

Revision

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Exam structure

- The exam consists of two questions:
 - ONE question about the autumn semester material.
 - ONE question about the spring semester material.

You need to answer TWO questions in total, i.e. both questions are compulsory.

- The style and difficulty of questions are similar to those in previous years (have a look at the past papers).
- We can ask questions about everything that has been discussed in the lectures and labs: including slides, whiteboard, lab exercises, live demos.

Exam topics: Autumn semester

- HTML
- CSS
 - Effective use of CSS to control the appearance of a website
 - CSS selectors (including advanced ones like `p > o1`)
 - Colour encodings
 - The CSS box model
- Web site design principles
- UNIX/Linux
- CGI to process forms
- Text file format and character encoding

Exam topics: Spring semester

- Principles of modern web development
- Databases and SQL
- Internet: Networks and Protocols
- Basics of security as applied to web (invited lecture)
- Principles of e-commerce, types of e-commerce business models
- Search engines

Principles of modern web development

- Frontend vs backend development
- Web development: lifecycle, approaches
- Design patterns: MVC
- Server-side vs client-side processing (e.g. JavaScript)
- Web frameworks, e.g Flask, Django
- Software configuration management and version control;
git

Databases & SQL

- Using databases to store the state of a dynamic website
- Definition, abstraction levels
- Relational model
- Writing SQL queries to manipulate databases: adding, removing, updating, searching, *etc.*

Networks

- Types: circuit vs packet switched
- Packetising data and routing
- Network topologies
- Protocols
- The 7-Layer OSI model
- IP addresses, domain names, DNS, URIs, URNs, URLs

Writing code in the exam

- We understand that it is difficult to write code on paper, without a debugger, and under stress.
- So, in this exam, you will *not* be asked to *write* any programs in JavaScript, Python, *etc.*
- However:
 - You *may be asked* to understand and explain what a piece of code does, what effects or output it produces.
 - You *may be asked* to write a few MySQL queries, as well as to write some snippets of HTML or CSS.

Past papers

- See past papers: <https://exampapers.cf.ac.uk/>
- They give a good idea of the style and difficulty of the questions.
- To challenge yourselves, also look at past papers for older modules like CM0133, CM0255.

What will NOT be on the exam

- CGI environment variables (e.g. how to get the client's IP address or the name of its browser)
- History of the Internet and Web.
- The HTML5 canvas.
- Functional programming.
- The precise difference between the various video and audio formats (although you do need to know the difference between GIF, PNG, JPEG and SVG)
- XML
- The optional lecture on how to run a webserver on a raspberry pi

EVERYTHING ELSE IS EXAMINABLE!

Optional - Extra revision drop-in session

- When?

Week 12: Thursday 9th May, 11:10 - 12:00

- Where?

The same room, i.e. S/1.32