

1. Which of the following tools are used in the back-end?

0 / 1 point

☒ Redis

☒ **Correct**

That's correct! Redis is used in the back-end for caching.

☒ MySQL

☒ **Correct**

That's correct! MySQL is used in the back-end and is one of the most popular database engines.

☐ JavaScript

☒ DRF

☒ **Correct**

That's correct! DRF or the Django REST Framework is used in the back-end with the Django framework.

☐ React

You didn't select all the correct answers

2. Your application is divided into two distinct parts: the code and the database. You host the application code on a virtual server and the database on two different servers. You're browsing the application using a mobile device. How many tiers are there?

1 / 1 point

☐ 2 tiers

☐ No tiers. It's a 4-layer architecture.

☒ 3 tiers

☐ 4 tiers

☒ **Correct**

That's correct! There are three tiers. The client tier, the application code tier and the database tier.

3. For a given `<div>` tag and `<p>` tag, which of the following has the correct syntax for an adjacent sibling combinator?

1 / 1 point

- ☐ `div p`
- ☐ `div > p`
- ☒ `div + p`
- ☐ `div ~ p`

✓ **Correct**

That's correct! This syntax will select the first `<p>` tag placed directly after a closed `<div>` tag.

4. Calculate the specificity of the following selector:

1 / 1 point

`ul#alpha li.visited`

- ☐ 22
- ☐ 13
- ☒ 112
- ☐ 103

✓ **Correct**

That's correct! The `#alpha` ID selector will add 100, the `.visited` class selector will add 10. The `ul` and `li` element selectors will add 2. So that is  $100 + 10 + 2 = 112$ .

5. Which form attribute is used to specify the address to which the form data should be submitted to?

1 / 1 point

- ☐ `method`
- ☐ `src`
- ☒ `action`
- ☐ `required`

✓ **Correct**

That's correct! The `action` attribute specifies the URL to which the data should be submitted.

6. What does the `&&` operator represent in JavaScript?

1 / 1 point

- ☐ The logical `NOT` operator
- ☒ The logical `AND` operator
- ☐ The logical `OR` operator
- ☐ It is not a valid operator

✓ **Correct**

That's correct! In JavaScript, the `&&` is the logical `AND` operator.

7. True or False: The `EmailField` validates if the input string value contains valid characters but does not validate if it is an email address.

1 / 1 point

- ☐ True
- ☒ False

✓ **Correct**

That's correct! The `EmailField` performs basic form validation of the field inside the form and checks if a valid email address has been entered by the user.

8. True or false: In a DBaaS solution, you must perform the database maintenance job.

1 / 1 point

- ☐ True
- ☒ False

✓ **Correct**

That's correct! The DBaaS provider takes care of the everyday database maintenance tasks. This allows you, as a developer, to focus on application development.

9. Which of the following are the benefits of public cloud computing? Select all that apply.

0.8 / 1 point

- ☐ Your application never goes down or offline.
- ☒ You can scale easily.

✓ **Correct**

That's correct! One of the biggest benefits of using cloud computing is that you can add or remove computing nodes to your infrastructure or resources like RAM, storage and processing cores to withstand the traffic load.

- ☒ You can deploy computing units any time.

✓ **Correct**

That's correct! One of the biggest benefits of using cloud computing is that you can deploy resources any time and remove them from the infrastructure when you don't need them.

- ☒ You only pay for what you use.

✓ **Correct**

That's correct! One of the biggest benefits of using cloud computing is that you can deploy resources anytime and pay for only what you use for that billing cycle.

10. True or false: Scaling vertically is easier than scaling horizontally

0 / 1 point

- ☐ True

11. Which of the following tools could be part of the front end portion of the full stack? Select the all that apply.

1 / 1 point

☒ Javascript

✓ **Correct**

That's correct! Javascript represents the "functionality" portion of the front end.

☒ HTML

✓ **Correct**

That's correct! HTML represents the "content" portion of the front end.

☐ NoSQL

☐ Python

12. Which part of an application would accept user data and do basic validation?

1 / 1 point

☐ API

☐ Database

☒ Front end

☐ Back end

✓ **Correct**

That's correct! One of the biggest roles of the front end is to accept and do basic validation of user data, and then pass that data to the back end.

13. For the main content of a page, one of the key semantic elements is \_\_\_\_\_.

1 / 1 point

☐ header

☒ section

☐ footer

☐ nav

✓ **Correct**

That's correct! The **section** and **article** elements are critical to semantically describing the main content of a web page.

14. When creating an HTML form, the \_\_\_\_\_ attribute can be added to any field to make sure it is filled in before the client sends the request to the server.

1 / 1 point

☐ not\_empty

☐ not\_null

☐ important

☒ required

✓ **Correct**

That's correct! The **required** element will ensure, from the client side, that the indicated input has some data in it before it will allow the request to be submitted.

15. Which of the following is a value in CSS that is relative to the font size of the root element of the page?

1 / 1 point

- ☐ `em`
- ☐ `px`
- ☐ `pc`
- ☒ `rem`

✓ **Correct**

That's correct! This is a good value to use when you want to ensure that parts lower on the page will always be smaller and less pronounced than something like a title or heading.

