



Institutionen för Data-
och Systemvetenskap



STOCKHOLMS
UNIVERSITET



KUNGLIGA
TEKNISKA
HÖGSKOLAN

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

Exam-2006-04-22-solved.doc

The following documents are allowed during the exam:

1. Documents in Compendium 1, printed on colored paper.
2. Documents in Compendium 2, printed on colored paper.
3. Documents in Compendium 3, printed on colored paper.
4. Documents in Compendium 7, printed on colored paper.
5. Documents in Compendium 9, printed on colored paper.
6. Ordinary language dictionaries between English and Swedish.

Note 1: Compendium 0, 4, 5, 6 and 8 are not allowed during the exam.

Note 2: The exam supervisor will check that you do not have copies of the disallowed compendiums. Bringing such compendiums on colored paper is cheating and can result in suspension of your rights to study.

Note 3: Underscoring and short handwritten notes in the yellow documents are allowed.

Note 4: A few copies of the allowed compendiums will be available for loan during the exam for students who have not brought 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 be available by phone 08-664 77 48 until 12:00 to ask if you want clarification of any of the questions in the exam.

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No.	Question in English	Question in Swedish	Max points
1	Specify, using ABNF a syntax of a transaction for transferring the names, height and weight of a series of people in a single transaction.	Specificera med hjälp av ABNF en syntax för att sända namn, längd och vikt för en serie personer i en enda transaktion.	6

One possible solution:

```
NameList = "*Start" CRLF *(Name) "*End" CRLF
Name = "Name: " 1*(ALPHA / " " / ".") CRLF
"Height: " 2*3(DIGIT) CRLF ; in centimeters
"Weight: " 1*(DIGIT) "," DIGIT CRLF ; kilos with one decimal
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2	The use of the "Reply-to" e-mail headers is highly controversial. Why?	Användningen av fältet "Reply-to" i e-post-huvud är mycket kontroversiellt. Varför?	6
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Answer:

There is a need for different recipients for different categories of answers, and "Reply-To" does not distinguish between them. In particular, common categories of replies are replies intended only for the author of a message, and replies intended for the author and all the recipients of a message.

3	You want people to be able to save a web page as a HTML file. They should then be able to open this file, click on relative links in the HTML document, and get to the same location as if they had downloaded the file from a web site. How can this be done, without changing all relative links to absolute links in the web page?	Du vill att folk skall kunna ladda ner en webbsida som en HTML-fil. De skall därefter kunna öppna filen, klicka på relativa länkar i filen, och komma till samma plats som om ser sidan direkt nedladdad från webbsajten. Hur kan man göra detta utan att behöva ändra relativa länkar till absoluta länkar i webbsidan?	6
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Answer:

Use the <base> HTML head element. All relative URLs will then be interpreted in relation to the URL in the <base> element.



No.	Question in English	Question in Swedish	Max points
4	Why is it not possible to send data, specified as a “struct” in C or a “record” in Pascal, to another computer just as they are stored in RAM on the sending computer. (RAM = Primary memory.)	Varför kan man inte sända data, specificerade med en ”struct” i C eller en ”record” i Pascal till en annan dator, precis som data är lagrade i RAM på avsändarens dator. (RAM = Primärminne.)	6

Answer:

1. There is no exact standard for how structs and records are stored in memory. For example, the format for storing real values in words is not the same for all computers.
2. Structs and records can contain pointers to other structs and records, and these pointers cannot be used in the recipient computer, unless the object the pointer refers to is also transferred. But this object can contain new pointers to further objects, so that transfer of a single record will need transfer of a large set of objects referring to each other.