



Machakos University College
(A constituent College of Kenyatta University)

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SCO207 Web development Technologies

Instruction: answer question **one** and any other **two**

Duration: 2 hours

Question one [compulsory]

- a. Explain the role of the following protocols in the internet context
- i. Hypertext Transfer Protocol HTTP
 - ii. Point to point protocol (PPP)
 - iii. Simple Mail Transfer Protocol (SMTP) [6 marks]
- b. The following web page relates to a machakos university registration module. Write an appropriate HTML code to generate the page on a web browser application [13 marks]

Machakos University College	
<u>Home</u> <u>About Us</u> <u>Courses</u> <u>Contact Us</u> <u>FAQs</u>	
Advert video named "mucadverts.j pg"	Sur name Other names Gender ▼ Date of birth Telephone Register Reset
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c. Differentiate between **internet, intranets and extranets** as used in the context of internet [6 marks]

a. Write an appropriate HTML 5 code to

i. Embeds an MP4 video name “adverts.MP4” on the browser [2 marks]

ii. Allows users to select a numeric number between 0 and 20 with a default value of 1 displayed on the control [3 marks]

Question Two

a. Apart from styling HTML elements, CSS allows us to define our own selectors. Discuss such two selectors and when each can be used in web design [3 marks]

b. Write appropriate HTML code to

i. Pop up a calendar from where the users can select a data value [1 mark]

ii. Inserts a image named ‘muc.jpg’ on a web page with alternative text ‘Machakos university college’ [2 marks]

c. The following figures depicts the proposed index page for *machakos county* website. As a web programmer, you are requested to write the appropriate code to generate the page. Use the appropriate web development development tools to design and produe an appropriate layout. [14 marks]

Machakos County						Search...	GO
						Login	Register
Home	About US	Projects	Officials	News	Contact Us	Faqs	
Email Email Subscribe		Welcome to machakos county official site . machakos county was established as a result of promulgation of the new constitution			Advert video named as “machakosadvert.mp4 “		
		Latest news from the county					
Home About Us projects news Contact us Site Map Machakos County All rights reserved ©2015							

Question three

- a. There are basically **three** ways of inserting CSS file into an HTML file. Using valid examples, explain how each works and when it is necessary to use each [9 marks]
- b. With a well labelled diagram, explain the concept behind box model in CSS [7 marks]
- c. Write an appropriate HTML code that renders the following web page on a web browser application [4 marks]

Welcome to University of Nairobi. We offer the following courses to our students

Bachelor of Science in computer science

-it's a course that introduces learners to the core concepts of computing systems

Mechanical Engineering

- introduces the students to the core concept of mechanical engineering

Question four

- a. With valid examples to support your answer, explain the role of the following tags in HTML
 - i. <abbr>
 - ii. <address>
 - iii. <blockquote> [6 marks]
- b. Critically discuss **three** ways of integrating database into the web environment [9 marks]
- c. Explain the role of **keygen** and **datalist** elements in HTML5. Use examples to support answer [4 marks]

Question Five

- a. Using the concepts of *Divs*, *external Cascading Style Sheets (CSS)* and *HTML*, write the appropriate CSS and HTML Code to render the following web page. The dimensions of various Elements are provided on the screen shot below. [16 marks]

The screenshot shows a web browser window titled "Form" with a blue title bar. The address bar shows "http://". The main content area displays a registration form titled "Registration Module:". The form contains the following fields and controls:

- Sur name:
- Other Name:
- Gender: (dropdown menu)
- Telephone Number:
- Email address:
- Password:
- Confirm Password:
- Buttons: and

Dimensions and labels are provided for various elements:

- 1: width: 180 px, width: auto px
- 2: width: 800px, height: 30px
- 3: width: 800 px, height: 20 px
- 4: Image name: IEBC.jpg
- 5: width: 600 px, height: auto
- 6: width: 180 px, width: auto px

A watermark "MockupScreens UNREGISTERED VERSION" is visible in the bottom right corner of the browser window.

- b. With examples to support your answers, explain any **two** tags we can place at the head section of an HTML document [4 marks]

*****End and good Luck*****