16. On an existing HTML page, all `<h2>` tags on the page need to be updated with content retrieved from a database. What Javascript code would be used to select all `<h2>` tags?

1 / 1 point

- ☐ `page.select('h2')`
- ☐ `document.querySelector('h2')`
- ☒ `document.querySelectorAll('h2')`
- ☐ `document.get('h2')`

✓ **Correct**

That's correct! The above command will return an array of all `h2` objects on the page that can then be used to update them.

17. When creating a new element in Javascript using the `createElement()` function, what needs to happen once the element is created to get it to show up on the page?

1 / 1 point

- ☐ The `import` statement in Javascript must be used.
- ☐ It must be moved from the bottom of the page.
- ☐ It automatically shows up.
- ☒ It must be added to the DOM structure.

✓ Correct

That's correct! Creating the element is one part, but until it is added to the DOM, it does not exist in the structure of the page.

18. When developing an application, sometimes new fields need to be added to a database. In Django, the field can just be added to a model and the migration can be run to add a new column. This is the same as using what SQL command?

1 / 1 point

- ☐ `DELETE`
- ☐ `CREATE`
- ☐ `UPDATE`
- ☒ `ALTER`

✓ Correct

That's correct! The `ALTER` command is used to alter the structure of a table in SQL.

20. When `fetch()` is used in Javascript to query an API and retrieve data, promises are used in case the fetch is potentially asynchronous. Which function is used to tell Javascript to wait for the data to return before moving on to the next step?

1 / 1 point

- ☐ `wait()`
- ☒ `then()`
- ☐ `next()`
- ☐ `async()`

✓ Correct

That's correct! `then()` functions are used as part of the `fetch()` process to tell Javascript what to do with the data, and forces it to do those tasks in order as the last task finishes.

21. What data format is typically used to read and process data in Javascript when a response is returned from an API?

1 / 1 point

- ☒ JSON
- ☐ `QuerySet`
- ☐ SQL
- ☐ `ModelForm`

✓ Correct

That's correct! JSON (Javascript Object Notation) is a common, easy to read and process format typically used with Javascript when retrieving and processing data.



22. When authenticated calls need to be made, what is used to pass authentication information?

1 / 1 point

- ☐ JSON
- ☐ Payload
- ☐ Django model
- ☒ Bearer token

✓ **Correct**

That's correct! A bearer token is passed as part of the header of the HTTP request to demonstrate that the person sending the request is authorized to do so.

23. Which one of the following is a type-2 hypervisor?

1 / 1 point

- ☐ Docker
- ☒ VirtualBox
- ☐ KVM
- ☐ Windows

✓ **Correct**

That's correct! VirtualBox is a very popular cross platform type-2 hypervisor which is open source and free.

25. What are some of the benefits of using a managed database solution through a cloud provider? Select all that apply.

0.75 / 1 point

☒ They can scale automatically

☒ **Correct**

That's correct! Scaling based on activity allows the database to handle more connections when activity is high, and use less resources (and cost less) when activity is low.

☒ The provider handles tuning the database

☒ **Correct**

That's correct! Tuning can take a lot of time and effort to get right. Offloading that responsibility allows the developer to focus on other things.

☐ The database is housed on premises.

26. Which of the following IP ranges are private? Select all that apply.

1 / 1 point

☐ 148.198.0.0 - 148.198.255.255

☒ 172.16.0.0 - 172.31.255.255

☒ **Correct**

That's correct! This is one of the few private-only IP ranges.

☐ 69.0.0.0 - 69.255.255.255

☒ 10.0.0.0 - 10.255.255.255

☒ **Correct**

That's correct! This is one of the few private-only IP ranges.

27. Though using a CDN can remove a lot of the load from a web server, what is one of the disadvantages?

1 / 1 point

- ☐ additional servers to manage
- ☐ more space required
- ☒ increased costs
- ☐ response times

✓ **Correct**

That's correct! CDNs can have a significantly higher cost than a standard web server to host and transmit content to clients.

28. To support more traffic, a company stands up five web servers with the same application code on them. To ensure that the traffic is directed and managed properly, they would need to put a \_\_\_\_\_ in front of them to route incoming requests.

1 / 1 point

- ☐ CDN
- ☐ proxy
- ☐ cache
- ☒ load balancer

✓ **Correct**

That's correct! A load balancer's only job is to take incoming requests and to send them to the appropriate server to be handled, whether that's through a health-based or round-robin method.

29. Which CSS property should be set on a container to change to a CSS grid layout of rows and columns?

1 / 1 point

- ☐ `flex: grid;`
- ☐ `layout: flexbox;`
- ☒ `display: grid;`
- ☐ `layout: grid;`

✓ **Correct**

That's correct! This property can be set on any container to arrange its child elements using CSS Grid, or even can be set on a root element to set an entire page that way.

30. Which attribute of an HTML tag can be used to define the function that could be run when the element is clicked on?

1 / 1 point

- ☒ `onclick`
- ☐ `clidean`
- ☐ `click`
- ☐ `submit`

✓ **Correct**

That's correct! By defining the `onclick` attribute and setting it to the correct Javascript function, dynamic behaviors can be set up from the HTML side of a web page.