

FFA FORESTRY CDE NM BMP STUDY QUESTIONS Answers

1. What is an arroyo? **a watercourse that conducts an intermittent or ephemeral flow, providing primary drainage for 40 acres or more**
2. Harvesting methods should be selected to meet _____ and should reflect _____.
environmental constraints, ultimate objectives of the landowner
3. Surface streams that flow year-round are called _____ streams. **Perennial**
4. Slash treatment methods include: **lopping and scattering, chipping, piling and burning, prescribed fire**
5. The seed tree cut method is designed to establish an _____ stand. **even aged**
6. What four benefits does a healthy streamside management area provide to the watershed?
**maintains shade
conserves aquatic and terrestrial habitats
protects stream channels and banks
promotes flood plain stability**
7. A stream that disappears underground and then reappears downstream is called a(n) _____ stream. **interrupted**
8. Name the five main watersheds in New Mexico. **Pecos, San Juan, Gila, Rio Grande, Canadian**
9. What are the three different types of cuttings involved in a shelterwood method?
**preparatory cutting
seed cutting
removal cutting**
10. Explain two impacts road construction can have on a watershed.
**Roads can act as man-made stream channels carrying sediment when improperly planned, located or constructed.
Excessive disturbance of vegetation and topsoil limits filtering capacity and affects surface water infiltration.**
11. Noxious weeds may cause: **displaced native vegetation, damaged watersheds, increased soil erosion, reduced opportunities for land use, reduced recreational activities**
12. Explain two situations where patch cuts would be acceptable in ponderosa pine.
**conversion to pasture is desired
prescribed by a professional forester to control problems such as mistletoe outbreaks, etc**

13. In mixed conifer stands the selection system helps prevent the residual trees from _____.
blow down
14. Waterlogged soils that support riparian plant growth are called _____. **hydric soils**
15. Explain what the streamside management area is. **It is the area that is within a 50' minimum slope distance from a stream, lake, wetland area, or other water body.**
16. What is the function of a streamside management area? **To protect water quality along streams, lakes, and other water bodies by maintaining a natural sediment filter.**
17. Selection cut method is designed to create or maintain _____ stands in which there are at least _____ distinct age classes. **uneven-aged, 3**
18. Streams that flow only in response to precipitation are called _____ streams. **ephemeral**
19. What problems can too much sediment in a stream cause? **suffocate fish, cement the streambed, kill aquatic insects and algae, fill in resting pools, interfere with recreation, reduce light penetration and increase thermal energy absorption**
20. What benefit do trees and overhanging shrubs provide the streamside management area? **maintain water temperatures**
21. Should snags and unmerchantable trees be left or cut in a streamside management area? Why or why not? **they should be left for birds and animals**
22. A parcel of land has the following trees on it. Determine the square-feet of BA per-acre for the area. 10 trees with DBH of 8", 2 trees with DBH of 12", and 3 trees with DBH of 14" **8.38**
23. Give two economic reasons why thinning could be used as a forest management tool.
an increase in yield from greater tree growth is realized in a future harvest removed from the stand
undesirable trees due to genetics or species can be removed
can return ecosystem function to overcrowded forests
reduce the risk of uncharacteristic fire
24. What is the maximum stump height of cut trees during a thinning or a harvest. **12"**
25. What are the four types of harvesting methods commonly used in New Mexico? **patch cut, seed tree, selection, shelterwood**
26. The harvesting method that removes all of the trees in a given area and the area is artificially or naturally reforested is called _____. **patch cut**
27. Timber harvest design must take into account long-term effects of the harvest on _____.
fish, wildlife, water and other resources
28. What does BMP stand for? **Best Management Practice**
29. What are some of the desired results of proper harvesting practices?
protect site productivity and resources
provide for prompt regeneration with desirable species
improve and maintain forest health

30. What is optimum stocking? **Each acre of land can only support a certain amount of tree volume in a healthy sustainable manner and is dependent on the site productivity and resources**
31. In the shelterwood method reproduction is established _____ the shelter portion of the old stand. **under**
32. What is a "leave tree"? **This is a tree that will not be cut during a thinning or harvest operation**
33. A _____ is any plant that interferes with the management objectives for a particular site. **weed**
34. _____ and _____ trees should be removed to make room for the more vigorous trees. **defective and suppressed**
35. When a person plants trees they are making a _____ investment. **long term**
36. Leave trees should be free from _____ and _____. **insect and disease**
37. Why is it important to move slash away from the base of a leave tree? **it is a breeding ground for harmful insects and a potential fuel for fire**
38. What is the maximum depth for chips? **2 inches**
39. _____ is the water ditch system used in agricultural irrigation to move water from streams and rivers to fields. **acequia**
40. The selection of the harvest method to be used depends on the _____. **timber type and terrain involved**
41. What are the three characteristics of a wetland?
at least periodically the land supports predominantly hydrophytes
the substrate is predominantly undrained hydric soil
the substrate is non-soil and is saturated with water or covered by shallow water at some time during the growing season of each year
42. Why should patch cuts be irregularly shaped? **Patch cuts can be unsightly and irregularly shaped cuts can help the area blend with the natural variation of the forest stand.**
43. For optimal survival when should containerized seedlings be planted? **They can be planted in the spring during the months of March through May and in the fall between mid-September and mid-October.**
44. Disadvantages of slash include: **potential for forest fire fuel, impediment for access, hinder growth of new seedlings by covering them with shade, build up of bark beetle populations, unsightly, can be restrictive to livestock and wildlife**
45. Seed trees should be _____. **free from disease, have high vigor, indicate past productivity**

