



## COLLEGE

*(A Constituent College of Chuka University)*

## UNIVERSITY EXAMINATIONS

**THIRD YEAR EXAMINATION FOR THE AWARD OF DEGREE OF  
BACHELOR OF SCIENCE IN COMPUTER SCIENCE**

**COSC 326: WEB DESIGN AND DEVELOPMENT**

**STREAMS: BSC (COSC)**

**TIME: 2 HOURS**

**DAY/DATE: THURSDAY 09/04/2020**

**11.30 AM – 1.30 PM**

**SECTION A: ANSWER ALL QUESTIONS IN THIS SECTION**

**QUESTION 1 [30 MARKS]**

- a) Giving an example of each, differentiate between absolute and relative links [4 Marks]
- b) An image 'Mypicture.jpeg' is needed in a web page such that when you click it, you are taken to a web page namely "Home.html". Show how this can be done using HTML: code. [4 Marks]
- c) Write the Mysql statement that you would use to display all the records of a table tblStudents and arrange them according to their Firstname in an ascending order. [4 Marks]
- d) What is a CMS with perspective to web design? Identify THREE types of CMS that you could choose from as a web designer and developer [5 Marks]
- e) What types of lists are supported by HTML? Identify them and give html code example of how to achieve them [3 Marks]
- f) Write php code that display information about the php environment on your browser window [3 Marks]
- g) Using php develop a program that declares a variable named color and initializes it with a default color. The program then displays three lines in the format "My car is color", "My house is color" and "My boat is color" [7 Marks]

**SECTION B: ANSWER ANY TWO QUESTIONS IN THIS SECTION****Question 2 [20 Marks]**

- a) Before using a Mysql database you need to connect and login to the server where the database is located. Write and explain code you would use to achieve this [5 Marks]
- b) Discuss the structure of a CSS style layout. Present a CSS style to format the background color to black and color of font to red. [5 Marks]
- c) CAPTCHA is a tool that is useful for designers and developers of websites and web applications.
  - i. Describe CAPTCHA differentiating it from reCAPTCHA [5 Marks]
  - ii. Discuss applications of CAPTCHA in websites and web applications [5 Marks]

**Question 3 [20 Marks]**

- a) A page is required on which a form for user entry is presented. Users enter their First Name and the Last Name on the form provided. The user then clicks a submit button which is processed by a php page processWelcome.php. The browser displays a page 'Welcome to my site Firstname LastName'. Use php to develop this application [10 Marks]
- b) What is CSS? [3 Marks]
- c) A CSS is required to format a table to have properties border=3px, a solid border of color="red". Show the code for this CSS [7 Marks]

**Question 4 [20 Marks]**

- a) Write an HTML code to display a page with at least 5 items; then sketch how the page will look like [10 Marks]
- b) Frames and tables are both usable in HTML to provide desktop layout and publishing features.
  - i. How do Frames differ from tables? (3 Marks)
  - ii. Demonstrate usage of a Frame in structuring a HTML document (7 Marks)

**Question 5 [20 Marks]**

- a) You have been required to create a form that asks users to input their Name, Age and Country. The user then clicks a button and when they do so these details are displayed on a web page. Write PHP code that implements both the creation of the form and the processing of the same [7 Marks]

- b) One of the most common elements of a web page is graphic elements. Identify **FOUR** types of images that most browsers recognize, their strengths and weaknesses [8 Marks]
- c) Demonstrate how to create connections both to a MySQL server and to a database using PHP [5 Marks]
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