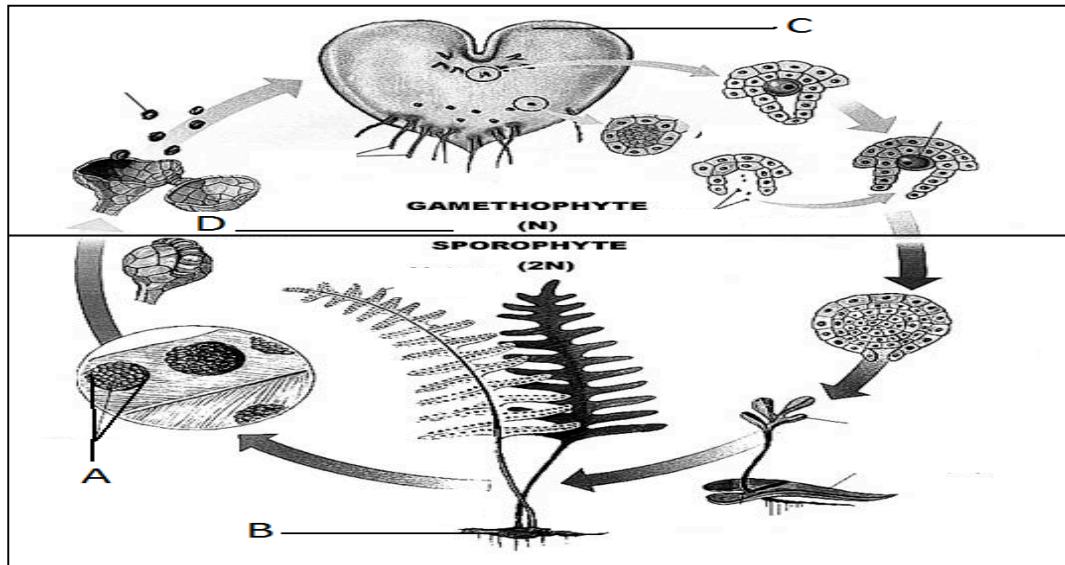


1. **Algae do not have specialized cells for reproduction:**
  - a) True
  - b) False
2. **An example of a multicellular green algae is:**
  - a) ulva
  - b) kelp
  - c) chlamydomonas
  - d) oedogonium
3. **In Bryophytes, water passes from cell to cell by**
  - a) mitosis.
  - b) meiosis.
  - c) osmosis.
  - d) tracheids.
4. **The structures in Bryophytes that penetrate the ground to anchor the plant are:**
  - a) xylem.
  - b) phloem.
  - c) rhizomes.
  - d) rhizoids.
5. **Fern spores are produced in structures known as**
  - a) antheridia.
  - b) archegonia.
  - c) sporangia
  - d) seeds
6. **Haploid spores of ferns are produced**
  - a) in the sporangia
  - b) by meiosis
  - c) by gametophytes
  - d) in protonema
7. **The cuticle of tracheophytes:**
  - a) Prevents carbon dioxide loss
  - b) are part of the roots
  - c) is part of a vein
  - d) is a waxy covering on the leaf
8. **The gametophyte of a fern flattens out into a thin heart-shaped structure called a(n)**
  - a) protonema
  - b) prothallium
  - c) frond.
  - d) archegonium
9. **The plant structure we recognize as ferns are the**
  - a) spenophytes
  - b) prothllytes.
  - c) sporophytes.
  - d) gametophytes.

## Lifecycle of a Fern:

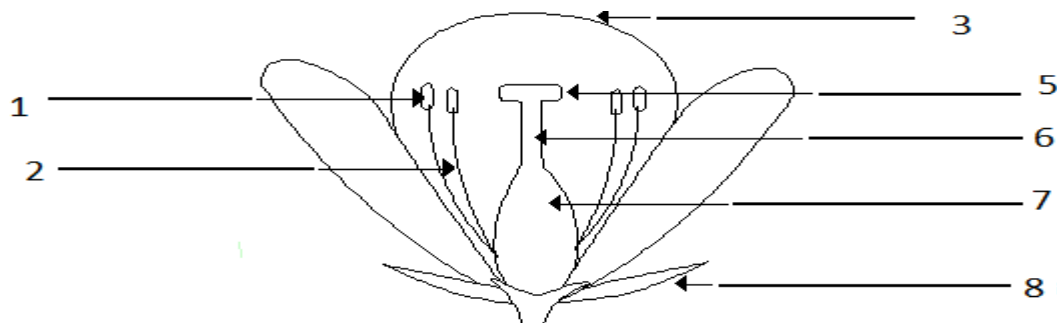


10. In the lifecycle above, the structure marked A is :
- a sorus
  - a single sporangium
  - a capsule
  - a megaspore mother cell
11. In the lifecycle above, the structure marked B is:
- a rhizoid
  - a holdfast
  - a fiddlehead
  - a rhizome
12. In lifecycle above, the structure marked C has:
- archegonia only
  - antheridia only
  - arthrodia and antheridia
  - archegonia and antheridia
13. The function of xylem is to
- carry water from roots to leaves.
  - be the site of photosynthesis
  - anchor plants
  - carry products of photosynthesis throughout the plant
14. The alternation of generations in plants is characterized by
- haploid gametophytes and diploid sporophytes.
  - diploid gametophytes and haploid sporophytes.
  - haploid gametophytes and haploid sporophytes.
  - diploid gametophytes and diploid sporophytes.
15. The “naked seed” plants are the
- monocotyledons
  - dicotyledons.
  - angiosperms.
  - Gymnosperms

