1. What are the key characteristics of a RESTful API? Select two answers.

   ☑ It works on HTTP

   > ⊘ **Correct**
   > Correct. Communication between a REST client and the REST server is in the form of an HTTP request using methods like GET, POST, and DELETE.

   ☐ One API to access all resources

   ☐ Unique interface for each component

   ☑ Stateless communication between client and server

   > ⊘ **Correct**
   > Correct. The REST architecture is designed so that the client state is not maintained on the server.

2. What does an API Gateway act as?

   ○ A streaming service

   ○ A firewall to protect your microservices

   ⊙ An API management tool

   ○ A load balancer for your hosted services

   > ⊘ **Correct**
   > Correct. An API Gateway decouples clients from your services, hiding their complexity, interconnection, and implementation details.

3. Which syntax is used to make an update request to a product REST API?

- ◉ PUT /products/114 (product data in the body)
- ○ POST /products (product data in the body)
- ○ PUT /products/114/name/Calendar2023
- ○ GET /products/114?updatedName=Calendar2023

✓ **Correct**
Correct. A PUT method with submitted data in the body is the standard for updating a resource.

4. Which type of framework is Flask?

- ○ Database
- ○ Frontend
- ◉ Micro web
- ○ REST API

✓ **Correct**
Correct. Flask is classified as a micro web framework as it does not require particular tools or libraries.

5. Which one of the following statements is true about communication in a RESTful API?

○ Each request does not contain all information.

○ Session state is kept entirely on the REST API.

○ A request can take advantage of any stored context on the server.

◉ Resources are uniquely identified at individual endpoints.

> ✓ **Correct**
> Correct. The REST API should ensure that the same piece of data belongs to only one uniform resource identifier (or URI).

6. What are the potential drawbacks of an API Gateway? Select two answers.

☑ Bottleneck in scalability

> ✓ **Correct**
> Correct. An API Gateway can become a scalability bottleneck if it is not designed in a resilient and highly available fashion.

☐ Increases requests to the backend

☐ Exposes the implementation details

☑ Single point of failure

> ✓ **Correct**
> Correct. If you ensure the gateway is properly designed to meet your application's availability requirements, then it won't become a single point of failure.

7. Which specification is followed by Swagger?

- ⦿ OpenAPI
- ◯ GraphQL
- ◯ SOA
- ◯ WebAPI

✓ **Correct**
Correct. OpenAPI is a specification implemented by Swagger.

8. Which cURL command should be used to query a list of products?

- ◯ curl -X 'POST' \

  'http://127.0.0.1:5000/products' \

  -H 'accept: application/json'

- ◯ curl -X 'PUT' \

  'http://127.0.0.1:5000/products' \

  -H 'accept: application/json'

- ⦿ curl -X 'GET' \

  'http://127.0.0.1:5000/products' \

  -H 'accept: application/json'

- ◯ curl -X 'PATCH' \

  'http://127.0.0.1:5000/products' \

  -H 'accept: application/json'

✓ **Correct**
Correct. This cURL command with the -X flag specifies a GET operation.

9. Which HTTP method is used to create new data in a REST API?

○ PATCH

○ UPDATE

◉ POST

○ PUT

✓ **Correct**
Correct. You can use POST to create a new resource. A POST request requires a body in which you define the data of the entity to be created.

10. What is the purpose of Postman?

○ Uniform interface for different components

○ Transfers applications

◉ Tests APIs

○ Command line tool to get data

✓ **Correct**
Correct. Postman is a popular tool for testing APIs.