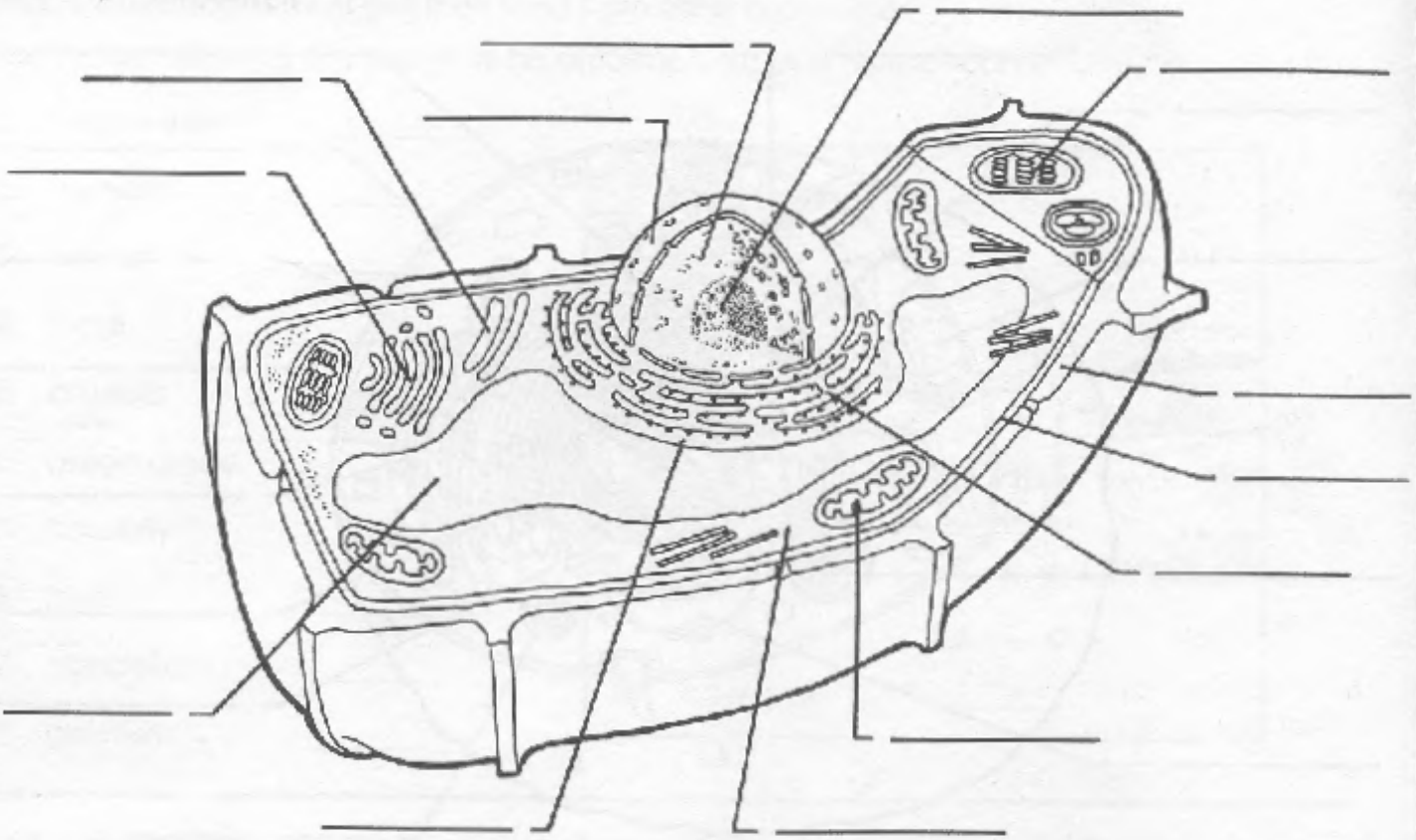
PLANT CELLS

Name _____

Label the organelles in the diagram below of a typical plant cell. Describe the function/purpose of each organelle in the cell.



