Exam History of Science

Datum: Tuesday May 26, 2015	Lecturers: dr. G. Alberts / dr. D.J. Beckers
Time: 8:45 – 10:45u	Course code: FEW 400318

In general:

(1) Make sure your name and studentnumber are on ALL your work.

(2) Answer in English sentences. Spelling and grammar should be correct, either to the English or to the US standards. Just a few buzzwords never constitute an answer. Always explain yourself.

(3) This exam consists of 7 A-question and 9 B-questions. The A-questions are about the lectures; the B-questions refer to information from the book by Campbell-Kelly.

(4) You pick eight question: 4 A-questions and 4 B-questions. Each question is worth 1 point. Indicate clearly which questions you're answering by mentioning either the number and / or the title of the question in your answer. If you answer more than four A-questions, only the first four will be considered. Likewise for the B-questions.

A-Questions:

1. **Histories of computing (A)**

The early history of computing cannot be understood as one history. Several histories, sometimes intersecting, have to be taken into account to understand where the computer actually had its origins. Explain.

2. Silicon Valley (A)

The rise of Silicon Valley as a centre of technological development may be viewed as the result of a blending of two cultures: the culture of technological hobbyists and the hippy culture. In the Netherlands both these cultures were present as well, but no such thing as Silicon Valley appeared. Explain both these statements.

3. US and Europe (A)

During the lectures a European history was told, sometimes contrasting the US oriented story told in the book by Campbell-Kelly. Mention two major differences between the US and European histories of computer sciences 1940-1970 and explain how these differences came about.

4. Computing sounds (A)

Why did pioneer computers in the 1950s have sound devices? What made them superfluous?

5. Language metaphor (A)

What was the difference between programs and autocoding systems. Give examples of such systems.

During the lecture it was argued that “programming language” was in fact a metaphor, constructed in the 1950s. What was new?

6. Inventions? (A)

In the evolution of computing, meetings were more important than inventions. Describe three meetings which were crucial in the development of the computer and digital culture.

7. Software crisis (A)
When and where was the software crisis proclaimed. Sketch this event and the practical consquences.

B-Questions:

1. When computers were people (B)
The word “computer” before 1950, was referring to a human, rather than a machine. Explain the role of the human computer in the cases of the weather forecast and the annual issue of the nautical almanac.

2. SABRE (B)
The SABRE system was one of the earliest civilian uses of realtime computing.
(a) Discuss where the ideas of realtime computing originated.
(b) Describe the impact of this system on the practice of flight reservation.

3. BASIC (B)
One of the earlier programming languages was BASIC. Describe its origins and in what ways it was different from some of its predecessors.

4. Visicalc (B)
Explain the role of Visicalc in the rise of spreadsheet culture in management and the use of computers in business in general. “Killer App”

5. eMail (B)
Discuss the role of electronic mail in the rise of computer networks in the 1970s.

6. Browser wars (B)
Campbell-Kelly describes the Browser wars in the 1990s as similar to the 1980s struggle over OS-dominance. Discuss both “conflicts”, paying attention to the similarities and differences.

7. Digital culture (B)
What, according to Campbell-Kelly, was the impact of the rise of a digital culture? Discuss two specific examples and indicate whether the impact of computer networks was typically changing an existing practice, or introducing something completely new.

8. Hollerith (B)
What, in the 1890s, was new about the Hollerith machines? Explain the role they played in the history of early computing.

9. The Whole Earth Catalog (B)
Discuss the role of the Whole Earth Catalog in the history of computing. In doing so, mention at least where, when and withtin what group of people it emerged, name at least one of the people it was influenced by, and one of the people that was influenced by it.