

QUIZ 14 VERSION B **"Health and Safety Regulation"**

INSTRUCTIONS: This exam is closed-book, closed-notes. Simple calculators are permitted, but graphing calculators or calculators with alphabetical keyboards are NOT permitted. Mobile phones or other wireless devices are NOT permitted.

Multiple choice: Circle the one best answer to each question. [10 pts each]

(1) One kind of market failure occurs when one side of the market (typically consumers in markets for consumer goods or workers in labor markets) is unaware of risks associated with a good or a job. This kind of market failure is called

- a. market power.
- b. imperfect information.
- c. externalities.
- d. irrationality.

(2) Surveys show that people tend to underestimate

- a. relatively small risks, like tornados.
- b. relatively large risks, like cancer.
- c. all risks.
- d. none of the above—people show no bias in estimating risk.

(3) The value of a statistical life (VSL) equals the

- a. present discounted value of taxes paid during a person's lifetime.
- b. present discounted value of a person's lifetime earnings.
- c. present discounted value of a person's lifetime earnings less consumption.
- d. none of the above.

(4) Suppose a person is willing to pay \$1000 to eliminate a 1 in 5,000 risk of death. The value of a statistical life for this person is

- a. \$1000.
- b. \$5000.
- c. \$6000.
- d. \$4,166,667.
- e. \$5,000,000.
- f. \$6,000,000.

(5) As people's incomes rise, they are willing to pay

- a. the same amount for reducing risk of injury or death.
- b. less for reducing risk of injury or death.
- c. more for reducing risk of injury or death.
- d. first more, then less for reducing risk of injury or death.

(6) The curve relating actual wages and injury risk across different jobs in the job market is called the

- a. isoprofit curve.
- b. hedonic equilibrium curve.
- c. cost curve.
- d. wage curve.
- e. supply curve.
- f. indifference curve.

(7) For the United States, a typical estimate of the value of a statistical life (in 2000 dollars) is about

- a. \$1,000.
- b. \$30,000.
- c. \$500,000.
- d. \$7,000,000.
- e. \$90,000,000.

(8) Willingness-to-pay for air quality can be estimated using data on the prices of

- a. appliances.
- b. public transportation.
- c. automobiles.
- d. houses.

(9) Suppose the government is considering regulating exposure to some toxic chemical in the workplace. Five possible standards have been proposed, as shown below. Standard A is the most lax. Standard E is the most stringent.

Standard	Allowable exposure (mg/m ³)	Average cost per life saved (millions)	Marginal cost per life saved (millions)
A	0.1	\$0.50	\$0.50
B	0.04	\$1.50	\$2.50
C	0.01	\$2.50	\$4.50
D	0.004	\$3.75	\$7.50
E	0.0001	\$6.00	\$15.00

If the value of a statistical life were \$5 million, what would be the economically efficient standard?

- a. Standard A.
- b. Standard B.
- c. Standard C.
- d. Standard D.
- e. Standard E.

(10) Optimal regulation of health and safety throughout the economy would

- a. equate the marginal cost of reducing each risk to the same value of a statistical life.
- b. allow unregulated market forces to determine risks.
- c. attempt to reduce all risks to zero.
- d. reduce each risk to the same low level.

[end of quiz]