CE212-4-SP

DEPARTMENT OF COMPUTER SCIENCE

Second Year Progress Test Week 21 2018-19

WEB APPLICATION PROGRAMMING

Time allowed: **30 minutes**

Candidates must answer **ALL** questions.

The paper consists of **TWENTY** questions in total. All questions are of equal weight.

The progress test is worth 10% of the total assessment for this module.

CANDIDATES MUST REFER TO THE FOLLOWING PAGES FOR FURTHER INSTRUCTIONS.

Please do not leave your seat until the end of the test unless you are given special permission by an invigilator.
Do not communicate in any way with any other candidate in the room.
Do not open the question paper until told to do so.
All answers must be written on the machine-readable form.
At the end of the test, remain seated until your papers have been collected and you have been told you may leave.

Answers must be written on the multiple choice answer sheet (machine-readable form). Note that there is only one choice that constitutes the correct answer to each question. The correct answer, in this context, is the most accurate and complete answer to the question, among those given.

ON THE MACHINE READABLE FORM PLEASE ENSURE THAT YOU COMPLY WITH THE FOLLOWING REQUIREMENTS:

(i) Write your name in the box headed **"Candidate Name"**.

(ii) Write your **"Student Registration Number"** in the box provided, and enter the same information by using the optical marks in the columns beneath the boxes (see example attached).

(iii) Do not write anything in the section headed **"Seat Number"**.

(iv) Write your **"Course Code"** in the box provided, and enter the same information by using the optical marks in the columns beneath the boxes (see example attached).

THE CORRECT ANSWER FOR EACH QUESTION SHOULD BE MARKED BY STRIKING THROUGH THE CORRESPONDING LETTER ON THE MACHINE READABLE FORM.

The following information has been entered as an example on the sheet attached:

Registration number 0403579 would be entered using the optical marks in the columns by striking through the characters in the seven columns as follows:

[0] [4] [0] [3] [5] [7] [9]

The course code for module CE112 would be entered as follows:

[C] [E] [1] [1] [2]

If you think that answer D is the correct answer for Question 1, then you should strike through the letter 'D' as shown below:

1. [A] [B] [C] [D]

NOTE: If more than one answer is marked for a particular question, your answer for that question will be ignored.

Candidates must answer all 20 questions. Answers must be written on the machine-readable form.

Question 1

The CSS rule `p.chosen {color:green}` would be applied to which of the following?

[A] All `<chosen>` elements within paragraph elements

[B] Any paragraph element with an `id` attribute with value `chosen`

[C] All paragraph elements with a `class` attribute with value `chosen`

[D] All paragraph elements with a `chosen` attribute

Question 2

The CSS rule `#highlight {font-weight:bold}` would be applied to which of the following

[A] All `<highlight>` elements

[B] Any paragraph element with an `id` attribute with value `highlight`

[C] All paragraph elements with a `class` attribute with value `highlight`

[D] Any element that does not have an attribute named `highlight`

Question 3

If a CSS style sheet specifies more than one style for an element, which of the following has the highest precedence?

[A] A rule that specifies a style for a class of elements

[B] A rule that specifies a style for an element with a particular `id` attribute value

[C] A rule that specifies a single tag name

[D] A rule that specifies multiple tag names

Question 4

Which of the following is *not* a primitive type in JavaScript?

[A] number

[B] boolean

[C] string

[D] array

Question 5

Which of the following is ***not*** true?

[A] JavaScript objects can be treated as associative arrays.

[B] The return type of a JavaScript function may be specified in the function declaration.

[C] A JavaScript variable can be used to store values of different types during the execution of a script.

[D] When calling a function in JavaScript it is permissible to supply fewer arguments than those specified in the declaration of the function.

Question 6

Which of the following expressions could be used in JavaScript to access the value of the `name` attribute of the object `mike`?

[A] `mike["name"]`

[B] `"mike"."name"`

[C] `mike."name"`

[D] `mike[name]`

Question 7

What is the difference between the `!=` and `!==` operators in JavaScript?

[A] The `!=` operator compares values whereas the `!==` operators compares references.

[B] The `!=` operator compares references whereas the `!==` operators compares values.

[C] Implicit type conversions may take place when comparing items with different types using `!=`, but not when using `!==`.

[D] Implicit type conversions may take place when comparing items with different types using `!==`, but not when using `!=`.

Question 8

What is the difference between the one-argument and two-argument versions of the JQuery `attr` function?

[A] The one-argument version retrieves the value of one attribute but the two-argument version can retrieve the values of several attributes.

[B] The one-argument version retrieves the name of an attribute but the two-argument version retrieves its value.

[C] The one-argument version is used to retrieve the value of an attribute but the two-argument version is used to set the value.

