

## **PLANTS FINAL EXAM review**

### **MONOCOTS- draw answers if you like**

1) Describe the flower petal arrangement

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2) Describe the veins on the leaves

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3) Describe vascular tissue in the stem

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4) Describe the seeds

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### **DICOTS- draw answers if you like**

5) Describe the flower petal arrangement

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6) Describe the veins on the leaves

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7) Describe vascular tissue in the stem

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8) Describe the seeds

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### **IMPORTANCE OF NITROGEN**

9) Why is NITROGEN so important to a plant?

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10) What organic molecule can a plant make with NITROGEN?

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11) How does a plant get its NITROGEN?

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12) Where is NITROGEN found?

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13) What would happen if a plant could not get nitrogen? (don't just say it would die)

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### **FILL IN THE BLANKS**

14) Name 3 plants that are nonvascular \_\_\_\_\_

15) The largest group of gymnosperms is the \_\_\_\_\_

16) Roots absorb \_\_\_\_\_ and \_\_\_\_\_.

17) Roots can anchor the \_\_\_\_\_ in place.

18) Roots can store surplus \_\_\_\_\_

19) Woody stems have \_\_\_\_\_ which are dark and light xylem cells

20) Herbaceous stems are \_\_\_\_\_.

21) The veins of a leaf contain \_\_\_\_\_ and \_\_\_\_\_ (vascular tissue)

22) In a flower, petals function to \_\_\_\_\_ pollinators

23) Flowering plants, such as apple trees and daisies, are classified as \_\_\_\_\_

24) Cycads, conifers, gnetophytes, and ginkgoes are \_\_\_\_\_

25) Plants that have specialized tissues for carrying minerals, water, or food are classified as \_\_\_\_\_ plants.

- 26) Chloroplasts are \_\_\_\_\_ that contain chlorophyll.
- 27) The purpose of the cuticle on a plant is to \_\_\_\_\_
- 28) The cell wall function is \_\_\_\_\_
- 29) Plants reproduce with sex cells called \_\_\_\_\_ and \_\_\_\_\_
- 30) Plants may also reproduce without sex cells. This is \_\_\_\_\_ reproduction
- 31) During a plant's life cycle, a sporophyte releases \_\_\_\_\_
- 32) Two groups into which all plants are divided are \_\_\_\_\_ and \_\_\_\_\_
- 33) Nonvascular plants move needed materials from one part of the plant to another by \_\_\_\_\_.
- 34) Vascular plants move needed materials from one part of the plant to another by \_\_\_\_\_ and \_\_\_\_\_.
- 35) Because mosses and liverworts lack a vascular system, they usually live in places that are always \_\_\_\_\_.
- 36) Each moss plant has slender, hairlike threads of cells called \_\_\_\_\_ that help hold the plant in place.
- 37) During the moss life cycle, sperm cells are carried to the egg by \_\_\_\_\_
- 38) Which group of plants produces spores in spore cases on the underside of its leaves?  
\_\_\_\_\_.
- 39) Which group of gymnosperms consists of evergreens with needle-shaped leaves?
- 40) Conifers reproduce by means of \_\_\_\_\_
- 41) After a conifer egg is fertilized, it develops into a seed within the \_\_\_\_\_ cone
- 42) All angiosperms produce what structure? \_\_\_\_\_
- 43) A \_\_\_\_\_ is a seed leaf found inside a seed.
- 44) The \_\_\_\_\_ stage of a fern is a tiny plant that produces eggs and sperm.  
(sporophyte or gametophyte)
- 45) Ferns have an underground stem called a \_\_\_\_\_.
- 46) \_\_\_\_\_ is the green pigment in plants that absorbs light energy from the sun.
- 47) \_\_\_\_\_ is the process by which plants use light energy from the sun to make food molecules.
- 48) Carbon dioxide enters a leaf through \_\_\_\_\_.
- 49) The transfer of pollen to stigma is called \_\_\_\_\_.
- 50) A \_\_\_\_\_ consists of one main root that grows downward, with many smaller branch roots coming out of it.
- 51) A \_\_\_\_\_ root system has several roots of the same size that spread out from the base of the stem.
- 52) Seedless vascular plants help to form \_\_\_\_\_

### STRUCTURE AND FUNCTION OF PLANT PARTS

53) Fill in the table with all the parts of a leaf and what their functions are: (12pts)

Structure	What is its function?
Cuticle	
Upper Epidermis	
Palisade tissue	
Spongy tissue	
Stomata	
Guard Cell	

54) Fill in the table with all the parts of a root and what their functions are: (10pts)

Cell type/ substance	What is its function?
Root cap	
xylem	
phloem	
Root hairs	

55) Fill in the table with all the parts of a flower and what their functions are (18pts)

Cell type/ substance	What is its function?
Pistil	
ovary	
stamen	
petal	
sepal	

56) Fill in the table with all the parts of a seed and what their functions are: (6pts)

Cell type/ substance	What is its function?
Seed coat	
cotyledon	
embryo	

57) Which of the following is NOT a true statement about leaves?

