



CICT PART II SECTION 4

WEB DESIGN AND e-COMMERCE

THURSDAY: 28 November 2019.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

QUESTION ONE

- (a) Conceiving the architecture in which you will present information on a website is key to developing a productive website.

In the context of the above statement, explain three types of website architecture. (6 marks)

- (b) Outline three differences between web based applications and desktop applications. (3 marks)

- (c) State three disadvantages of using flash technology to develop websites. (3 marks)

- (d) Write HTML code to illustrate:

- (i) Two ways in which the "method attribute" could be used for accessing form elements in a browser. (4 marks)

- (ii) The following form:

What type of music do you listen to?

Punk rock

Indie rock

Hip Hop

Rockabilly

(4 marks)

(Total: 20 marks)

QUESTION TWO

- (a) Highlight four characteristics of a good image format to be added onto a website. (4 marks)

- (b) (i) Describe the term "hardware as a service (HaaS)" as used in cloud computing. (2 marks)

- (ii) Outline four components of HaaS model. (4 marks)

- (c) List four elements necessary for the fulfilment of an electronic contract (eContract). (4 marks)

- (d) Write JavaScript validation code to ensure that a website visitor selects one radio button from each of the two radio button groups prior to submitting form results. (6 marks)

(Total: 20 marks)

QUESTION THREE

- (a) You have been contracted by Mwenda Pole Investments Ltd. to represent them in sourcing for the services of a web hosting company. Your specific task is to make a choice on the service provider with the most reliable web development platform.

Required:

List three web development platforms that you are likely to focus on. (3 marks)

- (b) Describe three types of animations that could be integrated in most websites in order to improve their overall appearance and attractiveness. (3 marks)

- (c) In order to protect your business from potential losses in an e-commerce environment, you need to ensure the validity of the payment card being presented for internet purchase.

Enumerate the procedure you would follow to ensure card validation during the purchase. (6 marks)

- (d) Consider the code below:

```
<html>
<head> <title>To check for Prime Numbers </title>
<Script type = "text/javascript">
function P( )
{
Var n, i, flag = true;
n = document.myform.n.value;
n=parseInt (n)
for (i = 2; i<=n-1; i++)
if (n% i == 0)
{
flag = false;
break;
}
If (flag == true)
alert (n+ "is prime");
else
alert (n+ " is not prime");
}
</script> </head>
<body>
<center>
<h1> To check whether a given number is prime or not </h1>
<hr color = "red">
<form name = "myform">
Enter the number: <input type = "text" name = n value = "" >
<br> <br>
<input type = "button" = "check" onClick = "p()" >
<br>
</center>
</form>
</body>
</html>
```

Required:

Two sketches showing two forms of outputs on rendering the above code on a browser. (8 marks)

(Total: 20 marks)

QUESTION FOUR

- (a) A web application developer has created a database named "Products". He intends to connect to this database from the local host.

Required:

(i) Suggest appropriate variables that will be required in the creation of the PHP connection file. (4 marks)

(ii) Using the variables suggested in (a) (i) above, create an appropriate database connection file in PHP. (4 marks)

- (b) Examine three different approaches to establishing an e-commerce site to sell goods and services online. (6 marks)
- (c) An e-commerce system consists of interrelated functions including; product presentation, order entry, electronic payment, order fulfilment, customer service, product support, data acquisition and data analysis.

Required:

Using a diagram, propose an e-commerce model that shows how these functions interact with each other and with the system users. (6 marks)

(Total: 20 marks)

QUESTION FIVE

- (a) Enumerate three test activities performed under website functionality testing. (3 marks)
- (b) Explain two steps followed when getting a website "live" on the web once all the necessary web pages have been created. (4 marks)
- (c) Summarise four applications of scripting languages in website development. (4 marks)
- (d) (i) Highlight three benefits of using cascade style sheets (CSS) in web development. (3 marks)
- (ii) With the aid of examples, illustrate three ways of integrating cascade style sheets (CSS) in HTML. (6 marks)
- (Total: 20 marks)**

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