[D] The one-argument version is used to retrieve the value of an HTML attribute but the two-argument version is used to retrieve the value of a CSS attribute.

Question 9

The JQuery expression `$("[name!='i']")` would refer to which of the following?

[A] All elements with a `name` attribute whose value begin with `i`

[B] All elements with a `name` attribute whose value ends with `i`

[C] All elements with a `name` attribute whose value is not equal to `i`

[D] All elements with a `name` attribute whose value is not equal to `I`, and also all elements without a `name` attribute

Question 10

The JQuery expression `$("p>b")` would refer to which of the following?

[A] All <b> elements nested within <p> elements

[B] All <p> elements nested within <b> elements

[C] All <b> elements that are immediate children of <p> elements

[D] All <b> elements that appear immediately after a <p> element

Question 11

The JQuery expression `$(".i").empty()` will do which of the following?

[A] Remove all of the attributes of all elements with `class` attribute `i`

[B] Remove from the document all elements within elements with `class` attribute `i`.

[C] Remove from the document all elements with `class` attribute `i` and all elements within those elements.

[D] Remove the all empty elements with `class` attribute `i`.

Question 12

Assuming the variable `p` refers to a JQuery object representing a particular HTML element what would be returned by a call `p.attr("class","odd")`?

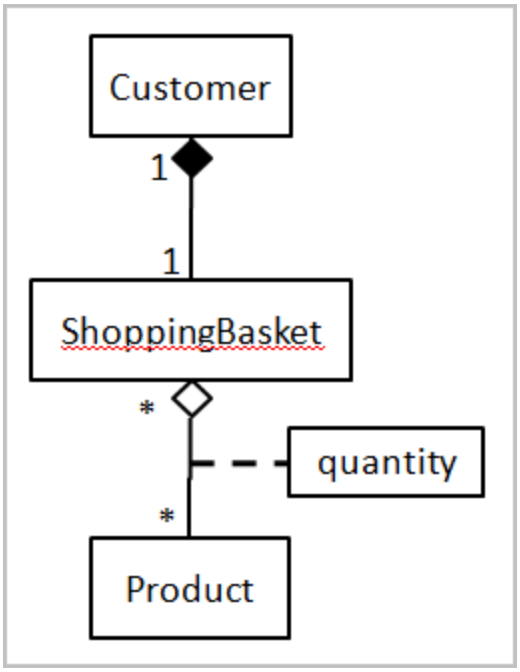
[A] The old value of the `class` attribute of the HTML element

[B] The new value of the `class` attribute of the HTML element

[C] The value `undefined`

[D] A reference to the JQuery object representing the HTML element

Diagram For Questions 13 and 14



Question 13

In the above UML class diagram the connection between the **Customer** and **ShoppingBasket** classes shows which of the following relationships?

[A] composition

[B] inheritance

[C] realisation

[D] aggregation

Question 14

Which of the following is ***not*** true about the system modelled by the above diagram?

[A] A shopping basket may contain several products.

[B] Each product belongs to at least one shopping basket.

[C] Every customer must have a shopping basket.

[D] A shopping basket may be empty (i.e. contain no products).

Question 15

Which of the following is a valid form for a JSP code fragment to display the current value of the variable `count` on the web page sent to the client?

[A] `<%= count; %>`

[B] `<%! count %>`

[C] `<% System.out.print(count); %>`

[D] `<%= count %>`

Question 16

In which of the following ways does the use of a `<jsp:forward>` tag differ from a call to the `sendRedirect` method of the `response` object?

[A] JavaBeans with page scope survive the forwarding but not the redirection.

[B] JavaBeans with request scope survive the redirection but not the forwarding.

[C] The URL of the target page of a redirection will be displayed in the browser, but the URL of the target page of a forwarding will not.

[D] The URL of the target page of a forwarding will be displayed in the browser, but the URL of the target page of a redirection will not.

Question 17

Which of the following is the correct style of tag for JSP declarations?

[A] `<%! ..... !%>`

[B] `<%= ..... %>`

[C] `<%! ..... %>`

[D] `<%= ..... =%>`

Question 18

If a JavaBean has a property called `password`, which of the following methods should it possess?

[A] `getPassword`

[B] `getpassword`

[C] `setpassword`

[D] `setPassWord`

Question 19

Which of the following scopes would be most appropriate for a JavaBean being used to implement a shopping basket in an online store?

[A] request scope

[B] application scope

[C] page scope

[D] session scope

Question 20

Which of the following scopes would be most appropriate for a JavaBean being used to implement a database connection in a flight booking application?

[A] request scope

[B] application scope

[C] page scope

[D] session scope