

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**THIRD YEAR FIRST SEMESTER EXAMINATION FOR THE AWARD OF
BACHELOR OF SCIENCE APPLIED COMPUTER SCIENCE**

ACMP 342: WEB PAGE CONSTRUCTION

STREAMS: BSCAPPLIED COMPUTER SCIENCE

TIME:2 HOURS

DAY/DATE: TUESDAY 5/12/2017

8.30 A.M – 10.30 A.M

INSTRUCTIONS:

- Answer Question **ONE** and any other **TWO** questions.
- Diagrams should be used whenever they are relevant to support an answer.
- Sketch maps and diagrams may be used whenever they help to illustrate your answer
- Do not write anything on the question paper
- This is a **closed book exam**, No reference materials are allowed in the examination room
- There will be **No** use of mobile phones or any other unauthorized materials
- Write your answers legibly and use your time wisely

SECTION A

ANSWER ALL QUESTIONS IN THIS SECTION

QUESTION ONE [30 MARKS]

- a) Explain any three advantages and any three disadvantages of JavaScript in a webpage. [6 Marks]
- b) Highlight the importance of W3C to web designers and developers. [4 marks]
- c) Explain in brief the following web construction technologies
 - i. XML [3 Marks]
 - ii. DHTML [3 Marks]
 - iii. Tomcat [3 Marks]

- d) List and explain steps you would take to develop a website. [6 marks]
- e) Differentiate between the Internet and WWW explaining the role of each in web construction. [5 Marks]

SECTION B

ANSWER ANY TWO QUESTIONS FROM THIS SECTION

QUESTION TWO [20 MARKS]

- a) A web form is provided below:

- i. Write the HTML code to reproduce the form. [10 Marks]
- ii. Explain how Schneidermann's golden rule "Error Prevention" has been applied in the design of the shown web form. [4 Marks]
- iii. Explain how Nielsen's heuristic "Visibility of system status" has been applied in the web form. [2 Marks]
- iv. Write code to demonstrate how JavaScript could be used to validate email text field. [4 Marks]

QUESTION THREE [20 MARKS]

- a) "Know your target audience" is a key factor to consider while creating web content. Identify and discuss factors to consider in order to "Know your target audience" [10 marks]
- b) JavaScript code is required to display the string "Hello World". Use this example to demonstrate four different ways to include JavaScript in an HTML file. [10 Marks]

QUESTION FOUR [20 MARKS]

- a) UNEP Kenya an arm of the UN has contracted you to design and develop a new home page for their new project touching on Climate change in Kenya and Global Warming in Kenya. Identify and explain five factors you would consider to design and develop a usable functional home page. [10 Marks]
- b) All passwords in a login form for a web application must be textual in nature and have seven characters or more
- i. Design the login form front end using HTML [4 Marks]
 - ii. Develop JavaScript code that ensures each password entered is textual in nature and that it is seven characters or more [6 Marks]

QUESTION FIVE [20 MARKS]

- a) Discuss any five effects of white hat hackers in webpage construction. Give examples for emphasize. [10 Marks]
- b) You have the following code in your webpage

```
mysql_real_escape_string($_POST ['username`'])
```

- i. Explain each component of this code [4 Marks]
 - ii. Explain how this code works for security protection in a web system. [6 Marks]
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