



Machakos University College

ISO 9001:2008 Certified

(A Constituent College of Kenyatta University)

SCHOOL OF ENGINEERING AND TECHNOLOGY
DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FIRST YEAR SECOND SEMESTER EXAMINATION FOR DIPLOMA IN ICT

WEB APPLICATION DEVELOPMENT

Date: 11 /12/2014

Time: 8:30 – 10:30 am

Instructions

Attempt question one in section A which is compulsory and any other two questions in section B.

SECTION A

Question one (30 marks)

- (a) Distinguish between hyperlink and hypermedia. (4 marks)
- (b) Identify four factors about the target audience that you have to consider before developing the website. (4 marks)
- (c) Identify three essential items on an organization's home page. (3 marks)
- (d) State three graphic file formats used on a web page. (3 marks)
- (e) Define the following terms; (6 marks)
 - i. http
 - ii. www
 - iii. website
 - iv. ftp
 - v. html
 - vi. web server
- (f) In the context of www client server paradigm, several components are essential. Explain the following components and provide an example of each. (2 marks each)
 - i. Web client
 - ii. Web browser
 - iii. ISP
 - iv. Hypermedia link
 - v. Protocol

SECTION B

Question two (20 marks)

(a) Study the following HTML code and then answer the question that follows:

```
<HTML>
<HEAD>
<TITLE>HTML Programming</TITLE>
,FRAMESET ROWS = "20%,*">
  <FRAME NORESIZE>
  <FRAMESET COLS = "25%,*">
    <FRAME>
    <FRAME>
  </FRAMESET>
</FRAMESET>
</HTML>
```

Generate the output when the code is run in a web browser. (6 marks)

(b) Explain the function of the following HTML tags. (8 marks)

- i. <BIG>
- ii. <CITE>
- iii. <SUB>
- iv. <SUP>

(c) State two advantages of using code generators during web design. (2 marks)

(d) Describe the function of the **meta** element in an HTML page. (2 marks)

(e) Write an HTML statement that will insert a graphic located in the directory C:\DESKTOP\USERS (2 marks)

Question three (20 marks)

(a) The table below contains some details in a webpage. Use it to answer the question that follows.

| Department | Full time Students | | Total |
|------------|--------------------|--------|------------|
| | Male | Female | |
| ICT | 20 | 35 | 55 |
| Business | 70 | 40 | 110 |
| Electrical | 5 | 20 | 25 |

Write HTML code that would generate the table in a web browser. (10 marks)

(b) The following is an extract from a particular college website. Use it to answer the question that follows.

Welcome to our website

Courses offered

1. Information Communication Department
 - a. Diploma
 - i. Information Technology
 - ii. Computer Studies
 - b. Certificate
 - i. Computer Application Packages
 - ii. Computer Studies
2. Business Education Department
 - a. Diploma
 - i. Marketing Management
 - ii. Business Administration
 - b. Certificate
 - i. Sales and Marketing
 - ii. Business Administration

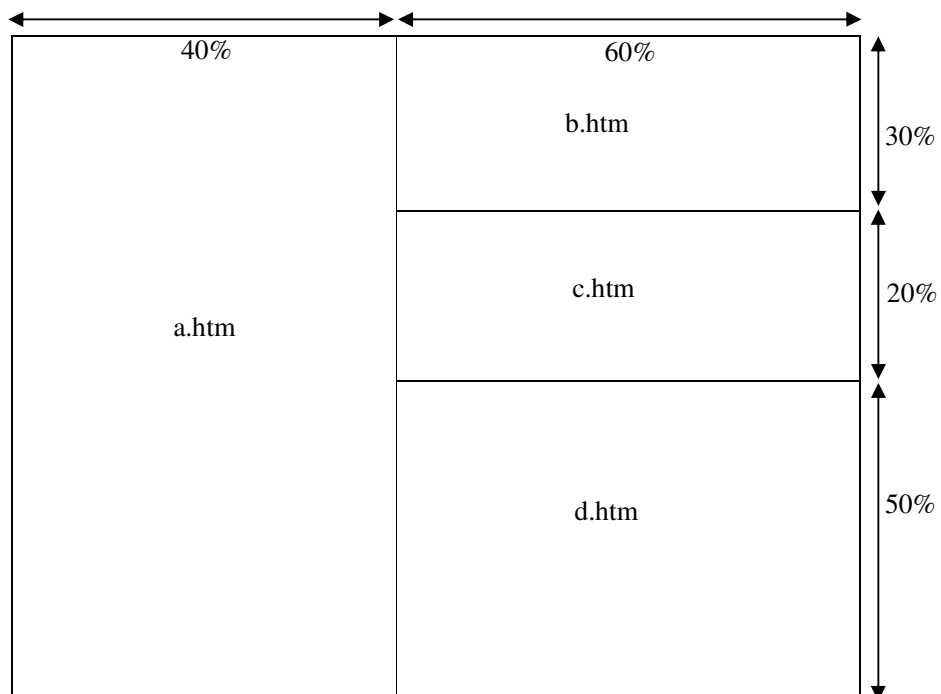
Write an HTML code that would produce this information on the web.

(10 marks)

Question four (20 marks)

(a) Write down HTML code that would produce the following frames when run in a web browser.

(10 marks)



(b) Explain the purpose of the *uniform resource locator*.

(2 marks)

(c) Generate the output of the following HTML code.

(8 marks)

```

<HTML.
<BODY>
<Table border = "4">
<Caption>YEAR 2012</Caption>
<TR>
  <TD Colspan = "3" align = "center">MATOPENI</TD>
</TR>
<TR>
  <TD>ADM</TD>
  <TD rowspan = "3">FINANCE</TD>
  <TD>COMPUTER</TD>
</TR>
<TR>
  <TD>SCIENCE</TD>
  <TD rowspan = "2">SOFTWARE</TD>
</TR>
<TR>
  <TD>ENGINEERING</TD>
</TR></TABLE></BODY></HTML>

```

Question five (20 marks)

- (a) State four web browsing tools. (4 marks)
- (b) Outline two qualities of a good website. (2 marks)
- (c) Write HTML statements that would perform each of the following when run on a web browser.
- i. Change the background color to yellow. (2 marks)
 - ii. Draw a horizontal line of color red. (2 marks)
 - iii. Insert a picture named *pick.jpg*. (2 marks)
- (d) The figure below shows an extra from a web browser. Use it to answer the question that follows.

STUDENT DETAILS

First name

Last name

GENDER DETAILS

Male

Female

PLEASE SELECT THE UNITS

PROGRAMMING

DATA COMMUNICATION

COMPUTER APPLICATIONS

DATABASE MANAGEMENT SYSTEM

Write a HTML code that would produce this information on a web page. (8 marks)