



MACHAKOS UNIVERSITY

University Examinations for 2021/2022

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

SECOND YEAR FIRST SEMSTER EXAMINATION FOR

BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

SIT 224: WEB DESIGN AND PROGRAMMING

DATE: 14/12/2021

TIME: 8.30-10.30 AM

INSTRUCTIONS:

Instructions

This paper consists of FIVE questions

*Answer **question one** and other **two questions** in this paper*

QUESTION ONE (30 MARKS)

- a) Give a hyperlink of each of the following protocols (2 marks)
 - i. HTTP
 - ii. FTP
- b) Describe FOUR HTML tags used for formatting text when preparing web pages (4 marks)
- c) Write a Java script code to display even numbers starting from 1 to 10, use while loop (4 marks)
- d) Distinguish between INTERNET and WEB. (4 marks)
- e) Discuss
 - i. How CSS compliments HTML in web design. (3 marks)
 - ii. Any THREE implementable features using Cascaded Style Sheet (CSS) (6 marks)
- f) Describe the THREE major components of the client /server architecture (3 marks)
- g) Explain any two characteristics of PHP variables. (4 marks)

QUESTION TWO (20 MARKS)

- a) Discuss FIVE benefits of outsourcing web development services (5 marks)
- b) Write a HTML code to output the following information (5 marks)
- | NO | COUNTRY | STAPLE FOOD | RATING |
|----|----------|-------------|---------|
| 1 | Kenya | Ugali | Good |
| 2 | Uganda | Matoke | Perfect |
| 3 | Tanzania | Rice | Okay |
- c) Describe FIVE ways in which how modern organizations respond to business pressures in this era of globalization. (5 marks)
- d) Using an illustration explain below statement using Java script.
If.....else if.....else statement (5 marks)

QUESTION THREE (20 MARKS)

- a) A business man recently opened online business involved with selling of goods, he wishes to register a domain name for the company, briefly describe the steps involved to register the domain name. (5 marks)
- b) Using a diagram describe the client server architecture model in a web browser (9 marks)
- c) Describe the syntax of a well-formed XML document (6 marks)

QUESTION FOUR (20 MARKS)

- a) Web applications are built in standards based technologies such as HTMLS, CSSs, PHP and other modern web technologies Web applications can run on pretty much any flatfrom with a modern web standards- compliant web browser. All above is what has made web applications popular
- i. State and explain any five good reasons for companies to build web applications. (5 marks)
- ii. Explain the web application development process, which provides a good outline for a web application lifecycle process. (6 marks)
- b) Distinguish the terms below: - (4 marks)
- i. Web service and Add Ons
- ii. Cookie and a pop up Blocker
- c) Explain FIVE qualities of a good web designer with reference of real life application to support the quality (5 marks)

QUESTION FIVE (20 MARKS)

- a) Identify five challenges faced by the society as a result of internet connectivity. (5 marks)
- b) With aid of an example explain the THREE major components of a Unified Resource Locator (URL). (6 marks)
- c) Describe each of the following types of servers (4 marks)
 - i. Web server
 - ii. DNS server
- d) Write a java code that displays a message alert “Bsc Information Technology” (5 marks)