

GEOG*1220 Human Impact on the Environment
Winter 2005

MIDTERM EXAMINATION (DAY CLASS)

Date: February 16, 2005 Name: _____

Instructor: L. Bennett I.D. _____

PART A: Multiple choice (10 marks)

Circle the letter beside the **BEST** answer.

1. High energy radiation (e.g. gamma rays, etc.) from the sun causes temperatures to rise within the:
 - a troposphere
 - b thermosphere
 - c atmospheric temperatures actually decrease with elevation throughout the atmosphere
 - d stratosphere
 - e mesosphere

2. What percentage of water on the surface of the Earth is fresh?
 - a 2%
 - b 20%
 - c 10%
 - d 75%

3. Vincent Schaeffer is famous for:
 - a creation of the pen that will write in a vacuum (i.e. space)
 - b creation of rain in a chamber
 - c creation of frightening movies about human impact on the environment
 - d both a and b

4. The plants we use as major food sources are characterised by:
 - a high yield
 - b high food value
 - c low environmental cost
 - d good storage ability
 - e all of the above
 - f three of the above

5. The primary trigger of circulation of the atmosphere is:
- a. wind
 - b. temperature
 - c. pressure differences
 - d. solar radiation
 - e. all of the above
6. Attributes of the Population component of the Human-Environment Interaction model include:
- a. size
 - b. age
 - c. distribution
 - d. all of the above
 - e. just a and c
7. How much time have Humans have spent on Earth as members of Early and Modern Agricultural societies?
- a. 1%
 - b. 10%
 - c. 90%
 - d. 99%
 - e. none of the above
8. One of the earliest materials of which humans composed tools was:
- a. glass
 - b. tanzinite
 - c. iron
 - d. obsidian
 - e. tin
9. The most significant factor leading to the creation of Neolithic villages and towns was:
- a. the evolution of crafts people
 - b. the evolution of food
 - c. the evolution of metalsmiths
 - d. the limited modes of transport
 - e. none of the above
10. Which expression does not characterise the “lithic” societies?
- a. small, rapidly growing populations
 - b. low birth rates
 - c. short lived
 - d. nomadic
 - e. none of the above
11. Which of the following does not reflect the modern industrial society?
- a. increased production and consumption of goods
 - b. increased dependence on non-renewable resources
 - c. shift in use from natural materials to synthetics
 - d. decrease in the amount of energy used per unit output
 - e. none of the above

PART B: Fill in the blanks (6 marks)

1. _____ The perspective which suggests that the “rights” of non-human resources supersede human wants or needs.
2. _____ A method of farming in which trees are planted with crops such as oats and potatoes in tree farms or plantations
3. _____ The size of the population that can live in a long-term, sustained balance with the environment at a reasonable quality of life
4. _____ The cost (or benefit) of producing and using an economic good or service which is not included in the market price of the good or service
5. _____ Rotational grazing of domesticated herbivores; characteristic of semi-arid landscapes
6. _____ The surface layer in a permafrost environment, which is characterised by freezing and thawing on an annual basis.
7. _____ A large biogeographical unit characterised by a particular combination of vegetation and animals whose distribution is associated with a general climatic type

PART C: Answer the following questions in the SPACE PROVIDED (24 marks)

1. The hydrologic cycle consists of precipitation, runoff, evaporation and _____
which may be defined as _____

2. List three ways in which air may be naturally saturated:
 - i. _____
 - ii. _____
 - iii. _____

3. List one way in which humans may increase the impact of convective precipitation

4. List one natural process whereby oxygen may be added to the atmosphere

5. List one natural process whereby nitrogen may be added to the atmosphere

6. Identify two challenges of modern agriculture
 - i. _____
 - ii. _____

7. Identify the technique commonly used in order to produce superior crops or livestock varieties:

8. Provide an example of how religion may affect any one of the components of the Human-Environment Interaction model

9. An example of a common property resource: _____
10. Provide a clear example of how a resource may be a hazard:

11. Copper is an example of what class of resource? _____
12. What is the Input Rule (for non-renewables) that is designed to assess the sustainability of human activities?

13. What was the first act that clearly distinguished our ancestors from all other species on Earth? _____
14. List 2 reasons that copper tools did become long-term tools of choice:
i. _____ ii. _____
15. List two general environmental impacts associated with the early stages of the industrial revolution
i. _____
ii. _____
16. Examples of two **specific** contaminants from **two classes** of contaminants measured in Arctic environments but derived from elsewhere:
i. _____ ii. _____
17. Modern Agriculture has affected soils by increasing erosion, enhancing desertification and

PART D: Compare and contrast three (3) of the following terms. Answer the questions in the SPACE PROVIDED (6 marks)

1. Substitution and simplification

2. Biomagnification and bioaccumulation

3. Developing and frontier environments

4. People overpopulation and consumption overpopulation