- a. Leaves are part of a plant's root system.
- b. Guard cells open and close pores in the leaf's epidermis.
- c. Their veins contain phloem that transports sugar.
- d. Photosynthesis occurs in cells in the palisade layer.

58) Which statement does NOT correctly describe plants?

- a. Plants make their own food.
- b. Plants have a cuticle.
- c. Plant cells do not have cell walls.
- d. Plants reproduce with spores and sex cells.

59) Which of the following statements does NOT correctly describe mosses and liverworts?

- a. Mosses and liverworts form a thin layer of soil in which new plants can grow when they die.
- b. Mosses and liverworts help reduce soil erosion.
- c. Mosses and liverworts are usually the first plants to inhabit a new, bare environment.
- d. Mosses and liverworts produce spores in spore cases on the underside of fronds.

60) How do mosses and club mosses differ?

- a. Mosses do not produce spores but club mosses do.
- b. Club mosses do not produce spores but mosses do.
- c. Mosses have vascular tissue but club mosses do not.
- d. Club mosses have vascular tissue but mosses do not.

## ESSAY:

61) What are two differences between a seed and a spore?

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62) Imagine that a seed and a spore are beginning to grow in a deep, dark crack in a rock. Which reproductive structure—the seed or the spore—is more likely to survive and develop into an adult plant after it begins to grow? Explain your answer.

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63) If plants did not possess a cuticle, where would they have to live? Why?

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64) How is water important to the reproduction of mosses and ferns?

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65) Which plant group is more important to people, angiosperms or gymnosperms? Why?

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66) Describe the ecological importance of mosses and liverworts.

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67) What's the difference between a rhizoid and a rhizome?

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68) How is a plant's size related to its method of transporting water and nutrients?

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69) In what ways are fruits adaptations that help angiosperms reproduce?

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70) What is the difference between tissue and cells?

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71) How could you tell a stem came from a woody plant?

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## CHAPTER 5

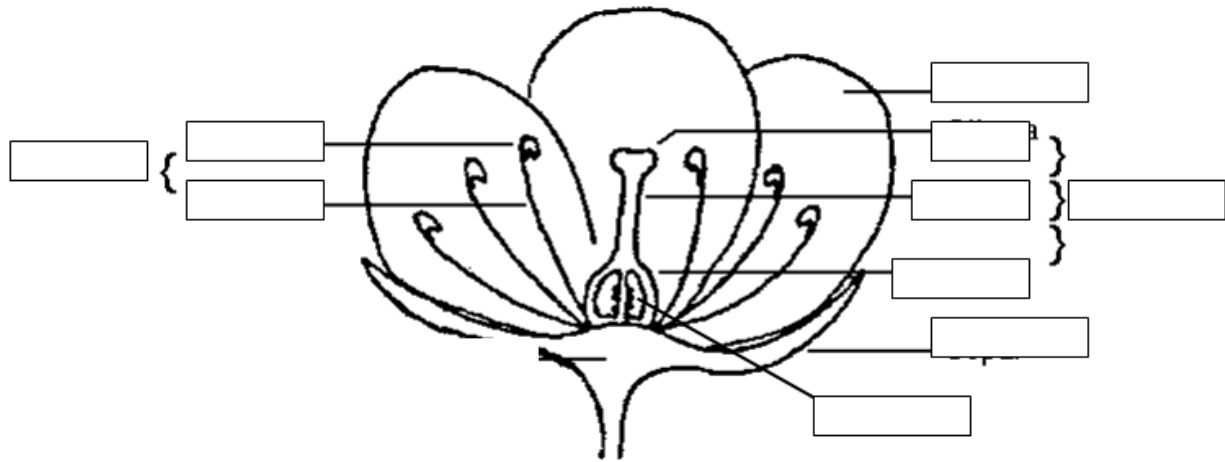
72) Describe how a plant fertilizes itself

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73) Describe how a plant gets fertilized by a different plant

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74) Label the parts of a flower:



75) What is the formula for photosynthesis? \_\_\_\_\_

76) Through what structure do plants do transpiration? \_\_\_\_\_

77) What is the definition of a fruit? \_\_\_\_\_

78) What is it called when a seed sprouts? \_\_\_\_\_

79) If a seed is not germinating, but just “sleeping” waiting to sprout, this is called? \_\_\_\_\_

80) Name 3 structures that plants use to reproduce asexually (NOT a flower)

\_\_\_\_\_

81) How is a runner different from a rhizome? \_\_\_\_\_

82) When a plant grows toward the light this is called? \_\_\_\_\_

83) When a plant’s roots grow toward gravity and its shoots grow opposite to gravity this is called?

\_\_\_\_\_

84) Trees that lose their leaves to conserve water are called? \_\_\_\_\_

85) Trees that keep their leaves year round are called? \_\_\_\_\_