

April 18, 2005

Americans and Their Forests

Practice Exam 1

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|---------|------------------------|---------------------------|
| Credit: | Short answer questions | 25 @ 3 points = 75 points |
| | Essay | 25 points 25 |
| | Total | 100 |
| | Extra credit | 5 |

I. Short answer (3 points apiece)

1. There are no forests in the middle of North America (the Great Plains) because the region is _____.

2. List two tree species (or genera) characteristic of the Eastern Deciduous forest.

- a. _____
- b. _____

3. In what forest type were the following locations 18,000 years ago?

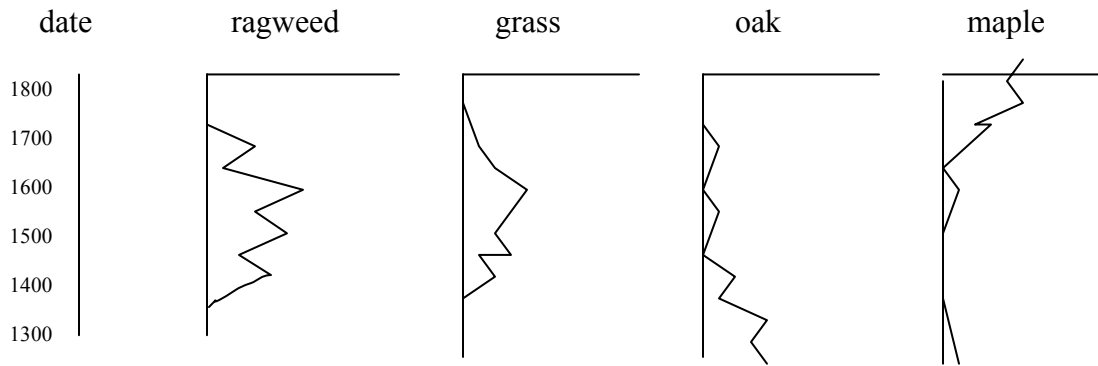
- a. Columbus, Ohio _____
- c. New Orleans _____
- d. Montreal _____

4. Ice age species of North America were different from those of today because (true or false)

- Many went extinct, possibly due to hunting _____
- Many species have evolved since the last ice age _____
- Plant species of the ice age were generally the same as today _____

5. The **ice free corridor** is important because it may have allowed _____ to move from _____ to _____.

6. What is suggested by this pollen record?



7. At the glacial maximum (18,000 years ago), plant species in modern Ohio were found in a small area located _____.

8. In theory, J.J. Rousseau's **noble savage** impacted the forest

___ severely ___ a lot ___ a moderate amount ___ hardly at all

9. Which activities did Aboriginal Americans practice (check as appropriate)?

- burning undergrowth
- grazing domestic animals
- plowing fields
- garden in shifting plots
- constructing walled villages
- collecting firewood
- baseball
- skate boarding

10. Most 19th Century commercial timber cutting was done in the winter. Why?

11. The most important goal of the Virginians in colonizing Virginia was to _____.

12. How would you describe the natural landscape of Sweden in 1638 (at the time of the establishment of New Sweden)?

- a. _____
- b. _____

13. Life in the American colonies was very hard, but it had some great advantages over life in Europe. List two such advantages discussed in this course:

- a. _____
- b. _____

14. Suggest 18th century uses of wood in addition to firewood and export.

- a. _____
- b. _____
- c. _____

15. The superior strength/weight ratio of wood (making it a good building material) comes from

_____.

16. In photosynthesis, CO₂ (from the air) plus H₂O (water) are assembled with energy from light to make _____ which can be used to make _____.

17. If he had a little capital and a little business sense, a 17th Century New Englander could become wealthy by shipping _____ to _____.

18. The 24 inch lower limit on harvestable white pines (established by the Charter of 1691) did not work in the long run because (assuming everyone obeyed the law) _____.

19. By 1780 residents of Philadelphia warmed their homes by burning coal from Europe. With ca. a third of the North American continent full of forest which could be cut for firewood, why bring coal from Europe?