16. The trees known as evergreens are
- cycads.
  - dicots.
  - ginkgoae
  - conifers.
17. A difference between monocots and dicots is that monocots have:
- one cotyledon.
  - two seed leaves.
  - flowers.
  - seeds.
18. After fertilization, the zygote grows into a tiny plant called a(n)
- scale.
  - pollen grain.
  - seed coat
  - embryo.
19. The following is not an example of a tracheophyte
- rose
  - moss
  - daffodil
  - Fern
20. Flowering plants are
- monocotylsperms
  - dicotylsperms
  - gymnosperms
  - angiosperms
21. Pollen grains can be distributed by
- air currents
  - birds
  - insects
  - all of the above.
22. This is a specific adaptation of plants to life on land:
- holdfast
  - stems with a water vascular system
  - chloroplasts for photosynthesis
  - alternation of generations
23. The following is an example of seed dispersion:
- a cutting (a piece) of a bamboo plant is planted in a different pot from its original pot
  - a root grows a runner which produces multiple plants from the same underground stem
  - a bear eats berries and does not digest the seeds, the seeds remain viable once the bear passes it's feces
  - a bee brings pollen from one flower to another
24. The reproductive structure of gymnosperms are
- flowers.
  - fruit.
  - scales.
  - spores.

25. The seeds of angiosperms
- are protected by the fruit.
  - sit exposed on the cone.
  - are called scales.
  - are grouped together in cones.
26. The gametophyte generation in plants is:
- Haploid
  - Diploid
  - The zygote
  - The embryo
27. Which parts of the flower make up the male reproductive organ?
- Pistil
  - Style
  - Stigma
  - Anther
28. The pollen grain of the seed plants are a:
- Male sporophyte
  - female gametophyte
  - female sporophyte
  - male gametophyte
29. If a plant has large yellow flowers and a sweet scent it is probably pollinated by:
- bats
  - mammals
  - bees
  - wind

FLOWER ANATOMY



30. In diagram above, the anther is labeled:
- 1
  - 2
  - 1 and 2 together
  - 5
31. In diagram above, the fruit develops from:
- 5
  - 3
  - 7
  - 8



- a) phylum Annelida, class Hirudinea
- b) phylum Annelida, class Oligochaeta
- c) phylum Nematoda, class Cestoda
- d) phylum Nematoda, class Trematoda

42. Earthworms always have separate sexes:

- a) True
- b) False

43. Choose the correct sequence of structures an earthworm's food would travel:

- a) esophagus, pharynx, gizzard, crop, intestine, anus
- b) pharynx, aortic arches, crop, esophagus, intestine, anus
- c) pharynx, intestine, gizzard, crop, anus
- d) pharynx, esophagus, crop, gizzard, anus

44. Earthworms and planarians belong to the same phylum:

- a) True
- b) False

45.



In the image to the left, the structure labeled A is used to:

- a) Feed
- b) Respire
- c) see
- d) sense humidity

46. The motile (moving) stage of a cnidarians lifecycle is called the:

- a) polyp
- b) medusa
- c) hydra
- d) anemone

47. Mollusca exhibit all of the following except

- a) respiration through lungs
- b) A closed circulatory system.
- c) A complete digestive system with mouth and anus.
- d) External fertilization.

48. Planaria show this type of response to light:

- a) negative
- b) neutral
- c) positive
- d) autotrophic

49. These animals have specialized tissues or organs for respiration:

- a) snails
- b) earthworms
- c) planaria
- d) anemones

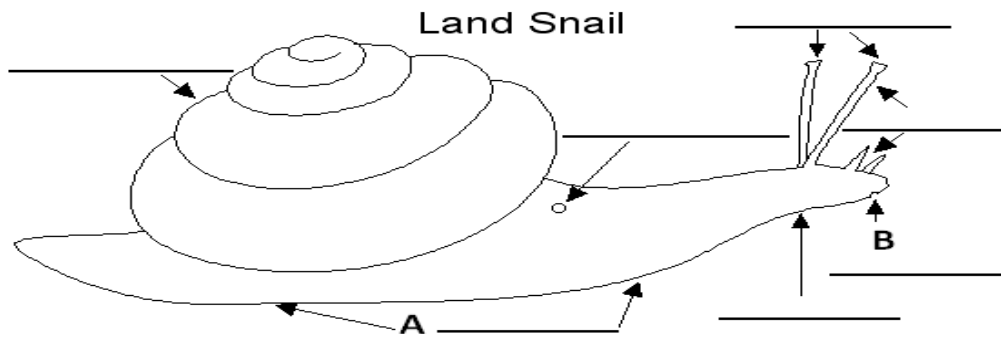
50. This is the common name for a squid's shell:

