UNIT-II
Assignment-Cum-Tutorial Questions

A. Objective Questions

1. Who is the Father of JSON? [ ]
   a) Douglas Crockford
   b) Rasmus Lerdorf
   c) Douglas Michel
   d) Dennis Ritchie
2. JSON stands for _____ [ ]
   a) Java Standard Output Network
   b) JavaScript Object Notation
   c) JavaScript Output Name
   d) Java Source Open Network
3. What kind of format is JSON, and what does the acronym mean? [ ]
   a) A lightweight data-encoding framework. Java Omnipresent Notation.
   b) A lightweight data-interchange format. JavaScript Object Notation.
   c) A lightweight data-interchange format. Java Objective Notion.
   d) A lightweight database framework. JavaScript Object Notation.
4. Which of these is a benefit JSON has over XML? [ ]
   a) JSON is more forgiving of poor formatting
   b) JSON has less markup requirements and therefore is lighter than XML
   c) JSON can be written poorly and still be parsed
   d) JSON does not need to be stored in a file to be sent remotely
5. What function will convert a JavaScript object to a JSON string?
   a) JSON.text()
   b) JSON.serialize()
   c) JSON.toString()
   d) JSON.stringify()
6. Which of these data interchange formats has seen a decline in usage in favor of JSON?
   [ ]
   a) ASCII
   b) Plain-text
   c) SQL
   d) XML
7. Which is correct format of writting JSON name/value pair [ ]
   a) 'name : value'
   b) name = 'value'

c) name = "value"
d) "name" : "value"

8. What error does JSON.parse() throw when the string to parse is not valid JSON?

[ ]

a) ReferenceError
b) EvalError
c) SyntaxError
d) TypeError

9. Which of the following is not a type in JSON? [ ]

a) date
b) Object
c) Array
d) String

10. Which of following statement is false about the space parameter in JSON.stringify() ?

[ ]

a) It controls spacing in the resulting JSON string
b) It is an optional parameter
c) It removes whitespace
d) All are false

11. Which of the following code will return a valid JSON object? [ ]

a) JSON.parse('({"FirstName": "John", "LastName":"Doe"})');
b) JSON.parse("{'FirstName': 'John', 'LastName':'Doe'}");
c) JSON.parse("({'FirstName': 'John', 'LastName':'Doe'})");
d) JSON.parse('{"FirstName": "John", "LastName":"Doe"}');

12. Which of the following is NOT a valid JSON object? [ ]

a) {
"name": "Smiley", "age": 20,
"phone": "888-123-4567",
"email": smiley@xyz.com,
"happy": true
}

b) {

"name": "Smiley",
"age": 20,
"phone": "888-123-4567",
"email": "smiley@xyz.com",
"happy": "true"
}

c) {
"name": "Smiley",
"age": 20,
"phone": null,
"email": "null",
"happy": true
}

d) {
"name": "Smiley",
"age": 20,
"phone": ["888-123-4567", "888-765-4321"],
"email": "smiley@xyz.com",
"happy": true
}

13. Which of these is proper a JSON array? [ ]

a) { “letters” : [“a”, “b”, “c”;] }
b) { ‘letters’ : {“a”, “b”, “c” } }
c) { “letters” : [a, b, c] }
d) { “letters” : [“a”, “b”, “c”] }

14. In the below notation, Employee is of type
{ “Employee”: [“Amy”, “Bob”, “John”] } [ ]

a) Not a valid JSON string
b) Array
c) Class
d) Object

15. Which answer represents the following order of TYPES? [ ]

Object, String, Boolean, Number

a) “{ }”, “a string”, “false”, “0”
b) [ ], 0, “true”, “0”
c) { }, “0”, false, 0
d) { }, hello, “false”, “0”

16. Which of the following code will throw an error?

[ ]

a) JSON.parse(null);
b) JSON.parse('{}');
c) JSON.parse(undefined);
d) JSON.parse('[]');

17. What is the value of json in the following code?

[ ]

```
var obj = { fruit: 'apple', toJSON: function () { return 'orange'; } };
var json = JSON.stringify({x: obj});
```

a) {"x":"orange"}
b) {"fruit":"apple"}
c) {"x":"apple"}
d) {"fruit":"orange"}

18. What is the value of json in the following code?

```
var cars = [];
cars[0] = 'Ford';
cars[1] = 'Toyota';
cars[2] = 'BMW';
var json = JSON.stringify({x: cars});
```

a) {"x":['Ford','Toyota','BMW']}
b) {"x":{"Ford","Toyota","BMW"}}
c) {"x":["Ford","Toyota","BMW"]}
d) {"cars":["Ford","Toyota","BMW"]}

19. Consider the following JSON data:

{ "A": [1,1,2,2], "B": {"C":3, "D":4}, "E":[5,6,true], "F": {"G": [null,7]} }

Which of the following could NOT be included as part of a JSON Schema specification that is satisfied by the JSON data above? Assume that every letter ("A", "B", "C", ...) appears in the JSON Schema specification exactly once.

a) "A": {"type":"array", "minItems":4, "maxItems":4, items":{"type":"integer"}}
b) "A": {"type":"array", "maxItems":10, "items":{"type":"integer"}}
c) "B": {"type":"object", "properties": {"C": {"type":["integer","null"]},

"D": {"type":["integer","null"]}}}

d) "F": {"type":"object", "properties": {"G": {"type":"object", "items": {"type":["null","integer"]}}}}

20. What two structures is JSON built on? [ ]

a) A collection of name/value pairs, and an ordered list of values, or array.

b) A collection of object/item pairs, and an ordered list of pairs, or array.

c) A collection of name/value objects, and an ordered list of objects, or array.

d) A collection of native-value pairs, and an ordered list of arrays, or values.

B. Subjective Questions:

1. Mention what is the rule for JSON syntax rules? Give an example of JSON object?
2. Explain JSON syntax rules?
3. What are the advantages of JSON over XML?
4. Create a JSON object that represents an Item with properties ItemNo, ItemName, Quantity and Price. And construct its tree structure.
5. Demonstrate the purpose of JSON.parse() method with an example.
6. Explain in detail various data types that are supported by JSON with an example.
7. Illustrate how to create, access and modify elements in an Array using JSON.
8. Write one application which demonstrates nested objects and nested arrays in JSON.
9. Illustrate how to send, receive and store data using JSON.
10. Make a list of benefits and drawbacks of JSON.