20. Between 1700-1800 soil quality declined on the East Coast due to

- a. _____
- b. _____

21. Suggest three natural circumstances made the Ohio Valley attractive to settlers.

- a. _____
- b. _____
- c. _____

22. An acre of land could be cleared by a healthy man with an ax in ca.

| | |
|---------------|----------------|
| _____ an hour | _____ a month |
| _____ a day | _____ a summer |
| _____ a week | _____ a year |

23. Suggest two possible sources of cash available to the homesteader.

a. _____
b. _____

24. Which most closely approximates the US population between 1800 and 1850 (numbers are in millions of people)?

| |
|-----------------|
| _____ 6.5 → 7.8 |
| _____ 5.5 → 560 |
| _____ 120 → 125 |
| _____ 20 → 23 |
| _____ 6.5 → 28 |

25. Logs are heavy and bulky. What was the most cost-effective way to get logs to market in the early 19th Century?

II. Essay (16 points)

Write a short essay explaining/exploring one of these two topics. Please be specific!

1. When Europeans arrived, North America was not so much a “Virgin land” (as the English liked to call it) but a “widowed land”.
2. The European model of agriculture implied large, cultivated fields – big trees were not part of it. How could a homesteader equipped with only an ax and a chain cope with a forest of really big trees?

Extra credit (1/2 point apiece)

Identify the following in the context of forest history:

Steppe _____

Driving _____

Hopewell _____

Broad arrow _____

Belomont _____

William Matlack _____

Log jam _____

Hanging Rock _____

Leanto _____

Quebec _____

Answers

1. Dry – forests generally occur in moderate – moist climates.
2. Oak, maple, yellow poplar, hickory, sweet gum, beech
3. a. Under the ice
b. Deciduous forest
c. Under the ice
4. T
F
T
5. Humans, Asia, North America
6. Something (not Europeans) cleared forest near this point ca. 1400, and it remained clear until ca. 1700. Maple trees colonized after 1700, but oaks never came back.
7. A small zone between New Orleans and the Florida pan handle
8. Hardly at all
9. Aboriginal americans
 - burned undergrowth
 - gardened in shifting plots
 - constructed walled villages
 - collected firewood
10. Because the ground was frozen; transport was easier
11. Get rich quick by finding gold.
12. a. Conifer forest from mid-Sweden northward and eastward into Finland
b. Cleared pastoral landscape from mid-Sweden south
13. a. Lots of firewood easily available.
b. Social equality (in New England and the Middle Atlantic) – one could improve his/her position.
14. a. Iron industry (charcoal)
b. Ship building
c. Lime production from limestone
d. Fence construction

15. Cellulose in the plant cell walls.
16. Sugar → cellulose
17. lumber, West Indies
18. There were no small trees left to grow into the large size classes which could be used for masts.
19. The weight of wood and the poor quality of roads made American firewood very expensive.
20. a. No fertilizer
b. Erosion
c. Constant cultivation
21. a. Good soils (alfisols)
b. Familiar climate
c. Easy access by the Ohio and other rivers.
22. A month +/-
23. Potash, medicinal herbs, furs, firewood
24. 6.5 M → 28 M
25. Dump them in a river.

Essays

1. Early explorers brought a variety of diseases (malaria, smallpox, measles, etc.) with them from Europe. Europeans were resistant by virtue of generations of exposure, and were unaware they carried the diseases. Aboriginal Americans were vulnerable because they had no historical experience of these diseases. As a consequence, millions of aboriginal Americans died. The population of North America was probably 10-20 times greater than scholars have calculated. The result was an empty landscape with many cleared areas and meadows allowing easy establishment of towns.
2. The homesteader had to defer the European model of agriculture for a few years and live with the stumps. He could girdle the trees, killing them but leaving them standing. Small stumps would be pulled up with a chain and oxen. Dead wood and brush would then be burned, and crops planted in small patches among the stumps. For a few years, the ash would provide fertilizer for the crops. The homesteader had to be careful though – large dead trees fell over unpredictably.

Extra credit

Steppe – Dry, short grassland found in places with too little water for forest.

Driving – Moving logs down a river, the only cheap way to move wood. Kept the forest clearance near rivers.

Hopewell – The Indian culture of the Ohio River Valley. Cleared small plots near villages.

Broad arrow – The mark the Royal forest surveyors put on trees to identify them as Crown property. This was widely flaunted by opportunistic New Englanders.

Belmont – Richard Coote, Earl of Belmont. The King's agent assessing the effectiveness of forest protection in New England.

William Matlack – A poor settler in the Middle Atlantic states who was eventually successful in putting together a large farm.

Log jam – The logs get jammed up, and do not go down the river. One of the weaknesses of rivers for log transport.

Hanging Rock – An iron-making region in southern Ohio. Required clearance of large areas of forest.

Leanto – A primitive shelter used by settlers before they could build themselves a cabin. The first stage of forest clearance.

Quebec – Center of French America. An imperial competitor who kept English colonists out of the center of the continent (for a while).