

## Biodiversity (Unit 10) Practice SOL Questions

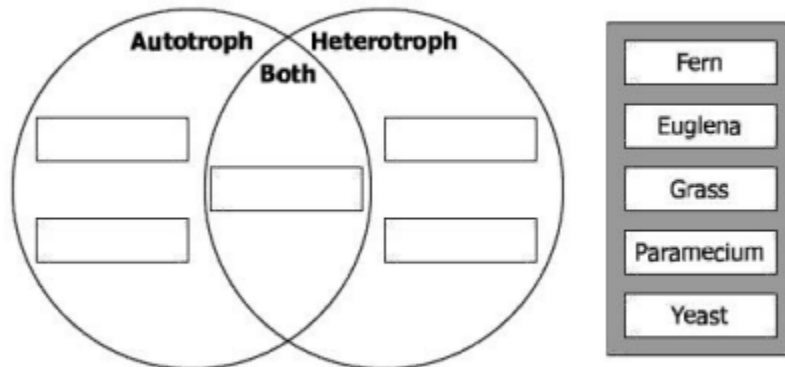
### Unknown Organism

- Nucleus present
- Mitochondria present
- Multicellular
- Cells grow in columns
- Cell wall made of chitin
- Decomposer

This chart shows observations made of an unknown organism. Based on this information, the organism most likely belongs to the kingdom —

- A Fungi
- B Plantae
- C Eubacteria
- D Animalia

Classify the organisms by their metabolic strategies.



Which characteristic do most adult fungi and plants share?

- A They both are producers.
- B They both have cells with cell walls.
- C They both reproduce through binary fission.
- D They both have multiple nuclei in each cell.

**Which feature do viruses have in common with animal cells?**

- A Ability to form proteins at the ribosomes
- B Existence of lipids in cell membranes
- C Presence of a genetic code in nucleic acid
- D Production of energy by a mitochondrion

**Plant Observations**

**Mosses and liverworts** – nonvascular, low-growing, rootlike structures

**Ferns** – vascular, spores, roots, stems, and leaves

**Gymnosperm** – vascular, naked seeds, needle-or scale-like leaves, roots, stems, seed in cones

**Angiosperm** – vascular, seeds enclosed in fruit, flowers, roots, stems, leaves



**A student observed different types of plants and recorded the data shown. Based on the drawings and information in the chart, these plants are most likely —**

- F gymnosperms
- G angiosperms
- H mosses
- J ferns

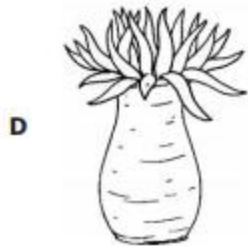
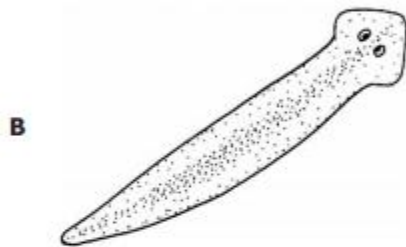
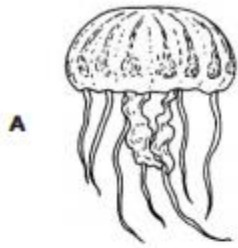
**What do viruses need to reproduce?**

- A Other viruses
- B Host organisms
- C A nutrient medium
- D An enzyme solution

**Fungi, such as mushrooms and molds, get their nutrition *primarily* by —**

- A** producing food by chemosynthesis
- B** decomposing dead organic matter
- C** preying on other organisms
- D** parasitic relationships with plants

**Which of these animals has the same type of symmetry as a vertebrate?**



**Gymnosperms (a group of plants including conifers) and angiosperms (flowering plants) share many traits but are classified in separate groups. Which is a difference between gymnosperms and angiosperms?**

- F** Only angiosperms form wood.
- G** Only gymnosperms reproduce with spores.
- H** Only angiosperms produce seeds within fruits.
- J** Only gymnosperms have vascular tissue.

**Ascidians are sac-like marine organisms. Their larvae have well-developed brains and dorsal nerve cords. This suggests that ascidians should be classified with the —**

- F** chordates
- G** annelids
- H** cnidarians
- J** sponges

**Which of these organisms contains *no* specialized cells?**

- F** Paramecium
- G** Sponge
- H** Jellyfish
- J** Sea anemone

**Students research unicellular, prokaryotic organisms that live in harsh environments such as volcanic hot springs, brine pools, and anaerobic black organic mud. Which of these groups are the students *most* likely researching?**

- F** Protista
- G** Archaeobacteria
- H** Eubacteria
- J** Plantae