



Institutionen för Data-  
och Systemvetenskap

**\*:96 (SU) and 2I1263 (KTH)  
Internet Application Protocols  
and Standards**

Exam 2003-03-10



STOCKHOLMS  
UNIVERSITET



KUNGLIGA  
TEKNISKA  
HÖGSKOLAN

**The following documents are allowed during the exam:**

1. Documents in Compendium 1, printed on coloured paper.
2. Documents in Compendium 2, printed on coloured paper.
3. Documents in Compendium 3, printed on coloured paper.
4. Documents in Compendium 7, printed on coloured paper.
5. Ordinary language dictionaries between English and Swedish.

*Note 1: Compendium 4, 5, 6, 8 and 9 are not allowed during the exam. The exam supervisor will check that you do not have copies of compendiums 4, 5, 6, 8 and 9 printed on colour paper. Bringing such compendiums on coloured paper is cheating and can result in suspension of your rights to study.*

*Note 2: Underscoring and short handwritten notes in the yellow documents are allowed.*

*Note 3: A few copies of these compendiums (part 1-3 and 7) will be available for loan during the exam for students who have not bought the compendiums.*

**Important warning**

It is not acceptable to answer an exam question by just a verbatim quote from the allowed documents above. You must show that you understand the question and your answer by using your own words.

Jacob Palme will come around 10:00-10:30 to the exam room to answer questions regarding the exam.



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| No. | Question in English   | Question in Swedish   | Max points |
|-----|---|---|------------|
| 1.  | Two common date formats are "2003-03-10" and "10 Mar 2003". Write an ABNF specification which allows both these date formats. | Två vanliga format för att skriva datum är "2003-03-10" och "10 Mar 2003". Skriv en ABNF-specifikation som tillåter båda dessa två datumformat. | 6          |
| 2.  | Describe the difference between the ASN.1 built-in types SET, SET OF, SEQUENCE and SEQUENCE OF.                               | Beskriv skillnaden mellan ASN.1-typerna SET, SET OF, SEQUENCE och SEQUENCE OF.  | 6          |

**Solution:**

date = numeric-data / alphabetic-date

numeric-date = 4\*4D "-" 2\*2D "-" 2\*2D

alphabetic-date = 1\*2\*D " " month " " 4\*4D

month = "Jan" / "Feb" / "Mar" / "Apr" / "May"  
/ "Jun" / "Jul" / "Aug" / "Sep" /  
"Oct" / "Nov" / "Dec"

**Answer:**

SET and SEQUENCE define a type, which contains a defined number of elements, each of which can be of a different type (2).

SET OF and SEQUENCE OF define a type, which contains an usually unlimited number of elements, each of which must be of the same type (2).

The difference between SET and SEQUENCE is that for SEQUENCE, there is a defined and required ordering of the elements, while for SET the elements can be sent in any order (2).



# \*:96 (SU) and 211263 (KTH) Internet Application Protocols and Standards

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| No. | Question in English   | Question in Swedish  | Max points |
|-----|---|--|------------|
| 3   | <p>Which constructs in HTML are used to identify which style sheet entry is to apply to a certain HTML-element. Compare the different constructs available.</p>   | <p>Vilka konstruktioner i HTML används för att ange vilken style-sheet-definition som gäller för ett visst HTML-element. Jämför de olika konstruktioner som finns.</p> | 6          |
|     | <p><i>Answer:</i></p> <p>The attributes CLASS (3) and ID (2), which can be given on almost any HTML tag contains the name of a style to be used. The difference between CLASS and ID is that only a single HTML element can have each value of ID, while several different HTML elements can have the same value of CLASS (1).</p> <p>The attribute STYLE (1) makes it possible to specify an inline style for just a single HTML element.</p> <p>It is also possible to specify that a certain CSS style is to apply to all occurrences of a certain HTML tag. And it is possible, for &lt;A&gt; tags, to specify different style depending on the status of the link (1). The notation for this is in CSS, not in HTML, and thus not part of the answer to this question.</p> <p>It is also possible to specify that a certain style is only to be used in a certain media, for example only used when printing a page, not when viewing it on-screen.</p> <p>Example (not required in answer to this question):</p> <p>(See next page)</p> |  |            |



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| No.   | Question in English  | Question in Swedish  | Max points |
|---|--|--|------------|
|   | <pre>&lt;HTML&gt;&lt;HEAD&gt; &lt;title&gt;Anonymity on the Internet&lt;/title&gt; &lt;STYLE TYPE="text/css"&gt; &lt;!-- h2 { /* This style applies to all h2 html elements */ font-family: Verdana, sans-serif; font-size: 18px } .bread { /* This style applies to all html elements which have class=bread */ font-family: Verdana, sans-serif; font-size: 10px; line-height: 14px; width: 60ex } --&gt; &lt;/STYLE&gt; &lt;/HEAD&gt; &lt;BODY&gt; &lt;H2&gt;Anonymity on the Internet&lt;/H2&gt; &lt;P CLASS="bread"&gt;How is &lt;span style="font-size:12px"&gt;anonymity&lt;/span&gt; &lt;!-- This style applies to this html element only --&gt; used on the Internet? How anonymous is an Internet user, and how can an Internet user achieve anonymity? What are the pros and cons of anonymity on the Internet?&lt;/P&gt; &lt;/BODY&gt; &lt;/HTML&gt;</pre> |  |            |
| 4   | <p>Which method is used in Usenet News to stop the same article being sent more than once to a news server?</p>  | <p>Vilken metod används i Usenet News för att hindra att samma artikel skickas mer än en gång till en News-server?</p> | 6          |
| <p><i>Answer:</i></p> <p>Each article has a globally unique Message-ID (4). A server can ask for, or get offered, new articles, and can then reply by asking only for those it does not already have (1-2).</p> <p>There is also a path of MTAs, which an article has passed, on the article itself, and this can be used to stop an article passing the same MTA more than once (2).</p> |  |  |            |