

17 What are large deposits of diatom remains called? List two uses of these deposits.

18 What is a red tide?

19 What two phyla principally contain macroscopic algae?

20 What substance produced by members of phylum Phaeophyta is useful for thickening ice cream, pudding, salad dressing, and jelly beans?

OPTIONAL SUMMARY OF MODULE 3

Review the vocabulary words listed in question 1 of the study guide.

Fill in the blanks. Many blanks contain more than one word.

1 Kingdom Protista is divided into two main groups: _____ (mostly individual, single-celled creatures with a form of locomotion) and _____ (mostly colonies of eukaryotic cells that have no form of locomotion).

2

Protozoa are split into four major phyla based on their locomotion: Mastigophora contains those that use _____, Sarcodina contains those that use _____, Ciliophora contains those that use _____, and Sporozoa contains those that have _____.

3

Algae are split into five major phyla based on habitat, organization, and cell wall.

Chlorophyta contains those that live in _____, are composed of _____, and have cell walls made of _____.

Chrysophyta contains those that live in _____, are composed of _____, and have cell walls made of _____.

Phaeophyta contains those that live in _____, are composed of _____, and have cell walls made of _____.

Rhodophyta contains those that live in _____, are composed of _____, and have cell walls made of _____.

4

The main portion of a cell's DNA is stored in its _____. Membrane-bounded "sacs" in a cell are called _____. Two main types of vacuoles are _____, which store food, and _____, which regulate the amount of water in the cell.

5

The cytoplasm in a cell can be split into _____, which is thin and watery, and _____, which is more dense.

6 *Amoeba proteus* is a typical member of phylum _____, and it can form _____ to survive extreme conditions.

7 Genus *Euglena* contains organisms from phylum _____. When it comes to food, these creatures are both _____ and _____. They have firm but flexible shape-sustaining _____ and a light-sensitive region known as an _____.

8 Photosynthesis requires a pigment called _____, which cells store in _____.

9 Round, green colonies found in phylum Mastigophora are found in genus _____.

10 When organisms form a relationship in which at least one of them benefits, it is called _____. If all organisms involved benefit, it is specifically known as _____. If one benefits and the other neither benefits nor is harmed, it is specifically known as _____. If one benefits and the other is harmed, it is specifically known as _____.

11 Genus *Paramecium* contains organisms from phylum _____. Organisms in this genus have two _____. The _____ is the larger of the two, and it controls metabolism, while the _____ is the smaller of the two, and it controls reproduction.

12 Paramecia can exchange DNA through _____, but unlike this process in bacteria, the DNA exchange is _____.

13 Genus *Plasmodium* contains organisms from phylum _____ that cause _____. These organisms are transferred between people by the action of _____.

14 Members of phylum Sporozoa form _____ as a part of their normal lifecycle.

15 Tiny organisms that float in the water are called _____. Small animals and protozoa are called _____, while photosynthetic organisms (typically algae) are called _____.

16 When conditions are ideal, algae will reproduce so rapidly that they essentially “take over” their habitat. This is referred to as an _____.

17 Members of phylum Chlorophyta have the pigment _____ and are often called _____.

18 _____ is a compound made of certain types of sugars that is common in many cell walls.

19 The members of phylum Chrysophyta are often called _____ and are responsible for a large amount of the photosynthesis that occurs in creation. When the cell wall remains of many of the organisms clump together, they form a crumbly, abrasive substance called _____.

20 A _____ is a colony that does not move and anchors itself to an object with a _____.

21 Members of phylum Pyrrophyta are often referred to as _____. They have two _____. One species in this phylum, *Gymnodinium brevis*, have blooms that are called _____.

22 Members of phylum Phaeophyta are often referred to as _____. Their cell walls contain _____ that is used as a thickening agent.

23 Members of genus _____ in phylum Phaeophyta are often called _____ or _____. They form _____ that allow them to anchor themselves to rocks which sit at the bottom of the ocean. Some can grow as long as 100 meters.

24 Members of phylum Rhodophyta are often called _____.