



(Knowledge for Development)

KIBABII UNIVERSITY

(KIBU)

**UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS
YEAR TWO SEMESTER TWO EXAMINATIONS
FOR THE DEGREE OF MASTER OF SCIENCE
(INFORMATION TECHNOLOGY)**

COURSE CODE : MIT 842 E

COURSE TITLE : WEB TECHNOLOGIES & APPLICATIONS

DATE: 31/07/2021

TIME: 9.00 AM. – 11.00 AM.

INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE AND ANY TWO OTHER QUESTIONS.

QUESTION ONE [30 MARKS]

- a. Compare and construct web 2.0 and web 3.0. [6 marks]
- b. Write a JavaScript code that displays number 0 to 9 on the screen. [4 marks]
- c. Why are internet technologies important? [4 marks]
- d. Briefly explain the concept of Semantic Tags as used in HTML5. [4 marks]
- e. Distinguish between Web development frameworks and content management systems [4 marks]
- f. HTML5 is meant to make the web content mobile friendly. Briefly explain how this is achieved in HTML5. [4 marks]
- g. Compare and contrast user experience UX design and User Interface UI design [4 marks]

QUESTION TWO [15 MARKS]

- a. Briefly describe what interaction design is and its area of focus [3 marks]
- b. You have been assigned the task of creating information architecture for a company website. Briefly explain what you will consider as you execute the assigned task. [6 marks]
- c. UX considers the Why, the what and the How in order to create a products that users can form meaningful experiences with. Explain these Why, What and How. [6 marks]

QUESTION THREE [20 MARKS]

- a. Write a CSS code to style a <div> as follows [4 marks]
- Background color Light gray (#F4F4F4)
 - Text color: maroon (#820000)
 - Margin {left and right – 10px, top and bottom – 5px}
 - Alignment – center
- b. Write a short HTML5 code demonstrate how to develop page layout with HTML. [5 marks]
- c. CSS can be implemented through three different ways in a website. Briefly explain when is it appropriate to use each of them. [6 marks]

QUESTION FOUR [15 MARKS]

- a. Explain how responsive web design is implemented in website development. [4 marks]

- b. Explain any three backend technologies a backend developer need to have proficiency in to be a competent developer. **[6 marks]**
- c. Client – Server computing is a common approach used in the computing industry. Briefly rationale of client-server computing. **[5 marks]**

QUESTION FIVE [15 MARKS]

- a. Give three benefits of using JavaScript in a website. **[3 marks]**
- b. Write a JavaScript code to compute the product of two variables and display the result in a browser. **[4 marks]**
- c. Using code, compare and contrast an array and an object as used in JavaScript. **[8 marks]**