

STS.001

Spring 2006

Final Exam Study Guide

Exam Date: Monday, 22 May, 1:30PM - 4:30PM

Part I

This part of the final exam will consist of identification-type questions (drawn from the lectures, readings, films) in which you will be asked to do two things: first, to identify the item; second, to explain its historical significance. Your response need not be long. One paragraph will do; however, use complete sentences, be specific and concrete, providing dates, geographical location(s) if relevant, and the reason(s) why the item is historically important. If the item is a person, explain what s/he is known for and why s/he is important. If it is a concept, indicate whose idea it was (if possible) and provide an example of the concept in action? If it is a thing, identify it and provide an example of how it was used and why it was significant. In grading these questions, we will be looking for evidence that you have listened, read, and watched carefully. The questions will be taken from the list below. *A tip: note that many of the identifications are related to each other; the list is not as long as it looks.*

“The Day After Trinity”

Five-dollar day

Alfred P. Sloan, Jr.

Ferdinand de Lessups

Morrill Land Grant Act (1862)

Samuel Slater

Time-motion studies

Armory practice

Simeon North

Clinton’s “big ditch”

Kelly-Bessemer process

Duryea brothers

NACA

Manhattan Project

Vannevar Bush’s “endless frontier”

DARPA

John Fitch

Long Island Parkway

Merrimack River

Atomic Energy Commission

Oliver Evans

Lowell

Eli Terry

John H. Hall

Elmer Sperry

“American system of manufactures”

“the physicist’s war”

Wirlwind/SAGE

Project Apollo

Edwin H. Armstrong

“the skulking way of war”

Tench Coxe

“let our workshops remain in Europe”

“pacing/soldiering”

Taylorism

Fordism

Rachel Carson

Altair 8800

ARPANET

the myth of Eli Whitney

Hawthorne’s “Celestial Railroad”

pig iron

Radio Licensing Act (1912)

Artisanal production

Ames Shovel Co.

Springfield Armory

“Lowell girls”

West Point

Guglielmo Marconi

Hudson River School

Model T

Short-wave radio

Ford Trimotor

“Modem Times” (1936)

Bell Labs
Gen. Leslie Groves
“the great arsenal of democracy”
Currier & Ives, “Westward the Course of
Empire Takes Its Way” (1868)
OSRD

The Kelly Act (1925)
Robert Oppenheimer
hobbyists
Samuel Morse
Penicillin
Ed Murrow’s “issue”

Part II

In this part, you will be asked to write two essays that will be drawn from the following questions (but they may not be exactly like these!). Each essay should be composed in a well-organized manner, with an introduction and a conclusion. We expect you to develop a well-reasoned argument supported by specific examples. Read the questions carefully; many ask you to discuss a specific number of examples from a list of choices.

1. “Government-in/government-out” is an important catalyst of technological change in the American economy. What does this expression mean? How has this made a difference to the larger American society? Describe two examples of a government-in/government-out scenario (one from the 19th-century, one from the 20th-century), and discuss their legacies.
2. Historians generally consider wars to be significant “turning points” in history. Confining your thoughts to World War II, discuss how that conflict was a turning point in American history. In responding to this question, take into account:
 - a) the invention/introduction/and/or deployment of at least five specific technologies (aircraft, for example);
 - b) how they changed the face of battle;
 - c) the larger implications they had after the war;
 - d) how they impacted engineering and the pursuit of science after the war;
 - e) how they influenced American politics and society.
3. The technological system is an important concept in the history of technology; but what is a system, what do historians gain by thinking in terms of “technological systems,” and how have they changed over time? Compare and contrast the histories of three systems (choosing from the railroad system, the electrical system, the telephone system, the automobile system, and the air transportation system) across three themes (choosing from the role of the government/military, the role of private industry, the role of system’s builders, consumers and users, and the system’s purpose). Are these systems similar or different?