2023 Comunity Forestry Test Answer Key

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128 points total

Section 1: (8pt)

1. Prunus Americana (1)
2. Can be eaten fresh or used for preserves, jellies, jams, and wines (1)
3. Flowers in spring (0.5), fruits in summer (0.5) (1 total)
4. Honey Mesquite (1)
5. Any of the following: Used for medicinal purposes, food, building materials, tool materials, and fuel (1)
6. False (1)
7. Quercus imbricaria (1)
8. Alternate (1)

Section 2: (15pt)

9. Liriodendron tulipifera (1)
10. Aggregate of samaras (1), transported by wind (1) (2 total)
11. Beetles pollinate magnolias (1) (among other things) which points to the magnoliid clade's early history around 125 mya, and thus unique pollination strategy.
12. They are the 2 tallest tree species on the Eastern side of the Mississippi River (1)
13. 540 lbf / 2400 N (1), It takes 540 pounds of force to get an 11.28 mm steel ball halfway through a piece of wood, meaning this wood is rather soft (1). However, as this is an angiosperm, Liriodendron tulipifera is still classified as a hardwood. (1) (3 total)
14. Pawpaw (1)
15. C (1)
16. False (1)
17. Generally shade tolerant (1) as it lives within the understory of mature forests. This results in a shorter, more slender tree (1) (2 total)
18. Cold stratification means the seed must have cold and usually moist conditions for around at least a month to germinate (1). This allows the seed to stay dormant over the often very cold winters it faces, and then germinate at a safe time (1) (2 total)

Section 3: (13pt)

19. Fraxinus latifolia (1)
20. The bark is dark gray-brown and it will eventually develop a woven pattern of deep fissures and ridges (1)
21. Latifolia means "wide leaves." (1), because Oregon Ash has wider leaflets than most Ashes (1) (2 total)
22. A moderately shallow, but extensive and wide-spreading root system (1)
23. D (1)
24. Samara (1)
25. Acidic to Neutral, or <6 to 6-8 (1)
26. Splits easily (1) and has a high heat value (1) (2 total)
27. Seeds are dispersed by wind (1) in September to October (1) (2 total)
28. A stand in which 80% of the trees in the main canopy are of a single species (1)

Section 4 (Berry Me Alive): (12pt)

29. Moraceae or Mulberry Family (1)
30. A (1)
31. B (1)
32. See below
    a. Ciboria carunculoides (1)
    b. Late spring and early summer (1)
    c. On developing carpels (1) and it looks like popcorn kernels (1) (2 total)
33. Rapid plant movement encompasses movement in plant structures occurring over a very short period, usually under one second (1). White Mulberry pollen is released from its catkins. The stamens act as catapults, releasing stored elastic energy (1) (2 total)
34. The berries are not commercially sold because they have very short "shelf lives" and pack/ship very poorly. (1)
35. Morus alba var. Alba OR Morus alba var. Multicaulis (1)
36. The presence of laticifers and milky sap in all parenchymatous tissues (1)

Section 5: (17pt)

37. Celtis occidentalis (1)
38. C (1)
39. Figure P: American Elm (1), Figure Q: Basswood (1), Figure S: Black Cherry (1) (3 total)
40. The hackberry's bark is corky and warty unlike elms (1)
41. Aragonite ($CaCO_3$) (1), found in endocarp (1) (2 total)
42. Fleshy oblong drupe (0.5), orange-red to dark purple (0.5), 0.25-0.375 in (0.6-1 cm) in diameter (0.5). It is edible (0.5) (2 total)
43. No (1), midwest/northeast regions of the US (or anywhere close) (1) (2 total)
44. Accept any of the two: American robin, cedar waxwing (or any other waxwing), quail, pheasant, woodpecker, cardinal, mockingbird (1 each) (2 total)
45. Larval hosts are plants necessary for the growth and development of a caterpillar or other larva (1). This plant is a larval host for the tawny emperor and the hackberry emperor (1) (2 total)
46. Its range is shifting northward (1)

