

Problem Set #1 Key

Animal Organization and Circulation

This problem set, along with problem set #2 and #3, will be reviewed during the next discussion, Jan 25 (there is no discussion session on Jan 18 due to a holiday). #2 and #3 will be posted later, after the content has been covered in lecture.

1) Define:

- Tissue

A group of cells with the same function.

- Organ

A group of tissues that, together, produce a joint function.

- Organ System

A group of organs that create an overall function responsible for an essential need to the organism.

2) List 5 advantages to multicellular life and 3 disadvantages:

Advantages:

Increased efficiency, controlled shape, large size, controlled internal conditions, ability to live on land.

Disadvantages:

Low surface area to volume ratio, requires a transport system, requires support for large weight.