46. What are the four steps to follow when developing a weed management program?
prevention
early detection and rapid response
control and management
rehabilitation and restoration
47. Aspen need plenty of light to regenerate and the seedlings sprout from suckers so _____ works very well for this species. **patch cutting**
48. What is the definition of a wash? **a dry streambed in the desert that flows only after significant rainfall.**
49. Why should seed trees be healthy specimen? **healthy seed trees improve the chances that the reproduction will be good quality**
50. What are some of the disadvantages of seed tree cuts?
seed trees may blow down
the seedlings in the understory can be damaged or killed while trying to remove the seed trees
some of the best lumber producing trees must be left for seed source
51. How is winter logging beneficial? **Winter logging on frozen ground is one way to avoid soil, watershed, riparian and wetland damage.**
52. _____ are plants capable of growing in water or waterlogged soils/substrates. **hydrophytes**
53. In spruce-fir stands individual selection “is” or “is not” recommended? **is not recommended**
54. Why does the selection cut system reduce the risk of losing the entire stand at once? **Selection cuts create several age classes and most insects and disease do not attack all age classes of a given species at the same time so there is always an adequate seed source to regenerate the stand.**
55. What is one disadvantage to selection cut systems? **There is greater expense and trouble in harvesting because the same area must be visited several times.**
56. The shelterwood cut method involves the _____ removal of the entire stand in a series of _____ cuttings which may extend over the entire rotation. **gradual, partial**
57. What are the two types of seedling stock that may be available for planting? **bareroot seedlings, containerized seedlings**
58. Mitigation measures such as _____ and _____ reduce erosion on skid trails. **water bars and grass seeding**
59. Avoid tractor or wheeled skidding on _____, _____ or _____ soils and on slopes that exceed _____%. **unstable, wet, easily compacted, 40%**

60. A light ground cover of _____ or _____ will retard erosion. **slash or mulch**
61. Mistreatment of seedlings can mean high seedling _____. **mortality**
62. What are the five types of mechanical harvesting?
cut to length harvesting
whole tree harvesting
cable yarding harvesting
helicopter harvesting
manual harvesting
63. What is one of the disadvantages of winter logging? **Operations may have to be suspended if conditions change rapidly and when erosion hazard becomes high.**
64. What is slash? **Slash is the accumulation of branches, treetops and other woody debris usually associated with a timber harvest or thinning project.**
65. Slash can be either beneficial or detrimental to the productivity of the site depending on what? **This depends on the how much slash has accumulated and what kind of timber species grows on the site.**
66. Besides the relative position of the tree, the condition of the crown, the straightness of the trunk, whether the tree is diseased or has damage what else should be considered when determining what trees should be left after a thinning project. **insect damage, biotic damage, spacing**
67. Advantages of slash include: **can conserve moisture in soil, increases organic matter in soil once it decomposes, can be small animal habitat**
68. Streams that only flow part of a year, typically in response to snowmelt are called_____ streams. **intermittent**
69. The important factors considered concerning a prescribed fire include: **fuel moisture, vegetative condition, fuel physical characteristics, fuel chemistry, weather, air quality controls**
70. The three ways to reforest an area are:
natural seeding method
artificial seeding method
seedling planting
71. The first consideration for a successful reforestation attempt is _____. **site preparation**
72. What elements determine water quality? **sediment level, conductivity, dissolved oxygen, pH, turbidity, total suspended solids and temperature**
73. Seedlings planted on a site should be grown from a _____ seed source so they will be genetically compatible with the area where they will be planted. **local**
74. The area where two different plant groups come together is called an _____. **edge**
75. Local seed sources will insure maximum ____ and _____. **survival and growth**

76. Advanced planning for planting projects include: **determining objectives, desired species, planting methods and spacing**
77. Seedlings must be kept _____ and _____ when stored prior to planting. **cool and moist**
78. Tearing small root hairs can subject seedlings to _____ infections. **fungal**
79. Bareroot seedlings do best when planted in the _____ from _____ to _____. **spring, April to May**
80. When planting, what should be done if a planting site is poor and you expect numerous trees to die? **Plant the seedlings a little closer together to insure that the number that survives per acre will be adequate to reforest the area.**
81. What are some of the causes of seedling mortality? **poor handling and planting, frost heaving, insects and disease, moisture deficiency, birds, rodents, deer and other wildlife, domestic animals, heat, sun and wind**
82. What is the definition of a noxious weed? **A plant species that is not indigenous to New Mexico and that has been targeted pursuant to the Noxious Weed Management Act for management or control because of its negative impact on the economy or the environment.**
83. Should skid trails be constructed cross slope or up/down slope? **cross slope**