

Fire Ecology
Exam 3
April 22, 1991

- (9) 1. How has prescribed burning in the southwest every 7 years in ponderosa pine affected (a) number of wildfires, (b) reduction in area burned, and (c) cost of control fire?
- (6) 2. How would you propose to use fire as a management tool in climax vs. seral stands of ponderosa pine?

(6) 3. What are the factors that can affect the density of a new stand of ponderosa pine?

(5) 4. How soon (years) can you use fire in a young stand of ponderosa pine?

(6) 5. Historically, (a) what kind of cover (%) would we expect to see for ponderosa pine and (b) what kind of herbage production would we have?

- (6) 6. Where in the United States would you expect to find Douglas-fir as a prevalent seral species and where would you expect to find it as a climax species?
- (5) 7. What is the significance of the cedar-hemlock community and where does it grow? What timber species is grown in this community?
- (5) 8. Sitka spruce and coastal redwood are both associated with the fog belt of the Pacific coast. However, they do not grow in the same area. Where do they grow and why do they not grow together?

(5) 9. Why does Sitka spruce dominate the area where it grows when cedar and hemlock will also grow in this area?

(10) 10. Describe how Douglas-fir, western redcedar, and western hemlock will dominate a community over time on the Pacific Coast following a disturbance. Which species requires the most moisture and which the least?

(6) 11. What is the long-term value of red alder and snowbrush following fires on the pacific coast?

(9) 12. What are the dominate tree species associated with the Douglas-fir zone in the Rocky Mountains?

(8) 13. How frequently do fires occur in lodgepole pine of the Yellowstone Park region? At what age and why are lodgepole pine communities susceptible to fire?

(6) 14. Fire controls dwarf mistletoe. True or False? Explain.

(6) 15. How would you harvest trees in red spruce on the Atlantic coast -- Clearcut or selective harvest? Why?

(3) 16. Why are Englemann spruce and subalpine fir susceptible to crown fires?