Study Guide 3 Plant Structures

1. Define plant morphology, anatomy and physiology.
2. Distinguish the basic difference between monocots and dicots.
3. What is pectin? Where is it found?
4. What are the blue and red pigments of plants called?
5. What is turgor pressure?
6. Plants are made up of many individual basic units called?
7. The yellow and orange pigments found in carrots and fall foliage is (are) called:
8. The green pigment in plants which is needed for photosynthesis to occur is known as ___and can be found in the _____structure of the plant cell.
9. What vegetables are produced through etiolation?
10. What are ergastics and why are they important to peppers?
11. What type of tissue plays a mechanical role in the plant support system? It can occur in the stems below the epidermis; in the leaf petiole; leaf margin and midrib and in fruit rinds that are soft and edible.
12. What type of tissue contains cells that are actively dividing? Where is this tissue commonly found?
13. What is the function of the cuticle layer which contains cutin?
14. Give 3 examples and their purpose of sectetory tissues found outside the plant.
15. Give 3 examples and their purpose of sectetory tissue found inside the plant.
16. Dieffenbachia or Dumb Canes often will lose water through specialized structures in the leaves which cause water droplets to form on the leaf tips. This process is called:
17. Translocation of water and nutrients occurs primarily in the:
18. The portion of stem just outside the cambium which conducts carbohydrates, minerals, and water primarily down the stem is called:
19. Undifferentiated cells can be found in:
20. The discrete reigns or groups of cells that posses continued cell division for the life of the plant or that organ:
21. Where does primary growth (growth in the length that gives rise to primary tissues or herbaceous tissues) occur in plants? Where does secondary growth (growth in width or diameter that gives rise to secondary or woody/corky tissue) occur in plants?
22. What is the function of plant stem?
23. Give an example of plant which contains modified stems such as: bulb, tuber; corm; rhizome; spur; stolon
24. What 3 environmental factors influence leaf abscission in the fall season? Which signals the plant to begin leaf abscission.
25. The first day of Autumn is:_____. Which means the sun passes directly over the _____.

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26. These buds develop where no buds previously existed. These are called:
27. Stems branch from _____ while roots branch _____.
28. What structure found on the stem primarily functions in gas exchange>
29. The types of buds found on a stem of plants are:
30. A scar marking the former point or attachment of a leaf or petiole to the stem is called:
31. What structure can be used to age stems and give the past history of some environmental influence on the plants?
32. Diagram the internal stem structure of a monocot an dicot
33. What is the function of leaves?
34. Define stomata and guard cells? Where are they more frequently found on leaf?
35. The _____ layer on a deciduous tree that can be found between the stem and the petiole of a leaf.
36. What 3 types of leaf-like structures serve as protection?
37. Leaves grown in shade generally have the appearance of:
38. Why are leaves or leaf blades exposed to full sun situations thicker?
39. What group of plants are adapted for growth in water? They have thin cuticle and spongy mesophyll which traps gases to allow them to float.
40. What groups of plants are adapted to arid climates and have modified leaves called _____ that serve to trap moisture and protection.
41. Leaf-like structure that are directly beneath the inflorences such as Dogwood or Poinsettia inflorences are called:
42. To determine if a leaf is simple or compound one must first determine:
43. Leaf margin is _____
44. Leaf apex is _____
45. Define petiole
46. Define cotyledon
47. What are some functions of plant roots?
48. The first root-like structure to emerge from a seed is called:
49. 95% of nutrient and water absorption occurs through the:
50. Which type of root system has one primary root that grows down from the stem with some small secondary roots forming from it?
51. Secondary woody growth orginates from the _____
52. What type of reaction wood is produced in conifers and is on the lower side of the branches?
53. Pores through bark for the purpose of gaseous exchange is known as:
54. Identify and define the four major parts of a flower.
55. What is the difference between pollination and fertilization of flowers?
56. A flower that is missing one or more of its parts is called a/an?
57. Plants that have both male and female flowers on the same plant are called:
58. An example of dioecious plant is:
59. Define a seed.
60. Define fruit.
61. Define parthenocarpy fruit and give an example.
62. A berry in which the exocarp is leathery and contains oils such as in oranges is classified as a:

63. Fruit when dry splits and opens to discharge their seeds is known as:

64. An example of a simple fleshy fruit in which the endocarp (inner layer) of the fruit is hard and stony and is usually attached to the seed is:
65. A strawberry is an example of _____ fruit.
66. An example of a dry indehiscent fruit would be.
67. Identify the major and minor taxa of plants.
68. Who is credited with establishing binomial system of classification?
69. Plants are classified in the same family because they have similar _____ and _____ habits
70. What is the different between a plant variety and plant cultivar?
71. The majority of the plants that are utilized in horticulture are found in the class of:
72. "x" between the genus and specific epithet mean that:
73. Identify the genus, specific epithet and variety in the botanical name of *Brassica oleranceae botrytis*
74. Define the vegetative phase and reproductive phase of plants.
75. Define annual, biennial and perennial. Give an example of each.
76. A plant with narrow leaves that retains a majority of its foliage throughout the year is known as a (an)?
77. Because of earth's movement, twining vines in the Northern Hemisphere have a tendency to circle _____ around a stem or support. (Hint: Hurricane circular patterns are the same)