

Tutorial Answers.

Question 1

To tell whether an object is a DOM object, use the following if syntax to check whether the object has the `nodeType` attribute:

```
if( obj.nodeType ) {  
    ...  
}
```

And to check for a jquery object see if it has the `jquery` attribute:

```
if( obj.jquery ) {  
    ...  
}
```

Question 2

- (a) `getAllResponseHeaders`
- (b) `responseXML`

Question 3

The biggest challenges in creating Ajax applications are not technical. The core Ajax technologies are mature, stable, and well understood. Instead, the challenges are for the designers of these applications: to forget what we think we know about the limitations of the Web, and begin to imagine a wider, richer range of possibilities.

Question 4

Synchronous calls wait until the response is delivered whilst **asynchronous** calls do not wait for a response.

Question 5

standards-based presentation using **HTML** and **CSS**
dynamic display and interaction using the **DOM**
data interchange and manipulation using **XML** and **XSLT**
asynchronous data retrieval using **XMLHttpRequest**
and **JavaScript** binding everything together

Question 6

onreadystatechange allows the javascript developer to assign a callback function that will execute when the **readystate** changes to 4 indicating that it has retrieved the requested resource successfully. The state can have values 0 – 4 indicating various degrees of readiness.

Question 7

- a. `p`
- b. `select option`
- c. `#radio2`

- d. .left
- e. h1, code
- f. li li
- g. p > *
- h. #myid *
- i. p + *
- j. code ~ *
- k. li li:first
- l. a[href*="htm"]
- m. li:lt(3)
- n. p:has(strong)

Question 8

- (a) ajax, get, getJSON, getScript, load, post
- (b) headers
- (c) Specify the callback function name for a JSONP request.
- (d) Forces a crossdomain request (i.e. JSONP) when URL is local

Question 9

Find out what the role of each of the following JavaScript libraries/ jQuery plug-ins plays within a Single Page Application, and in each case, suggest an alternative choice of library/plugin.

1. Knockout - Architecture (MVVM) – backbone
2. jQuery.tmpl - templating – mustache.js
3. mockjax - ajax mocking – jasmine-ajax
4. jQuery.history - history manipulation – History.js
5. QUnit - unit testing – Jasmine,
6. Sammy - routing – backbone

Question 10

Discuss the security restrictions and issues associated with the use each of the following in consuming web services:

- (a) XMLHttpRequest
- (b) Dynamic Scripting
- (c) Hidden iFrame call

Question 11

- a) The DOMContentLoaded event is used when you need to ensure resources, such as images, have finished loading as opposed to the DOMContentLoaded event when you need only the DOM to be loaded.
- b) onload

Question 12

POST HTTP method would be used as the GET contains the password as clear text in the URL. In a POST the data is transferred via the header info.

Question 13

- a) XML data - DOM object.
- b) JSON data - Basic JavaScript object.