a. ribosomes _____

b. Golgi complex _____

c. cytoplasm _____

d. nucleus _____

e. nucleolus _____

f. nuclear membrane _____

g. cell (plasma) membrane _____

h. mitochondria _____

i. rough endoplasmic reticulum _____

j. vacuole _____

k. cell wall _____

l. chloroplast _____

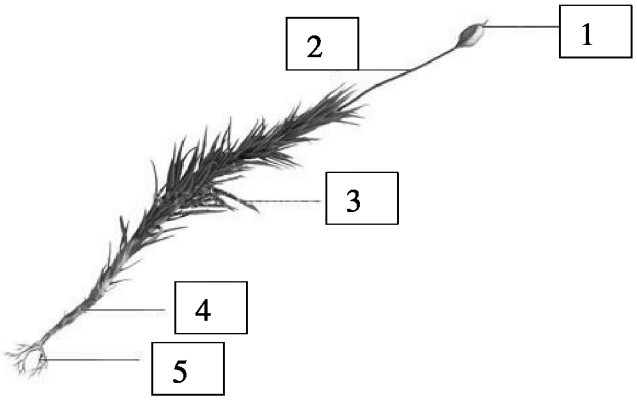
m. smooth endoplasmic reticulum _____

Name: _____

Mosses & Ferns Worksheet

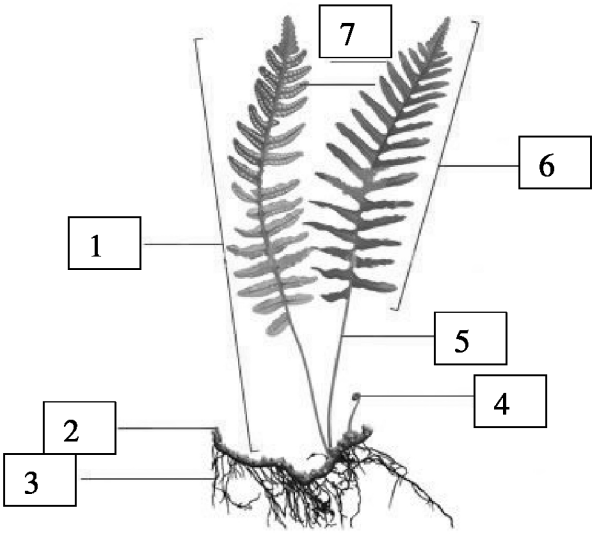
Label the structures on the moss plant

1. _____
2. _____
3. _____
4. _____
5. _____
6. Do mosses have Vascular Tissue? _____
7. What is the Phylum? _____



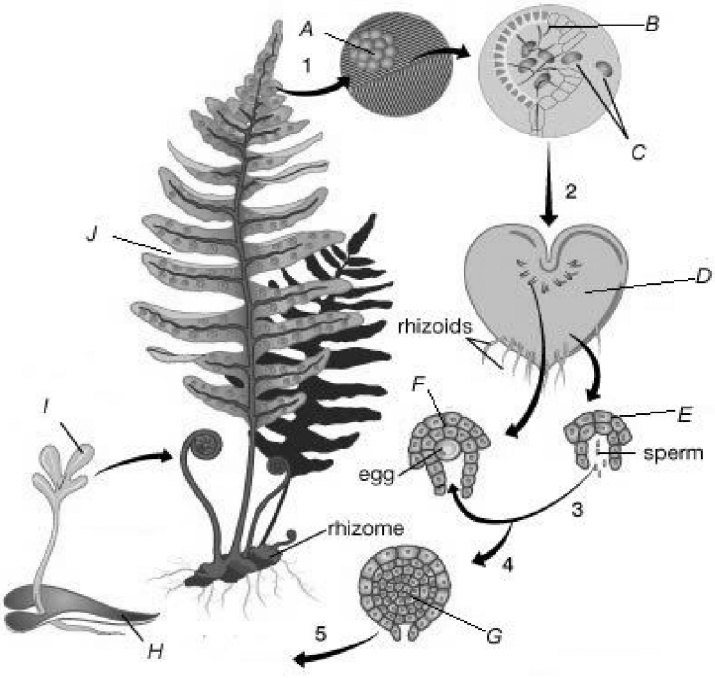
Label the structures on a fern plant

8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. Do Ferns have vascular tissue? _____
16. What is the phylum of Ferns? _____



Label the parts of the fern life cycle:

