**Spring 2018 APES Final Exam Study Guide** Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Give 3 examples of sustainability. Think about what you incorporated into your city.

2. Define ecological footprint-

 After taking this class, what are some things you might change to lower your footprint?

3. What is saltwater intrusion and what may cause this to happen?

4. If a country has a CBR of 25 per 1,000 and a CDR of 10 per 1,000, the natural annual percent increase of its population is \_\_\_\_\_\_\_\_\_\_\_.

5. Give an example of an abiotic factor affecting a biotic factor in the environment.

6. Define the 1st and 2nd law of thermodynamics.

7. Match the following (choice can be used more than once):

 \_\_\_\_. Location of beneficial ozone a. troposphere

 \_\_\_\_. Location of dangerous ozone b. stratosphere

 \_\_\_\_. Global warming occurs here c. mesosphere

 \_\_\_\_. Layer with the most air mass (like oxygen) d. thermosphere

 \_\_\_\_. The outermost layer

8. Match the following (choice can be used more than once):

 \_\_\_\_. Naturally occurs from the decay of uranium a. asbestos

 \_\_\_\_. Can be found in old paint and pipes- affects brain b. radon

 \_\_\_\_. Now banned, but fibers from this type of insulation causes lung cancer c. lead

 \_\_\_\_. Emitted from some furniture and building materials d. carbon monoxide

 \_\_\_\_. This gas can kill you by affecting your blood’s ability to carry O2 e. formaldehyde

9. Match the following (choice can be used more than once):

 \_\_\_\_. Most abundant greenhouse gas; comes from burning fossil fuels a. CO2

 \_\_\_\_. A greenhouse gas if in the troposphere, also causes respiratory issues b. CH4

 \_\_\_\_. Most potent greenhouse gas that can come from livestock c. O3

 \_\_\_\_. Cars are the biggest source of this greenhouse gas d. NO2

 \_\_\_\_. Burning coal is the biggest source of this greenhouse gas e. SO2

10. The two main factors that determine the quality of life in a country are

11. What was the significance of Rachel Carson’s book Silent Spring?

12. Describe 3 effects of a warmer climate.

13. Give an example of point source and nonpoint source pollution.

14. What is the equation used to calculate NPP?

15. What happens if land subsidence occurs?

16. Draw arrows representing the following tectonic plate movements:

Divergent Convergent Subduction Transform

17. Draw or describe the process of making electricity from burning coal.

18. How does an oil refinery work?

19. Circle the correct answer. Nuclear reactors use the process of nuclear (fission/fusion) by using (uranium-235/hydrocarbons) as fuel.

20. Explain how tidal power creates electricity.

21. Explain the difference between passive and active solar energy.

22. Draw or describe the difference between primary and secondary pollutants. Give an example of each.

23. Briefly describe each stage of the wastewater treatment process. (Primary, Secondary, and Tertiary)

24. Describe the relationship between BOD and DO.

25. What is thermal pollution? Why does it happen and what effect does it have?