed spreadsheet that will be used for creating invoices. An individual Item Total is calculated by multiplying price and quantity. The Item Total figure is calculated by adding up all the individual Item Figures. The Tax (10%) figure is calculated s 10% of the Items Total Figure. The invoice Total is calculated by adding the Items Total and the Tax (10%) figure together.

	A	B	C	D	E	F
1				<b>Invoice</b>		
2						
3						
4						
5						
6	<b>Product code</b>	<b>Item</b>	<b>Price</b>	<b>Quantity</b>	<b>Item Total</b>	
7	1234	Spreadsheets- all you need to know	12.93	2	25.86	
8	2345	Word Processing - the answers	13.1	3	39.3	
9	3456	Databases - harness the power	20	5	100	
10						
11						
12				<b>Items Total</b>	<b>165.16</b>	
13				<b>Tax(10%)</b>	<b>16.516</b>	
14				<b>Invoice Total</b>	<b>181.676</b>	
15						

- i. State a formula that correctly calculates the Item Total figure in E7. [2 marks]
  - ii. State what the most efficient formula is to calculate the Items Total figure in E12. [2 marks]
  - iii. State a formula that correctly calculates the Tax (10%) figure in E13. [2 marks]
  - iv. State a formula that correctly calculates the Invoice Total figure in E14 [2 marks]
- c) Suggest a change to the formatting of the spreadsheet in order to improve the presentation of the spreadsheet. [1 mark]
- d) Suggest a suitable folder name and file name for saving the spreadsheet. [2 marks]

#### Q4 Database

- a) Explain what the following database terms mean:-
- i. Record (also called row) [2 marks]
  - ii. Field (also called column) [2 marks]
  - iii. Table [2 marks]
- b) Describe an example of one of the database in a business organization. [2 marks]
- c) State the most appropriate data type for storing each of the items of data listed below.

i. +44(0)20 83292930

[1 mark]

ii. 21 July 1969

[1 mark]

iii. 3.1415

[1 mark]

d) Below is a screenshot of part of a database. Refer to it when answering the questions below the database.

ID_Students	Forename	Surname	Age
1	Chris	Smith	42
2	Fazia	Bibi	31
3	Gemma	James	20
4	James	Brown	7
5	James	Nkonde	58
6	Kamran	Khan	64
7	Les	Jones	14
*	(New)		

i. Explain what the problem with this design is.

[2 marks]

ii. Describe what changes you would make to improve the design of this database [2 marks]

e) For queries on the data shown above:

i. How many records would be displayed if a criterion of >50 was set for the age field?

[1 mark]

ii. What criteria would you use to display records of people aged from 20 to 45 years inclusive?

[2 marks]

iii. What criteria would you use to display records of people that are younger than 21 years or with the forename James?

[2 marks]

### **Q5 Electronic Mail**

a) Explain what the following e-mail terms mean

i. Junk mail (also known as spam) [2 marks]

ii. Zip [2 marks]

iii. CC (also known as Carbon copy) [2 marks]

iv. Reply to All [2 marks]

b) Reply and forward are two very useful e-mail commands;

i. Explain one similarity between Reply and Forward. [2 marks]

ii. Explain one difference between Reply and Forward. [2 marks]

c) Name two internet software and internet browsers. [4 marks]