1. REST APIs are 'stateless', with keeping that in mind, which of the following statements is/are true? [MSQ : 2 Points]

    √ Every request from the client is independent of one another, i.e., the request runs independently of other requests from the same client.

    √ The client cannot assume state of the server.

    √ The server need not maintain the client's previous interaction.

    ◯ Sometimes, the server can take advantage of any previously stored context information on the server.

Solution: Option 4) The server cannot take advantage of any previously stored information on the server, as in REST API, statelessness means that every HTTP request happens in complete isolation. They should not keep a client state on the server and vice versa.

2. Which of the following is/are true regarding POST HTTP method? [MSQ : 3 points]

    ◯ It should be safe in context of REST.

    ◯ It should be idempotent in context of REST.

    √ It is allowed in HTML forms.

    √ POST Request has a body.

Solution: An HTTP method is safe if it does not change the state of the server. POST request is used to create a resource. It changes the state of the server, so it is not safe. It is not idempotent because multiple identical POST request can create multiple resources. It is allowed in the HTML forms. And POST request has a body.

3. For an API, which of the following can be an output? [MCQ: 2 points]

    √ JSON

    √ XML

    √ YAML

    √ CSV

4. Which of the following come(s) under authenticated APIs in the context of the CoWin website? [MSQ : 2 Points]

   ◯ state-wise search of positive cases.

   ◯ district-wise search for medicine.

   √ booking appointment for vaccination.

   √ download vaccination certificate.

5. Consider the following YAML file.

```
openapi: 3.1.0
info:
    title: A minimal OpenAPI document
    version: 0.0.1
paths: {}
```

   How many endpoints are defined in the given YAML file? [MCQ: 1 points]

   √ 0

   ◯ 1

   ◯ 2

   ◯ 3

6. In the context of REST, a DELETE request that deletes a random resource in the database will be _____. [MCQ: 3 points]

- ◯ idempotent
- ✓ not idempotent
- ◯ safe
- ◯ All of the above

> **Solution:** A DELETE request of a random resource from the database is a violation of REST principles.

7. Which of the following is an invalid JSON object? [MCQ : 1 Points]

- ◯
  ```
  {
      "Year" : "2020",
      "Month" : 4,
      "Date" : 19
  }
  ```
- ◯
  ```
  {
      "Year" : 2016,
      "Month" : "7",
      "Date" : 28
  }
  ```
- ✓
  ```
  {
      "Year" : "2007",
      "Month" : 2,
      "Date" : NULL
  }
  ```
- ◯ None of the above

> **Solution:** A JSON object is a collection of key : value pairs, where a key must be a string and value can be a number, string, object, array, true, false, array or null. NULL is not a valid value, but null is a valid JSON value.