A. _____
B. _____
C. _____
D. _____
E. _____
F. _____
G. _____
H. _____
I. _____
J. _____



Plant Practice for the up-coming exam

Fill-in the Blank

_____1: ____ transports food from the leaf to other parts of the plant.

_____2: Xylem carry water and minerals from the ____ to the leaves.

_____3: Two materials needed for photosynthesis are ____ and water.

_____4: In plant cells___ are responsible for photosynthesis.

_____5: Plants absorb water and minerals by ____ across a cell membrane

_____6: A plant's stomata lets in ____.

_____7: Tiny ____ grow from the tip of a root.

_____ 8: The water and minerals move from the roots through the ____ to the leaves.

_____ 9: ____ tubes carry water from the roots to the leaves.

_____10: Tubes called ____carry food from the leaves to all parts of the plant.

_____11: ____allow gases to enter and exit a leaf.

_____12: The parts of a leaf that take in air and let out water are called ____

_____13: Most plants have broad, flat ____to absorb as much sunlight as possible.

_____14: ____ absorb sunlight and carbon dioxide, produce the plant's food, and remove wastes.

_____15: ____ support leaves, and transport food, water and minerals.

_____16: ____ provides plants with water and minerals.

_____17: ____ is a green-colored substance that absorbs energy from the sun.

_____18: Chlorophyll is found in cell parts called ____.

_____19: Some plants store starch in swollen stems called ____.

_____20: Instead of seeds, ferns have ____.

_____21: Vascular plants are made of____ tissue. This tissue forms tubes that transports minerals and water.

_____22: ____ is the type of vascular tissue that carries water and minerals from the roots -up the rest of the plant.

_____23: ____ anchor plants into the soil and absorb water and minerals.

_____24: Trees have ____ stems which are hard, thick, and rigid.

_____25: Below the ____ is the palisades layer.

_____26: Together, the palisade and ____ layers use sunlight to produce food for the plant.

_____27: Oxygen, carbon dioxide, and water vapor enter and leave the leaf through ____

_____28: In photosynthesis, the energy from the sun is captured by ____ a green pigment.

_____29.- The two phases of photosynthesis are the ____ phase and the____ phase

_____30: In the ____ chlorophyll captures light from the Sun.

_____31: In the ____phase, sugar is formed from the combination of hydrogen and carbon dioxide.

_____32: ____ cambium separates rings of xylem and phloem.

_____33: During the light phase, reactions take place in ____ chloroplasts.

_____34: Phloem transports sugar from the ____ to the rest of the plant.

_____35: The two major classes of seed plants are Angiospermae and ____.

_____36: The ____ is the female organ of a flower.

_____37: In conifers, ____ are produced in structures called cones.

_____38: The ovary of a plant becomes its ____

_____39: ____ transports water and minerals to the stem -

True or False

_____ 40: A leaf is composed of one layer of cells.

_____ 41: Most plants are autotrophs.

_____ 42: Chloroplasts make food from water and carbon dioxide by using sugar and nitrogen.

_____ 43: Cbloroplasts trap sunlight and use it to make food from water and carbon dioxide.

_____ 44: Photosynthesis is the process that plants use to break down sugar and release energy

_____ 45: Leaves absorb almost all the water taken in by a plant.

_____ 46: Stomata are usually on top of a leaf.

_____ 47 Casparian strips allow water and nutrients to move between parenchyma cells.

_____ 48: A fern's life cycle includes both sexual and asexual reproduction.

_____ 49t. Reproduction from a nonsexual part of a plant is called vegetative reproduction

_____ 5O: Seedless, vascular plants do not require water for fertilization to occur.

Multiple Choice

_____ 51: Bryohpytes include

A) hornworts B) mosses C) liverworts D) all of the above E) none of the above

_____ 52: The vascular plants include

A) horsetails B)hornworts C)liverworts D)all of the above E)none of the above

_____ 53: Bryophytes

A) have the support of xylem B) can move fluids internally across long distances

C) need water for the sperm cells to swim to egg cells D) none of the above

_____ 54: All bryophytes have a(n)

A) sporophyte generation B) alternation of generations

C) gametophyte generation D) all of the above

_____ 55: The _____ are, in terms of numbers of species, the most successful group of plants.

A) angiosperms B) gymnosperms C) club-mosses D) ferns

_____ 56: Gymnosperms include

A) grasses B)rushes C)sedges D) all of the above E) none of the above

_____ 57: Angiosperms include

A) ginkgoes B) conifers C) cycads D) both a and b E) none of the above

_____ 58: The conifers include

A) cypress B) fir C) larch D) both a and c E) all of the above

_____ 59: The branch of biology that deals with the study of plants is

A) zoology B) embryology C) botany D) endocrinology

_____ 6O: The most highly developed plants are classified as

A) bryophytes B) angiosperms C) lycopods D) saprophytes

_____ 61: The corn plant

A) is a dicot B) is a monocot C) is a gymnosperm D) has leaves with palmate veins

_____ 62: Plants that have covered fleshy seeds are classified as

A) Filicinae B) angiosperm C) gymnosperms D) none of the above

_____ 63: The _____ is the leaf-like outer part of the flower that helps protect the young bud.

A) Petal B) Sepal C) filament D) Corolla

_____ 64: Bees are guided to nectar by the bright markings on

A) petals B) stamens C) sepals D) none of the above

_____ 65: The structure that produces pollen is called

A) anther B) ovary C) filament D) style

_____ 66: A monocot has stamens, petals & sepals arranged in multiples of ____.

A) Two B)Three C)four D) five

_____ 67: ____ all have one seed leaf such as in the orchid, lily, grasses and palms.

A) Dicotyledons B) Monocotyledons C) Annuals D) Biennials

_____ 68: The sticky or feathery surface upon which pollen grains land and grow is called the

A) stamen B) ovary C) stigma D) petal

_____ 69: The essential parts of a flower are the

A) anther and stamens B) stamens and pistils C) ovary and pollen D) calyx, petal and stamen

