# Final Exam

**Total points** 30

**1.** Marlon is creating a web page. It's a simple page, which has a list of his current projects, a short bio about himself, and some GIF images of some of those same projects that he uploaded to the server himself. What type of web page is this?

**1 point**

○ dynamic web page

◉ static web page

○ web service

○ web app

**2.** Which of these examples is a **web application**?

**1 point**

○ a blog

○ online poker

◉ an online shopping platform

○ a website conducting a survey

**3.** Which of these formats can be used to express and structure content to be sent over the internet? Choose the **three correct** answers:

**1 point**

☑ HTML

☐ CSS

☑ XML

☑ JSON

**4.** What are the essential parts of an HTTP request? Choose the **three correct** answers.

**1 point**

☑ request-line

☑ a blank space

☑ headers

☐ a message body

**5.** Which of these are essential parts of an HTTP server response? Choose the **two correct** answers.

**1 point**

☐ response-line

☐ a message body

☑ headers

☑ status-line

**6.** Consider the following two statements about Javascript. Choose the one correct option.

**1 point**

1. It can allow you to generate content within the browser

2. A Javascript file must be sent in addition to an HTML file

◉ Only the first statement is true

○ Only the second statement is true

○ Both statements are true

○ Neither statement is true

**7.** What is the term for the action that converts the parameters into a standardized message on the client side?

**1 point**

◉ marshalling

○ binding

○ blocking

○ invocation

**8.** Consider the following two statements about middleware and RPC. Choose the one correct option.　　**1 point**

　1. RPC (Remote Procedure Call) is a form of middleware

　2. The IDL (Interface Definition Language) is responsible for generating stubs

○ Only the first statement is true

○ Only the second statement is true

● Both statements are true

○ Neither statement is true

**9.** Which of these can be found in Common Object Request Broker Architecture (CORBA)? Choose the **three correct** answers.　　**1 point**

☑ client and server stubs

☐ facilities

☑ object request broker

☑ interface definition language

**10.** What are some disadvantages of CORBA? Choose the **two correct** answers.　　**1 point**

☑ Objects are always called remotely

☑ Implementation is difficult

☐ Dynamic binding is impossible

☐ Clients and servers must be implemented in the same language

**11.** In what format are SOAP messages represented?　　**1 point**

○ JSON

○ HTML

● XML

○ SOAP formatting is not based on any other format

**12.** Which part of a SOAP message can be included but is **NOT** required?　　**1 point**

● header

○ HTTP method

○ body

○ envelope

**13.** True or False: a SOAP message must be sent over HTTP.　　**1 point**

● True

○ False

**14.** Which type of description will a service requester need to bind to a web service?　　**1 point**

○ WS-Description

○ UDDI

● WSDL

○ SOAP

**15.** Which section of WSDL 2.0 contains concrete information like physical ports and mapping interfaces to endpoints?　　**1 point**

○ interfaces

○ bindings

○ portTypes

◉ services

**16.** What does the types section of a WSDL 2.0 document allow developers to do?

    `1 point`

◉ Define abstract data types

○ Specify document-style or RPC-style interaction

○ Specify which communications protocol is used (HTTP, SMTP...)

○ Specifies the type of interaction (request-response, solicit-response...)

**17.** Which aspects of web services does UDDI allow you to implement? Choose the **two correct** answers.

    `1 point`

☐ invocation

☑ publication

☑ discovery

☐ composition

**18.** In which section of a UDDI description will you find information like the category of business and service?

    `1 point`

○ white pages

○ blue pages

○ green pages

◉ yellow pages

**19.** Under which data structure of UDDI will you find a reference to the WSDL description?

    `1 point`

○ businessEntity

◉ tModel

○ serviceInterface

○ businessService

**20.** What is the difference between coordination and composition in the context of services?

    `1 point`

○ coordination is focused on pairwise interactions

◉ composition exposes a combination of services as another service

○ composition uses only objects

○ coordination can only be done in a synchronous way

**21.** Consider the following two statements. Choose the one correct option.

    `1 point`

  1. WS-BPEL only allows you to compose services out of basic services.

  2. WS-BPEL has other features such as conditional logic and the ability to store state.

○ Only the first statement is true

◉ Only the second statement is true

○ Both statements are true

○ Both statements are false

**22.** What does it mean that RESTful services are cacheable?

    `1 point`

○ the service logic can be stored on the client

○ the server can store the state of the interaction

◉ the client can store a version of the server's response

○ the server can queue and prioritize requests

**23.** Which of these formats can be used within the invocation of a REST service? Choose the **three correct** answers.

    `1 point`

- [x] simple text
- [ ] WSDL
- [x] XML
- [x] JSON

**24.** Which of these is a good name for a REST resource? In other words, which of these resource names follow best practices? Choose the **two correct** answers. `1 point`

- [x] /cars/2/tires
- [ ] /getCar/2
- [ ] /car/2
- [x] /cars/2

**25.** You received an HTTP status code 201 from the server, which means that a resource was created. In a well-designed REST service, which HTTP methods did you send to the server? `1 point`

- ( ) DELETE
- ( ) PUT
- ( ) GET
- (•) POST

**26.** Which of these elements in the HTTP header of a request specifies the format of the response? `1 point`

- ( ) Content-Type:
- ( ) Host
- ( ) Content-Encoding:
- (•) Accept:

**27.** What is the most important difference between WS*-style web services (which utilize SOAP, WSDL, etc.) and RESTful web services? `1 point`

- (•) RESTful services are simpler
- ( ) WS* are more secure
- ( ) Their differences are very minor
- ( ) They do not use the same transfer protocol

**28.** Where are the formats of the input and output data specified, according to REST best practices? `1 point`

- ( ) As parameters in the URL
- ( ) In the HTTP request in XML format
- (•) In the HTTP header
- ( ) In the HTTP request in JSON format

**29.** What are some advantages of microservices architecture? Select the **two correct** answers. `1 point`

- [x] Good performance
- [x] Scaling through replication
- [x] Services can be developed in different languages
- [ ] No centralized management

**30.** Consider the following two statements about microservices architecture. Choose the one correct option. `1 point`

  1. Communication between microservices is stateless

  2. Testing microservice architecture is complex

- ( ) Only the first statement is true.
- (•) Only the second statement is true
- ( ) Both statements are true

◯ Neither statement is true