

### Question 1

5 / 5 pts

What type of architecture does the HTTP request and response process occur in?

☐ HTTP operates in a monolithic architecture.

☒ HTTP uses client-server architecture

Correct. The client-server architecture accurately describes the relationship and interaction between a web client (like a browser) and a server.

☐ HTTP functions in a serverless architecture.

☐ HTTP uses peer-to-peer architecture.

### Question 2

5 / 5 pts

What are the different parts of an HTTP request?

☐ The method, the URI, and the protocol version.

☒ The request line, the request headers, and an optional request body.

Correct, these are the fundamental components that make up an HTTP request, ensuring proper communication and data transfer between the client and the server.

☐ The request method, the path, and the query parameters.

☐ Status line, status headers, and status body.

---

**Question 3****5 / 5 pts**

Which part of an HTTP request is optional?

- ☐ The request method
- ☐ The request headers
- ☒ The request body

Correct. The request body is not required for all types of HTTP requests, such as GET requests, making it optional.

- ☐ The request line
- 

---

**Question 4****5 / 5 pts**

What are the three parts of an HTTP response?

- ☐ The protocol, the status code, and the status message.
- ☐ The method, the status, and the message.
- ☐ The request line, the request headers, and the request body.
- ☒ The status line, the response headers, and the response body.

Correct. These components form the structure of an HTTP response, each serving a specific purpose in delivering the response to the client.

---

**Question 5****5 / 5 pts**

Which number class of status codes represent errors?

- ☐ 200 and 300
- ☐ 300 and 400
- ☐ 100 and 200
- ☒ 400 and 500

The 400 and 500 series of status codes are designated for indicating various client and server errors, respectively.

**Question 6****5 / 5 pts**

What are the two most common request methods a security professional encounters?

- ☐ PUT and DELETE requests
- ☒ GET and POST requests

GET and POST are the most widely used HTTP request methods, commonly encountered and scrutinized by security professionals.

- ☐ TRACE and OPTIONS requests
- ☐ CONNECT and PATCH requests

### Question 7

5 / 5 pts

Which type of HTTP request method is used for sending data?

☐ HEAD

☒ POST

Correct. The POST method is specifically designed to submit data to be processed to a specified resource.

☐ DELETE

☐ GET

### Question 8

5 / 5 pts

What are the advantages of using `curl` over the browser?

☒ It allows you to easily see the response status lines, is repeatable, can be automated, and can be edited while in use.

Correct. `curl` is a versatile command-line tool used for making network requests, offering detailed control and visibility over the requests and responses

☐ It automatically stores cookies and session data for subsequent requests.

☐ It provides a graphical user interface for easier navigation.

☐ It can render JavaScript and display images and CSS like a browser.

### Question 9

5 / 5 pts

Which `curl` option is used to change the request method?

☐ -d

☐ -A

☒ -X

Correct. The `-X` option in `curl` explicitly specifies the request method to be used when communicating with the server.

☐ -F

### Question 10

5 / 5 pts

Which `curl` option is used to set request headers?

☒ -H

Correct. The `-H` option in `curl` is used to specify custom headers to be sent with the request.

☐ -i

☐ -G

☐ -X

### Question 11

5 / 5 pts

Which request method might an attacker use to figure out which HTTP requests an HTTP server will accept?

☒ OPTIONS

Correct. The OPTIONS method is used to describe the communication options for the target resource, revealing methods that the server supports.

☐ POST

☐ GET

☐ HEAD

### Question 12

3 / 3 pts

Which response header sends a cookie to the client?

☐ Accept-Encoding

☐ Content-Type

☐ Server

☒ Set-Cookie

Correct, the `Set-Cookie` header is specifically used to send cookies from the server to the client. The `Content-Type` header indicates the media type of the resource, `Server` header describes the software used by the originating server, and `Accept-Encoding` is a request header that indicates the encoding formats accepted by the client.

### Question 13

5 / 5 pts

The following is an example HTTP Request:

```
POST /login.php HTTP/1.1
Host: example.com
Accept-Encoding: gzip, deflate, br
Connection: keep-alive
Content-Type: application/x-www-form-urlencoded
Content-Length: 34
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Linux; Android 6.0; Nexus 5 Build/MRA58N) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.132 Mobile Safari/537.36
username=Barbara&password=password
```

What is the request method?

☒ POST

Correct. This request is a POST request.

☐ GET

☐ gzip

☐ login.php

### Question 14

5 / 5 pts

Sample HTTP Request:

```
POST /login.php HTTP/1.1
Host: example.com
Accept-Encoding: gzip, deflate, br
Connection: keep-alive
Content-Type: application/x-www-form-urlencoded
Content-Length: 34
Upgrade-Insecure-Requests: 1
User-Agent: Mozilla/5.0 (Linux; Android 6.0; Nexus 5 Build/MRA58N) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/80.0.3987.132 Mobile Safari/537.36
username=Barbara&password=password
```

Which header expresses the client's preference for an encrypted response?

Upgrade-Insecure-Requests: 1

Correct, this header is the browser requesting an encrypted response.

### Question 15

5 / 5 pts

```
HTTP/1.1 200 OK
Date: Mon, 16 Mar 2020 17:05:43 GMT
Last-Modified: Sat, 01 Feb 2020 00:00:00 GMT
Content-Encoding: gzip
Expires: Fri, 01 May 2020 00:00:00 GMT
Server: Apache
Set-Cookie: SessionID=5
Content-Type: text/html; charset=UTF-8
Strict-Transport-Security: max-age=31536000; includeSubDomains
X-Content-Type: NoSniff
X-Frame-Options: DENY
X-XSS-Protection: 1; mode=block
```

What is the response status code?

200

Correct. 200 status means the request was OK.

### Question 16

3 / 3 pts

What are the individual components of microservices called?

☐ Modules

☒ Services

Correct. When a monolith's components are separated by functions, they are called services.

☐ Procedures

☐ Functions

### Question 17

5 / 5 pts

What is a service that writes to a database and communicates to other services?

☐ A protocol suite

☐ A middleware application

☐ A data entry interface

☒ An application programming interface (API)

Correct. An API is the correct answer because it provides a set of protocols and tools for building software and applications, allowing different services to communicate with each other and with databases.

---

**Question 18****5 / 5 pts**

What tool can be used to deploy multiple containers at once?

- ☐ Docker Swarm
- ☐ Kubernetes
- ☐ Docker Hub
- ☒ Docker Compose

Correct. Docker Compose is specifically designed for defining and running multi-container Docker applications, making it the right tool for deploying multiple containers simultaneously.

---

**Question 19****5 / 5 pts**

What kind of file format is required for us to deploy a container set?

- ☐ INI
- ☐ XML
- ☒ YAML

Correct. Docker Compose uses a YAML file (docker-compose.yml) to define services, networks, and volumes for docker containers, making it the standard for defining and running multi-container Docker applications.

- ☐ JSON



### Question 20

4 / 4 pts

Which type of SQL query would we use to see all the information in a table called customers?

- ☐ ALTER TABLE customers;
- ☐ CREATE TABLE customers;
- ☒ SELECT \* FROM customers;

Correct. The `SELECT * FROM customers;` query is used to retrieve all data from the `customers` table, making it the correct choice for viewing all information in a table.

- ☐ UPDATE customers;

### Question 21

5 / 5 pts

Which type of SQL query would we use to enter new data into a table?

- ☒ INSERT INTO

Correct. The `INSERT INTO` statement is used to add new rows of data to a table in the database, making it the correct choice for entering new data into a table.

- ☐ UPDATE
- ☐ DELETE FROM
- ☐ SELECT FROM