



MACHAKOS UNIVERSITY

University Examinations for 2020/2021

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: 10/8/2021

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

This paper consists of FIVE questions

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

QUESTION ONE (COMPULSORY) (30 MARKS)

- a) Explain the term search engine as used in the web (3 marks)
- b) Describe FOUR HTML tags used for formatting text when preparing web pages (4 marks)
- c) Discuss THREE weaknesses of HTML as a tool for web application development (6 marks)
- d) CSS can be added to HTML elements in 3 ways; explain each of the ways (3 marks)
- e) Write a Java script code to display odd numbers starting from 1, use while loop (4 marks)
- f) Distinguish between client-side scripting and server-side scripting. (4 marks)
- g) PHP contains THREE different variable scopes, demonstrate each scope using scripts (6 marks)

QUESTION TWO (20 MARKS)

- a) Discuss FIVE features of a good website. (5 marks)
- b) Describe each of the following types of servers (4 marks)
 - i. Web server
 - ii. DNS server

- c) Write a java code that displays a message alert “Bsc Information Technology” (6 marks)
- d) An IT firm based in Nairobi is prone to external website attacks. Explain FIVE ways in which the firm can protect itself against these attacks (5 marks)

QUESTION TWO (20 MARKS)

- a) Give a hyperlink example for each of the protocols listed (4 marks)
 - i. HTTP
 - ii. HTTPS
 - iii. FTP
 - iv. E-mail
- b) Using a diagram describe the client server architecture models in a web browser (9 marks)
- c) Using an illustration explain below statement using Java script.
If.....else if.....else statement (4 marks)
- d) List THREE font properties permitted in Cascaded Style Sheets (3 marks)

QUESTION FOUR (20 MARKS)

- a) Discuss TWO factors to consider when choosing an ISP. (4 marks)
- b) Describe the benefits of outsourcing web development services. (4 marks)
- c) Write a HTML code that would generate the following output when run in a web browser include title (8 marks)

A Nested List

- A. Coffee
 - B. Tea
 - i. Black tea
 - ii. Green tea
 - C. Milk
- d) Differentiate between ASP and PHP (4 marks)

QUESTION FIVE (20 MARKS)

- a) Discuss each of the following internet protocols (5 marks)
- i. ICMP
 - ii. RARP
 - iii. POP3
 - iv. SMTP
 - v. BOOTP
- b) Describe the syntax code of a well-formed XML document (5 marks)
- c) With aid of an example explain the THREE major components of a Unified Resource Locator (URL). (6 marks)
- d) Distinguish the terms below:- (4 marks)
- i. Web service and Add Ons
 - ii. Cookie and a pop up Blocker