

Economics 111

The Economy and the Environment

Fall 2013

First Midterm Exam

Answer each of the following twenty questions. This exam accounts for either 0% or 50% of your final grade depending on whether your second midterm score is higher or lower respectively than your score on this exam. This exam paper has three pages. Time allowed: 45 minutes.

1. Evidence suggests that the natural system had been extremely stable until human activities began to disrupt it.
 - A. True
 - B. False

2. A chaotic system exhibits
 - A. stochastic behaviour.
 - B. behaviour that is difficult to distinguish from stochastic behaviour.
 - C. inherently unpredictable behaviour.
 - D. Both B and C.

3. The economic criterion for assessing environmental impacts
 - A. distinguishes between anthropogenic and non-anthropogenic sources because only the former are within human control.
 - B. focuses on damage to productive capacity.
 - C. is based on consequences rather than sources.
 - D. None of the above.

4. Mass extinctions have occurred only since the industrial revolution.
 - A. True.
 - B. False.

5. The economic approach to value focuses on *human* needs because
 - A. it is a pragmatic approach in a liberal democracy.
 - B. of an underlying philosophical position that individuals are the best judge of what makes them happy.
 - C. Both A and B.
 - D. None of the above.

6. Assimilation is primarily solar-powered.
- A. True.
 - B. False.
7. The build-up of stratospheric ozone over the past decade
- A. is an example of transboundary pollution
 - B. is the primary source of photochemical smog
 - C. causes respiratory illness and damage to materials
 - D. reflects a reduction in global emissions of CFCs.
8. The term “economic capital” refers only to anthropogenic inputs (manufactured capital, knowledge capital and social capital) while “natural capital” refers to non-anthropogenic inputs (like soil, water resources and ecosystem services).
- A. True.
 - B. False.
9. Mining is part of the
- A. the primary production sector of the economy.
 - B. the manufacturing sector of the economy.
 - C. the services sector of the economy.
 - D. evil conspiracy by big business to ruin the planet in the unholy pursuit of profit.
10. Accounting for the non-timber values associated with a standing forest
- A. typically calls for a shortening of the rotation cycle for forestry.
 - B. typically calls for a change in the spatial pattern of logging.
 - C. is part of a recent trend to put environmental values ahead of human values.
 - D. All of the above.
11. A non-uniformly mixed pollutant is
- A. one that builds up in the environment over time
 - B. one whose damaging effect is relatively short-lived
 - C. one that tends to pool in areas of relatively high concentration
 - D. one that does not mix with air or water
12. A key property of a uniformly-mixed pollutant is that the damage caused is uniform across the receptive area.
- A. True.
 - B. False.
13. A pollutant whose damage is related to the history of emissions is a
- A. cumulative pollutant
 - B. persistent pollutant
 - C. stock pollutant
 - D. All of the above.

14. Mercury contamination is a particular problem in fish because
- A. most mercury pollution is discharged directly into rivers by industrial plants
 - B. compounds of mercury are not water-soluble
 - C. there are many layers to the food chain in fish and mercury is bioaccumulative
 - D. All of the above.
15. Photosynthesis is a process through which carbon dioxide is removed from the atmosphere.
- A. True
 - B. False
16. Anthropogenic eutrophication of lakes and streams is primarily due to elevated biological oxygen demand.
- A. True
 - B. False
17. The irreversibility of some environmental impacts means that
- A. the benefits of reducing those environmental impacts always outweigh the costs
 - B. environmental policy should be forward-looking
 - C. no economic activity should be allowed unless its environmental impacts are fully understood
 - D. All of the above.
18. The kinetic energy used to generate electricity in a hydroelectric power station
- A. derives from gravitational force.
 - B. is eventually dissipated as heat and light.
 - C. causes a turbine to spin.
 - D. All of the above.
19. One of the three key components of the energy system is
- A. energy production
 - B. energy consumption
 - C. energy inputs
 - D. energy services
20. Most of the operational nuclear power plants in the world today are based on nuclear fusion.
- A. True
 - B. False

Answer Key

1. B
2. B
3. C
4. B
5. D
6. A
7. D
8. B
9. A
10. B
11. C
12. B
13. D
14. C
15. A
16. B
17. B
18. D
19. D
20. B