



# AFRICA NAZARENE UNIVERSITY

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## EVENING & DISTANCE LEARNING

**CENTRE:** NAIROBI  
**DEPARTMENT:** COMPUTER SCIENCE  
**UNIT TITLE:** INTRODUCTION TO WEB DESIGN AND DEVELOPMENT  
**UNIT CODE:** CSC 103  
**LECTURER:** OBUHUMA JAMES  
**TRIMESTER:** 1<sup>ST</sup> TRIMESTER 2015/2016  
**DATE:** 30<sup>TH</sup> NOVEMBER 2015  
**TIME:** 5.30PM – 8.30PM

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### Instructions:

1. Answer Question ONE (Compulsory) and any other THREE Questions
2. Write all your answers in the answer booklet provided.
3. Time: Three Hours

### Question One

- a) Consider a <meta> tag a HTML file:
- i) Where is it placed in the HTML file? (1 mark)
  - ii) With clear code snippets, state any two roles of the <meta> tag. (4 marks)
- b) What is the role of the <div> tag? (2 marks)
- c) Give the role of the following Internet Standards and Coordination organisations:
- i) Internet Society (2 marks)
  - ii) ICANN (2 marks)
  - iii) W3C (2 marks)
- d) Identify the sections that form the URL http://www.safaricom.com. (4 marks)
- e) Write the HTML5 code that will produce the following list: (4 marks)
- i) Web design is an interesting course.
  - ii) The following are my classmates:
    - James
    - John
    - Mark
- f) Code a JavaScript that prompts a user to type the radius value after which it outputs the Area of a circle through an alert message. (5 marks)
- g) Assume you have an audio file “gospel.mp3”. Using an appropriate code snippet, explain how the file could be embedded on web pages. (4 marks)

### Question Two

Write the HTML5 code for the following web page. Use an embedded CSS. (15 marks)

The screenshot shows a website for Africa Nazarene University. At the top, there is a dark green header with the text "Africa Nazarene University" in white. Below the header is a navigation menu with links for "Home", "About Us", and "Programs". The "Home" link is highlighted. The main content area has the heading "Home" and a paragraph: "Africa Nazarene University is a member of the worldwide family of Nazarene institutions founded on the same principles - the development of students in a strong spiritual environment." Below this is another paragraph: "ANU offers a well-rounded, holistic education to help members establish themselves in three important areas:". At the bottom of the page, there is a dark green footer with the text "Copyright © ANU 2014".

### Question Three

- a) With reference to the Client-Server Model
- i) With the aid of a diagram, discuss the model with respect to web-based applications. (4 marks)
  - ii) State and explain the role of any two protocols used in the model. (4 marks)
- b) With reference to the Domain Name System:
- i) What is its role? (2 marks)
  - ii) With the aid of a diagram, explain how it works. (5 marks)

**Question Four**

- a) The <canvas> tag is one of the flexibility features in HTML5:
  - i) What is its role? (2 marks)
  - ii) Using the <canvas> tag and JavaScript, write a code that draws a circle on a canvas. (7 marks)
- b) Use an 'if' statement to display of the statement "Good Morning" if the time on your browser is less than 12:00 otherwise it display the statement "Good Afternoon" (6 marks)

**Question Five**

Consider the following form:

The form is titled "Suggestion Form" and contains the following elements:

- A text input field for "Name:" with two checkboxes to its right.
- A text input field for "Programme:" with radio buttons for "BBIT" and "BSC" to its right.
- A large text area for "Suggestion:".
- Two buttons: "Send" and "Clear Form".

- a) Write the html5 code for the form using html5 field validation options. (7 marks)
- b) Rewrite the html5 code for the form using JavaScript for field validation. (8 marks)