_____ 70: ____ have two seed leaves and include many flowering trees, wild and garden flowers,

A) Dicotyledons B) Annuals C) Perennials D) Biennials

_____ 71: A plant that attaches to a larger plant for support, water and nutrients from the air is called a(n)

A) dicot B) monocot C) ovule D) epiphyte

_____ 72: The sepals form a structure together called

A) petals B) calyx C) stamens D) pistil

_____ 73: A flower that has a pistil, stamens, petals and sepals is a

A) short-day plant B) long-day plant C) calyx D) complete flower

_____ 74: ____ have leaves with a branching network of veins and flower parts in multiples of four or five.

A) Perennials B) Annuals C) Biennials D) Dicotyledons

_____ 75: The male gametophyte is contained in the _____.

A) seed B) filament C) pollen grain D) gymnosperm

_____ 76: _____ are plants with parallel veins and flower parts in multiples of three.

A) Monocotyledons B) Annuals C) Biennials D) Dicotyledons

_____ 77: Most sepals are a _____ color.

A) yellow B) pink C) green D) white

_____ 78: The structure located at the top of a stamen is called the _____.

A) anther B) filament C) corolla D) stigma

_____ 79: Water and mineral ions enter the root by absorption into the _____.

A) stomata B) root hairs C) phloem D) Protective tissue

_____ 80: The seed coat ____

A) protects the seed embryo. C) has no practical value.

B) falls off after pollination. D) provides a source of food.

_____ 81: Growth and development of a seed is called

A) germination B) maturation C) fertilization D) none of the above

_____ 82: The leaf-like colorful part of a flower that attracts pollinators is the

A) zygote B) stigma C) pistil D) petal

_____ 83: cells regulate the size of the openings of the stomata.

A) Epidermal B) Mesophyll C) Cuticle D) Guard

_____ 84: The _____is the embryonic root of a plant.

A) epicotyl B) cotyledon C) seed coat D) radicle

_____ 85: The plumule would most likely be found in

A) a bean seed B) a monocot seed C) a maple seed D) all of the above

_____ 86: Those tissues concerned with tubular internal transport, such as xylem and phloem are called

A) epidermis B) pith C) vascular D) collenchyrma

_____ 87: Stomates are largely found in a

A) stem B) leaf C) root D) root hair

_____ 88: In between the phloem and the xylem lies the

A) vascular cambium B) lateral meristematic tissue

C) apical meristematic tissue D) both a and b E) all of the above

_____ 89: What tissues carry carbohydrates, usually in the form of glucose, from the leaves to the nonphotosynthetic parts of the plant.

A) arteries B) phloem C) veins D) xylem

_____ 90: The plant tissue that carries water and ions from the roots to other parts of the plant is called

A) phloem B) xylem C) companion cells D) sieve tube

_____ 91: Food-making cells in plants are located in the

A) xylem B) phloem C) pith D) palisade layer

_____ 92: The growing region of a plant stem is called the

A) meristem B) wood C) phloem D) spongy layer

_____ 93: Gases move into intercellular spaces on leaves through openings known as

A) Stomates B) lenticels C) phloem tubes D) xylem tubes

_____ 94: A cell membrane

A) is semipermeable B) is not permeable C) is soluble D) stores food

_____ 95: _____ transfers food to the rest of the plant.

A) phloem B) heartwood C) root hairs D) gametes

_____ 96: The process of losing water through a plant's leaves is called

A) respiration B) transpiration C) circulation D) transportation

_____ 97: Which of the following is not a tissue type in stems?

A) parenchyma B) cambium C) nonvascular D) root hairs

_____ 98: In most plants, specialized epidermal cells which absorb water and minerals are found in the

A) roots B) stems C) lenticels D) flowers

_____ 99: What are the 2 products of photosynthesis?

_____ 100: How does a plant get food to all its cells?

_____ 101: What are two functions of plant roots?

_____ 102. The root-like structures of mosses are called _____.

_____ 103: The haploid phase of the life cycle is predominant in _____.

_____ 104: In nonvascular plants, minerals move through the plant by a process called _____.

_____ 105: In nonvascular plants, water moves from cell to cell by a process called

_____ 106: Bryophytes include ___ and mosses.

_____ 107: The _____ is a root-like structure in bryophytes.

_____ 108: _____ contain special spore structures called gemmae.

_____ 109: In bryophytes, water moves from cell to cell by _____

_____ 110: In bryophytes, food is transported by _____.

_____ 111: Bryophytes lack specialized _____ for transport of materials.

_____ 112: Mosses have true roots, stems, and leaves.

_____ 113: Bryophytes are nonvascular.

_____ 114: Moss spores are diploid.