



SCHOOL OF PROFESSIONAL STUDIES
BACHELOR OF INFORMATION COMMUNICATION TECHNOLOGY
UNIT CODE: BCT 314, UNIT NAME: WEB APPLICATIONS
PROGRAMMING

September – December 2018/2019 End Semester Exam - Time: 2 Hours

Instructions: Answer Question ONE (Compulsory) and any other TWO questions.

Question One (30 Marks)

- a) Differentiate between the following terms
 - i. Web site and web portal as used in the context of web technology (6 Marks)
 - ii. HTTP and HTTPS
 - iii. XML and HTML
- b) Explain the phases of web site development (8 Marks)
- c) State four common ways in which you can reduce the load time of a web application (4 Marks)
- d) Consider the following HTML and CSS fragment below:
 - i. Draw a diagram showing how the page will appear when rendered in a browser. (7 Marks)
 - ii. By default, webpage content flows as a single column. Each heading, list, paragraph (etc.) appears one after the other. However, most websites are designed with more complex page layouts. Draw a sketch of a typical web page layout. Use blocks to

illustrate areas of the page, clearly labeling and explaining the function of each block in your diagram.

(5 Marks)

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Strict//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-strict.dtd">
<html>
<head>
<style>
div{
outline: 1px solid black;
}

#block1{
position: absolute;
top: 150px;
left: 200px;
height: 50px;
width: 50px;
}

#block2{
position: absolute;
top: 150px;
left: 100px;
height: 200px;
width: 100px;
}

#block3{
position: absolute;
top: 0px;
left: 50px;
height: 200px;
width: 100px;
}
</style>
</head>
<body>
<div id="block1">Box1</div>
<div id="block2">Box2</div>
<div id="block3">Box3</div>
</body>
</html>
```

Question Two

a) Usability testing is an important part of website design. (6 Marks)

- Give THREE (3) advantages offered by usability testing.
- When should usability testing be carried out?

b) Explain the following as used in CSS (3 Marks)

- Why is the use of inline CSS often considered bad practice in web design?
- TWO (2) different ways of specifying CSS for a webpage.

c) Write an appropriate HTML code to generate the following web page (6 Marks)

#	Product	price
1	Ramtoms iron Box	Ksh 2,500
2	Mineral water (300 ml)	Ksh 30
3	Bread (500 grams)	Ksh 45
4	Protex Soap (100G	Ksh 150
5	Ariel Detergent (500g	Ksh 130

Question three

- a) What is list? Describe different types of lists (4 Marks)
- b) The use of tables can cause issues in web design. (5 Marks)
- List THREE (3) potential problems of using tables for web page design.
 - List TWO (2) issues of using tables when designing web pages for use on mobile devices.
- c) Briefly explain why it is important to test the accessibility of a website before releasing it for use and explain TWO (2) ways in which a web designer might test the accessibility of a web site. (6 Marks)

Question Four

- a. What is scripting language? Describe different types of scripting languages (5 Marks)
- b. Write the appropriate code to generate the web page that follows (10 marks)

 MY COLLEGE						Search... GO	
Home	About US	Courses	Register	Services	Contact Us	Faqs	
Welcome to My college. We offer the following courses ▪ Bachelor of science in computer science ▪ Mechanical engineering ▪ Short courses in driving Bachelor of Science in computer science -introduces the learners to concepts of computing Mechanical Engineering - introduces the students to the core concept of mechanical engineering							

Question Five

- a) Write CSS code that define five classes of paragraph with different background, color, margins, padding and border style **(6 Marks)**
- b) Critically discuss **three** ways of integrating database into the web development **(9 Marks)**