Section 6: (10pt)

47. Blue Oak (1) note the kinda-waved leaves, the oak-y buds, the blue-ish color on one side of the leaves
48. The earliest rings will not be present higher up on the tree because those higher parts did not exist when the earliest rings were forming. (1)
49. They can only date the trees to when the tree sprouted (either from resprouting from roots or germinating from acorns) instead of just when it germinated from acorns (1)
50. Overestimate (1), some fires might go undetected because of being less intense and not damaging the cambium, i.e. not making a fire scar in the wood that the researchers could see (1) (2 total) Note that this is very much minimized because these folks sampled a LOT of trunks.
51. Trees being top-killed (1) and new sprouts being established (1). The reason suspected in the study is lots of fires happening in the 1850s (because of…um… human stuff) but they suspect that from lots of fire scars and not much human activity in the area, none of which is said in this

question, so accept other reasonable answers that relate to it being top-killed, like logging. (2 total)

52. See below, answers will vary
    a. Results in more dense woodlands, so more oaks competing with the new seedlings, which makes it hard for them to get established (1)
    b. Any of the following: grazing prevents seedlings from growing much, they eat acorns, and they compact soil which makes it harder for new plants to get enough water (1)
53. Older trees (1)

Section 7 (Fruits and Facts): (10pt)

54. Red Maple (1)
55. Frosted Hawthorn (1)
56. American Mountain Ash (1)
57. Utah Juniper (1)
58. American Mountain Ash (1)
59. American Persimmon (1)
60. American Mountain Ash (1)
61. Frosted Hawthorn (1)
62. American Mountain Ash (1)
63. Utah Juniper (1)

Section 8 (Never Gonna Rick You Up): (13pt)

64. C (2)
65. The Mexican state of Chiapas (1)
66. Pomes or berries (1)
67. Too acidic (1), cooking or boiling the berries (1), any of the following: to make a jelly, jam, pie filling, to accompany meat, etc. (1) (3 total)
68. Moist habitats bordering swamps or rocky hillsides (1), found in openings or wooded areas, roadsides, & semi-open stands (1) (2 total). Grows stunted on dry soils. This was taken from the USDA: https://www.fs.usda.gov/database/feis/plants/tree/sorame/all.html#:~:text=SITE%20CHARACTERISTICS%20%3A%20American%20mountain%2Dash,relatively%20dry%20soils%20%5B21%5D.
69. Native groups made an herbal tea known as black drink (1) by brewing its leaves and/or stems (1) (2 total)
70. Ilex opaca (1), American holly (1) (2 total)

Section 9: (14pt)

71. Black Locust (1), Robinia pseudoacacia (1) (2 total)
72. It can reproduce asexually (1), and when damaged suckers grow from the stem which grow from the roots (1) (2 total)
73. Herbicide (1) such as tricolpyr or glyphosate
74. Any two: Illinois, Wisconsin, Connecticut, Michigan, Massachusetts (2)
75. They can compete with and force out native species and reduce biodiversity (1), they can be good for the environment if they can fit into the environment and form/fill in a niche (1) (2 total)
76. Leaves, bark, seed pods (2, no partial credit) also accept flowers.
77. Sweet green peas (0.5)
78. Nausea, weakness, vomiting (1)
79. Yes (0.5), the horse could die
80. It is a major honey plant (1)

Section 10: (16pt)

Across:

3. Angiosperms (1)
4. Adaxial (1)
7. Deciduous (1)
11. Meristem (1)
12. Xylem (1)
13. Radicle (1)
15. Fascicle (1)

Down:

1. Taproot (1)
2. Monoecious (1)
5. Angiosperms (1)
6. Mesophyll (1)
8. Stomata (1)
9. Acorn (1)
10. Spermatophytes (1)
14. Dicot (1)
15. Fruit (1)