



# THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of Jkuat)

*Faculty of Engineering and Technology*

**DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY**

**DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY - DICT 2K 10J**

**EIT 2213, ECS 2205 WEB DEVELOPMENT**

**SPECIAL/SUPPLEMENTARY EXAMINATION**

**SERIES: OCTOBER 2011**

**TIME: 2 HOURS**

## **Instructions to Candidates:**

You should have the following for this examination

- *Answer booklet*

Answer question **ONE (COMPULSORY)** in section A and any other **TWO** questions from section B

Maximum marks for each part of a question are clearly shown.

This paper consists of **FOUR** printed pages

**Question 1 (30 marks)**

- (a.) (i.) Why are hyperlinks important in a web page? Discuss  
(ii.) What are the two HTML elements that you need to specify to enable hyperlinks? As you explain, give the tag for each element. (10 marks)
- (b.) (i.) What does the acronym HTML stand for? Outline  
(ii.) HTML is said to be a markup language, what does that mean to you? Explain. (3 marks)
- (c.) Briefly distinguish between the two terms internet and web. (4 marks)
- (d.) What is an attribute in relation to a tag? As you explain give three attributes that you know. (5 marks)
- (e.) (i.) What is a tag? Give an example of an empty tag and non empty tag.  
(ii.) Outline the structure of a HTML web page. (8 marks)

**Question 2 (20 marks)**

- (a.) Define each of the following terms:  
(i.) table  
(ii.) cell (2 marks)
- (b.) (i.) How is a table specified in HTML? As you describe give the basic tags that are used to define the table element in HTML.  
(ii.) How do we define a table caption? Explain and give the corresponding tag. (7 marks)
- (c.) Define a HTML code excerpt for following table layout:

Course Code	Course Title	Contact Hours
EIT 2100	Fundamentals of Computing	70
EIT 2101	Foundations of Programming	45
EIT 2103	Mathematics for Sciences	45
<b>Total Contact Hours</b>		160

(11 marks)

**Question 3 (20 marks)**

- (a.) (i.) What are the two types of lists that we can have in a HTML page? What differentiates them?
- (ii.) Give the tag used to implement each list type. (8 marks)
- (b.) Define a HTML page that will produce content which has the following layout:

**Design Patterns**

1. Creational Patterns

- Factory Method
- Abstract Factory Method
- Prototype

2. Structural Patterns

- Adapter
- Bridge
- Composite

(12 marks)

**Question 4 (20 marks)**

(a.) Explain, with the aid of an example, what is meant by client-server architecture. (4 marks)

(b.) What is the most suitable format for webpage display of

- (i.) Photographic images
- (ii.) Graphics

Briefly justify your answer. (6 marks)

(c.) What is the purpose of CGI? (2 marks)

(d.) Cascading Style Sheets (CSS) are used to separate content from presentation.

(i.) Give THREE reasons why it is important to separate content from presentation.

(4 marks)

(ii.) What are the advantages of defining and linking to an external CSS file, as opposed to simply defining CSS in the header of an HTML document? (4 marks)

**Question 5 (20 marks)**

- (a.) Describe the function of the two parts of the TCP/IP communication protocol. (2 marks)
- (b.) Define and briefly explain the role of:
- (i.) IETF (4 marks)
  - (ii.) W3C (4 marks)
- (c.) Explain the difference between Dynamic HTML and Static HTML. (4 marks)
- (d.) Explain the roles the following technologies play in delivering a dynamic website:
- (i.) HTML (2 marks)
  - (ii.) CSS (2 marks)
  - (iii.) JavaScript (2 marks)