



MACHAKOS UNIVERSITY

University Examinations for 2016/2017

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

SECOND YEAR FIRST SEMESTER EXAMINATION FOR DIPLOMA IN
INFORMATION COMMUNICATION TECHNOLOGY

DIT 112: WEB APPLICATION DEVELOPMENT II

DATE: 31/5/2017

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

Answer Questions ONE and Any Other Two Questions

QUESTION ONE (30 MARKS)

- a) State three web application development software. (3 marks)
- b) Identify three text editors that can be used to write JavaScript code. (3 marks)
- c) Explain three demographic factors to be considered when designing web pages. (6 marks)
- d) Identify three methods of internet connectivity. (3 marks)
- e) State three graphic file formats used on a web page. (3 marks)
- f) Explain the importance of animation in web pages. (2 marks)
- g) Explain two internet related protocols. (4 marks)
- h) Write a JavaScript program code that would display even numbers between 0 and 20.
Use **for loop**. (6 marks)

QUESTION TWO (20 MARKS)

- a) Identify three dialog boxes used in JavaScript. (3 marks)
- b) Describe three parts of a link tag as used in web design. (6 marks)
- c) Write a JavaScript program that would display numbers between 1 and 10. Embed the code in html tags. Use a **do while loop**. (5 marks)

- d) Classify the following languages as either compiled or interpreted. (3 marks)
C, C++, PHP, JAVA, JAVASRIPT, PERL
- e) Study the program segment provided below and use it to answer the question that follows.
- ```
b=++a;
c=b++;
d=b+c;
```
- Suppose the value of a is 5, determine the value of b, c, and d after the program execution. (3 marks)

### QUESTION THREE (20 MARKS)

- a) Write a JavaScript code embedded in HTML that would display the following multiplication table when run on a browser. Use **for loop**. (6 marks)
- ```
5 X 0 = 0  
5 X 1 = 5  
5 X 2 = 10  
5 X 3 = 15  
5 X 4 = 20  
5 X 5 = 25
```
- b) Write a JavaScript code embedded in HTML that would display 40 integer values which are multiples of 2 starting from 50. Use **while loop**. (5 marks)
- c) Outline two functional differences between server-side programming language and client-side programming language. (2 marks)
- d) State two advantages of using code generators during web design. (2 marks)
- e) Using a **While Loop**, write a JavaScript program that will decrement the number 10 to 0. The program should display the decrements vertically on the screen with 10 and 0 inclusive. (5 marks)

QUESTION FOUR (20 MARKS)

- a) Compare JAVA and JavaScript. (2 marks)
- b) Outline two characteristics of an effective website. (2 marks)
- c) Distinguish a compiler from an interpreter (4 marks)
- d) Write a JavaScript program that would display the current day of the week based on the computer system date. (6 marks)
- e) Interpret the following JavaScript segment code giving the output. (6 marks)

```

<script>
function mynumber(x, y)
{
var sum;
sum = x+y;
return sum;
}
alert ( mynumber (3,6));
</script>

```

QUESTION FIVE (20 MARKS)

- a) The table below shows the prizes to be awarded at the Olympics athletics competition for the first three positions.

Position	Prize
1	Gold
2	Silver
3	Bronze

Write a JavaScript program that would be able to prompt a user to enter the position. The program then outputs the appropriate prize. Use **Case statement**. (6 marks)

- b) Write the format of incorporating a JavaScript code into the head section of a HTML page. (4 marks)
- c) Write a JavaScript program that would display numbers between 0 and 10. Embed the code in html tags. Use a **while loop**. (4 marks)
- d) The table below shows items in an ICT accessories shop and their respective codes. Use it to answer the question that follows.

Code	Items
P001	Printers
C001	Computers
S001	Scanners
Any other code	Any other item

Write a JavaScript program that would accept a code entered by the user and then outputs the corresponding item on an alert box. Embed the code in html tags. Use **if statement**. (6 marks)