

Quiz 7 Study Guide

IT&C 210B

All quizzes in IT210 are selected response. That is, multiple choice, true/false, matching, and so forth. That means you don't need to memorize terms so long as you know their meaning. Nevertheless, this study guide uses open-ended questions to make it a more effective learning activity.

Quiz 7 covers Sessions 28 – 32. It has 17 questions and should take about 10 minutes. It is not an exam so lots of study should not be required. Just take a simple pass through this and look up anything that's not familiar to you.

The slide decks from the lectures are a good choice as is a web search.

Regular Expressions

How many repetitions of the letter "t" will the following regular expressions match?

t*

t+

t?

The function `re.search()` will search a string for a regular expression. Is it used in Python or JavaScript?

What do we mean when we say a regular expression is greedy or non-greedy? Which is the default?

Systems Design, Systems Engineering and DevOps

The three components of the Iron Triangle are Resources, Time, and Scope. What do we mean when we say they form an "Iron Triangle"?

Would you expect to find a programmer on a Systems Engineering team? Why or why not?

Would you expect risk management to be a responsibility of a DevOps team?

Which method reduces risk earlier in a project, Waterfall or Agile?

Which of the following terms is most associated with Agile, and which with Waterfall? Scrum, Stage-Gate, Sprint, Kanban, Change Order

Internationalization and Localization

What is the difference between Internationalization and Localization? Are they used together or are they alternatives?

What is the difference between ASCII and Unicode?

What is UTF-8 character encoding? Does using UTF-8 help internationalization?

Processes and Threads

Do processes belong to threads or do threads belong to processes?

Which has its own memory space, a process or a thread?

Is there one stack per process or one stack per thread?

By default, Apache creates a new process for every request. It can be configured to use a new thread for each request. Which mode has greater capacity? Which mode provides better protection between requests?

Asynchronous Programming

Is the JavaScript `fetch()` command synchronous or asynchronous? How does that affect the way you use the command?

Node.js

Can Node.js be used for things other than being a web server?

How is the Node.js asynchronous, event-driven model distinct from the Apache multi-process, multi-thread model? What is the common goal of both models?

Web and Social Analytics

What is the difference between client-side and server-side analytics?

Which form of analytics (client or server-side) uses JavaScript?

Which form of analytics (client or server-side) can be blocked by a firewall?

Virtualization

What are the distinctions between a Type 1 Hypervisor, a Virtual Machine (Type 2 Hypervisor), and a Container?

Which virtualization method requires the most computing resources? Which requires the least?