

## STS.011 Final Exam

December 17, 2004, 1:30-4:30

### **Section A: Multiple Choice**

Each correct answer earns you one point. Half a point will be subtracted from your score for each incorrect answer. You will neither gain nor lose points if you give no answer to a question. (Maximum possible score: 30 points).

1. Historicism is:

- a) An approach that judges people's actions according to their historical context.
- b) The philosophy underlying the Nuremberg Code
- c) The same as utilitarianism
- d) The belief that history is superior to other academic disciplines

2. Utilitarianism is:

- a) The basis of Michael Walzer's argument about Hiroshima
- b) An argument based on the assumption that the highest utility is the rights of the individual
- c) An argument based on the assumption that the highest utility is the greatest good of the greatest number and that there is nothing sacrosanct about the happiness of the individual.
- d) The same as deontology

3. Neils Bohr held firm beliefs about the atomic bomb. Which action did he take?

- a) Attempted to contact President Roosevelt to communicate his views
- b) Tried to organize a meeting between Heisenberg and Oppenheimer

- c) Organized a revolt involving scientists who were making the bomb
- d) All of the above
- e) None of the above

4. According to Joseph Rotblat, why did scientists not choose to leave the Manhattan Project once Germany had been defeated in World War II:

- a) Scientific curiosity
- b) They didn't feel it was their responsibility
- c) It might affect their future careers
- d) All of the above
- e) A and C only

5. In Michael Walzer's article, what does *jus ad bellum* refer to:

- a) A country has a moral right to drop an atomic bomb on another country
- b) A country has a moral right to go to war against another country
- c) A country has a moral right to fight against both military personnel and civilians of another country
- d) A country has a moral obligation to pursue the path of peace

6. Which scientist was eager to make the hydrogen bomb?

- a) Joseph Rotblat
- b) Leo Szilard
- c) Robert Oppenheimer
- d) Edward Teller

7. The Enola Gay controversy at the Smithsonian revealed which of the following, according to Lifton and Mitchell:

- a) Mainstream media did a good job of representing both sides of the issue fairly
- b) Organizations representing veterans who fought in World War II were appalled by arguments that the atomic bomb should not have been used

- c) The Smithsonian curators, misinformed about the bombing of Hiroshima and Nagasaki, needed help with their script for the exhibit
- d) The bombing of Hiroshima and Nagasaki was necessary to bring about the surrender of Japan

8. The College of Natural Resources Department at Berkeley made a deal with:

- a) Merck
- b) Pfizer
- c) Novartis
- d) Boots

9. Which of the following has NOT been accused of participating in unethical research on human subjects:

- a) Stanley Milgram
- b) Laud Humphreys
- c) Paul Farmer
- d) Phillip Zimbardo

10. John Marks highlighted the importance of the following issues:

- a) Informed consent as defined by the Nuremburg Code
- b) The use of war and communism as threats that justified any actions by CIA researchers
- c) The role of secrecy in protecting researchers from peer scrutiny
- d) All of the above

11. Based on John Marks' book, which of the following experiments did the CIA not conduct:

- a) Use of LSD on prisoners and prostitutes
- b) Hypnosis
- c) Use of marijuana to get information from "informers"

d) Use of pressure chambers to model pilot responsiveness to high altitude flying conditions

12. Which of the following pairs is the odd one out:

- a) John Dower and physics
- b) Paul Farmer and anthropology
- c) Paul Farmer and medicine
- d) Ray Siever and oceanography

13. In her New England Journal of Medicine article, Marcia Angell advocates which of the following in developing countries

- a) Placebo controlled trials
- b) Treatment based on utilitarian calculations
- c) Treatment in accordance with what one would expect in a developed country
- d) Universal health insurance

14. Who was the engineer who blew the whistle on the Challenger space shuttle's O-ring problem?

- a) Hal Gehman
- b) Roger Boisjoly
- c) Ron Dittemore
- d) Linda Ham

15. The "precautionary principle" exemplifies which of the following:

- a) The restriction of activities the consequences of which are contested
- b) The permitting of activities the consequences of which are contested
- c) The restriction of activities the consequences of which are clearly established
- d) The permitting of activities the consequences of which are clearly established

16. Rachel Carson's conclusions had which of the following effects on environmental policy in the United States:

- a) Led to a ban on all pesticides as harmful to humans and the environment
- b) Led to the ban of DDT because of its highly toxic nature
- c) Encouraged the use of DDT indoors, but discouraged it for outdoor use
- d) Encouraged the use of DDT in developing countries, but discouraged its use in the United States

17. Xenotransplantation refers to:

- a) The use of embryonic stem cells to make human organs for transplantation
- b) Transplanting human organs from living donors
- c) Transplanting human organs from brain-dead donors
- d) Transplanting organs from animals to humans

18. Richard Sclove

- a) Says science juries work in Europe but would not work in the U.S. because of its different culture
- b) Is skeptical that non-experts should play any role in decision-making about science
- c) Says science juries have worked well in Europe and should be tried more in the U.S..
- d) Says science juries have failed in Europe because of its hierarchical culture, but would work better in the U.S. because of its more democratic culture.