- a) siphon
- b) mantle

- c) pen
- d) pharynx

51. The mollusk with the least developed nervous system would be:
- a) clam
  - b) octopus
  - c) squid
  - d) nudibranch
52. The following is a method of defenses or response found in octopi:
- a) hissing through the siphon
  - b) changing colour to match surroundings using chromatophores
  - c) releasing poisons through the sucking discs
  - d) attacking with stinging cells called nematocysts

Use the diagram to below to answer the following three questions:



53. If you were dissect at point B you would most likely find:
- a) a beak
  - b) a buccal mass
  - c) a radula
  - d) a siphon
54. The above organism belongs to this class:
- a) bivalve
  - b) gastropoda
  - c) cephalopoda
  - d) gastropedius
55. The structure identified by the lines extending from A is called:
- a) the foot
  - b) visceral mass
  - c) gastropede
  - d) radula
56. Members of the class bivalve typically use this method to feed:
- a) scraping of a radula

- b) scraping of a beak
- c) capturing and hunting prey
- d) filter feeding using gills

**57. Echinodermata are characterized by**

- a) spiny skin
- b) bilateral symmetry.
- c) an external skeleton.
- d) internal fertilization.

**58. Members of the phylum echinodermata have:**

- a) only herbivorous feeding methods
- b) only carnivorous feeding habits
- c) bilateral symmetry in the adult form
- d) radial symmetry in the adult form

**59. Echinoderms show greater cephalization than the mollusks.**

- a) True
- b) False

**60. The following is not a member of the phylum Echinodermata:**

- a) sea urchin
- b) sea stars
- c) sea cucumbers
- d) sea anemones

**61. The sea cucumbers have:**

- a) an endoskeleton
- b) an exoskeleton
- c) swimming fins
- d) complex eyes

**62. Sea stars are only able to reproduce sexually:**

- a) True
- b) False

**63. All sea urchins are sessile (are unable to move)**

- a) True
- b) False

**64. A general feature of arthropods is:**

- a) compound eyes
- b) respiration using gills
- c) bilateral symmetry
- d) radial symmetry

**65. The spider respiratory structure is:**

- a) book gills
- b) book lungs
- c) gills
- d) alveoli

**66. Crabs and crayfish are members of the subphylum Chelicerata:**





- b) compound eye
- c) simple eye
- d) ocelli

**74. This is the upper lip mouthpart of the grasshopper:**

- a) labrum
- b) maxibles
- c) Librium
- d) mandillas

**75. Insects belong to the subphylum:**

- a) arthropodist
- b) uniramia
- c) chelicerata
- d) crustacea

**76. The three main body parts of an insect are:**

- a) head, cephalothorax, abdomen
- b) head, carapace, thorax
- c) head, thorax, abdomen
- d) thorax, carapace, abdomen

**77. A difference between animals and plants is:**

- a) animals are autotrophic and plants are heterotrophic
- b) animals are eukaryotic and plants are prokaryotic
- c) animals are prokaryotic and plants are eukaryotic
- d) animals are heterotrophic and plants are autotrophic

**78. Unlike humans, grasshoppers:**

- a) use their mouths to breathe
- b) use their mouths to eat
- c) breathe through openings in their abdomen
- d) have closed circulatory system

**79. Arachnids have:**

- a) 3 pairs of legs
- b) 4 pairs of legs
- c) 4 legs
- d) 6 legs

**80. The name "Platyhelminthes" means:**

- a) flat animals
- b) water living worms
- c) flatworms
- d) parasitic worms

**81. The name "Echinodermata" means:**

- a) many armor
- b) smooth skin
- c) tough skin
- d) spiny skin

- 82. Water enters the water vascular system of a sea star through the:**
- a) mouth
  - b) anus
  - c) madreporite
  - d) tube feet
- 83. The name “arthropoda” means:**
- a) jointed foot
  - b) jointed mouth
  - c) man foot
  - d) man-like mover
- 84. Osteichthyes are fish characterized by**
- a) jaws
  - b) skeleton of bone
  - c) paired fins
  - d) all of the above.
- 85. Chondrichthyes (such as sharks) are also known as**
- a) bony fishes
  - b) jawless fishes
  - c) cartilaginous fishes.
  - d) all of the above.
- 86. Amphibians need water because**
- a) eggs are laid in water.
  - b) The larval stage is aquatic
  - c) They need a moist skin to breathe
  - d) All of the above.
- 87. The following adaptation(s) allow Aves to fly,**
- a) hollow bones.
  - b) specialized feathers.
  - c) the lack of a bladder
  - d) All of the above.
- 88. Mammals are characterized by**
- a) a viviparous lifestyle
  - b) skin with scales.
  - c) Laying Eggs
  - d) External fertilization