19. Janet Raloff's science shops are:

- a) Indistinguishable from NGOs such as the Union of Concerned Scientists
- b) Stores where scientists buy their scientific equipment
- c) A way of finding corporate funding to support research in developing countries

d) Arrangements to facilitate scientific research on behalf of local communities in need

20. Which of the following does Jeremy Rifkin NOT argue:

- a) The biotech revolution will bring with it new kinds of genetic pollution
- b) We should oppose attempts to patent genetic material
- c) The biotech revolution will, by ending disease and increasing crop yields, make inequality a problem of the past.
- d) The biotech revolution will dissolve the boundary between nature and culture.

21. Paul Farmer's major financier was:

- a) Ophelia Dahl
- b) Jim Kim
- c) Tom White
- d) Zanmi Lasante

22. Which of the following does Paul Farmer NOT believe:

- a) Focusing scarce resources on multi-drug resistant TB is a waste.
- b) The health problems of the poor require political as well as medical intervention if they are to be cured
- c) White liberals ("WLs") profess concern for the poor but rarely take action on their behalf, and so are as much a part of the problem as the solution.
- d) Despite their poverty and lack of education, HIV+ Haitians can follow complicated treatment regimens.

23. Genetic determinism means

- a) The human genome project is ultimately flawed
- b) Genes tell you all you need to know about a person
- c) The nature/nurture debate has not been resolved
- d) Patenting genes is a necessary part of biological research

24. For (Guest Lecturer) James Shirley, what is the moral status of the embryo when considering the ethics of stem cell research:

- a) The same as when considering abortion
- b) Embryonic stem cell research is acceptable under some circumstances
- c) Embryos merit protection since they are both human and alive
- d) It doesn't matter because embryonic stem cell research is a vital area of research for developing medical treatments

25. Leon Kass

- a) Agrees with Richard Lewontin that religious arguments against cloning are spurious
- b) Wants a temporary moratorium on implanting cloned embryos to make a child
- c) Wants a temporary moratorium on the cloning of human embryos
- d) Favors a complete ban on implanting cloned human embryos to make a child while allowing research on cloned embryos

26. From among the following choices, what was the most important concern surrounding Monsanto's New Leaf potatoes for Michael Pollan:

- a) They required large amounts of pesticide spray
- b) They are not labeled as GM when sold in supermarkets
- c) They represented a society of monocultures controlled by corporations
- d) Pollan could not use them to make a salad for his potluck party

27. In her guest lecture Dr. Theodora Capaldo

- a) Was concerned about experimentation on higher mammals such as chimpanzees, but was not concerned about rats
- b) Supported PETA activists who break into labs to liberate animals being kept there
- c) Argued that animals are often poor human analogues in drug testing experiments

d) Argued that animals are invariably good human analogues in drug testing experiments, but that it is still immoral to experiment on them

28. Which of the following is NOT true?

a) On the eve of the protests against the I-Lab, military research accounted for more than 50% of MIT's budget

b) Norbert Weiner, an MIT faculty member, worked on weapons in World War II but then refused to do military work after the war.

c) The MIT protests of the 1960s succeeded in getting the Instrumentation Lab moved off campus, but not in converting it to non-military research

d) Phillip Morrison was fired by Cornell during the McCarthyist years

29. Which of the following statements is untrue:

a) Genetically modified food must be labeled as such in the U.S..

b) Monsanto's GM potatoes are officially registered as pesticides

c) GM corn genes have already drifted from the U.S. to remote parts of Mexico

d) Monsanto deliberately engineered crops to be sterile.

30. Which of the following systems could be prone to a normal accident?

a) Nuclear reactor

b) Air traffic control

c) Metro bus system

d) All of the above

e) A and B

f) A and C

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**Section B: Short Essays**

Pick 4 of the following. Write one paragraph on each of your choices. Each answer is worth 5 points (for a maximum of 20 points).

Michael Walzer's sliding scale

Amy Smith

Algeny

Nurse Rivers

Philip Morrison

ACT UP

Project Chariot

DDT

### ***Section C: Long Essay***

Pick ONE of the following and write an essay on it, bringing in as much of the course material as possible. (Maximum score 30 points).

1. To what extent can science be left to the market to regulate?
2. Jeremy Rifkin (p.231) asks: "Are there technologies whose inherent power is so immense and overshadowing that the unleashing of that power will result in greater diminution than enhancement and more harm than good?" Based on your reading for this class, how would you answer this question? And if there are such technologies, how can they be restrained?