

1. **Answer:** A

**Explanation:** In Carolus Linnaeus' naming system, an organism is assigned a two-part name. Hence, this system is referred to as the **binomial nomenclature system**. The first part of the scientific name is the genus (plural, genera) which is a larger group. This is then followed by the species name (or specific epithet in the more technical use of the term) of the organism.

2. **Answer:** A

**Explanation:** Tautonymy occurs when the living organism has the same name for its genus and species name. Examples are red fox (*Vulpes vulpes*) and milkfish (*Chanos chanos*). Tautonymy signifies that the species is representative of the characteristics of the genus.

3. **Answer:** D

**Explanation:** Both genus and species names must be italicized when typewritten and underlined when handwritten.

4. **Answer:** B

**Explanation:** The second part of the scientific name is the species name (or specific epithet in the more technical use of the term) of the organism.

5. **Answer:** C

**Explanation:** Once the full scientific name has been mentioned, it is possible to refer to it on succeeding use of the name through a contraction. That is, we simply put the first letter of the genus name, followed by a period then proceed to the species name. Example: *H. sapiens* or H. sapiens is the contracted form for *Homo sapiens*. Again, both genus and species names must be italicized when typewritten and underlined when handwritten.

6. **Answer:** C

**Explanation:** Short and rigid prokaryotes are called **spirilla** while longer cells are called **spirochetes**.

7. **Answer:** D

**Explanation:** **Methanogens** are archaea that thrive in oxygen-lacking environments and, as the name suggests, live on other gases in the area such as methane.

8. **Answer:** C

**Explanation:** Among the bacteria, the **cyanobacteria** are the only ones that are plant-like and are able to photosynthesize. It is believed that the origins of chloroplasts in plants are linked to cyanobacteria.

9. **Answer:** C

**Explanation:** Despite their microscopic size, prokaryotes have an immense impact on our world. These microorganisms are present wherever there is life, this includes ourselves. In fact, communities of microorganisms live in and on our bodies. This community is referred to as the **microbiota**.

10. **Answer:** A

**Explanation:** **Proteobacteria** are Gram-negative bacteria and share a common rRNA sequence. Examples include pathogenic bacteria such as *Vibrio cholerae* that causes cholera and those that are residents of the body like *Escherichia coli* (*E. coli*).

11. **Answer:** A

**Explanation:** **Protist** is the term used to refer to unicellular eukaryotes. **Diatoms** and **algae** are photosynthetic protists.

12. **Answer:** B

**Explanation:** The feeding structures of fungi are composed of threadlike filaments called **hyphae**. These hyphae branch repeatedly as they grow, forming a mass called **mycelium** (plural mycelia).

13. **Answer:** B

**Explanation:** Seedless vascular plants are composed of two phyla: the **lycophytes** (which include club mosses, spike mosses, and quillworts) and the **monilophytes** (the ferns, horsetails, and whisk ferns).

14. **Answer:** D

**Explanation:** Flowering vascular plants are called **angiosperms** belonging to a single phylum, the **anthophytes**.

15. **Answer:** C

**Explanation:** **Lichens** are fungi that form symbiotic relationships with green algae or cyanobacteria.

16. **Answer:** B

**Explanation:** Animals can be categorized according to gastrulation or how the animal embryo develops. Animals can be considered protostomes if the first opening that forms during gastrulation becomes the mouth. The other group, the **deuterostomes**, have this opening that becomes the anus and develops a second opening that becomes the mouth.

17. **Answer:** C

**Explanation:** **Ecdysozoans** include the nematodes and arthropods. The group got its name from the process of **ecdysis**, where the external skeleton of the organism must be shed first before the animal could grow.

18. **Answer:** D

**Explanation:** Four features identify members of the Phylum Chordata: (1) a **dorsal, hollow nerve cord**; (2) a **notochord**, a rod located between the digestive tract and the nerve cord; (3) **pharyngeal slits** located in the pharynx; and (4) a muscular **post-anal tail**.

19. **Answer:** B

**Explanation:** **Phylum Arthropoda** is a group composed of segmented animals with a hard exoskeleton and jointed appendages. The arthropods consist of groups called **chelicerates**, **myriapods**, and **pancrustaceans**. Pancrustaceans include the crustaceans and the insects, the latter considered the most successful invertebrate.

20. **Answer:** B

**Explanation:** Phylum Cnidaria, to which jellyfish belongs, is named after its stinging cells called **cnidocytes**.

21. **Answer:** A

**Explanation:** **Class Mammalia** refers to endotherms with the distinguishing feature of having hair and mammary glands that produce milk.

22. **Answer:** D

**Explanation:** In the biological species concept, a **species** is a group of populations whose members can interbreed and produce fertile offspring.

23. **Answer:** C

**Explanation:** Some mammals called **monotremes** retained egg-laying and include spiny anteaters and platypus.

24. **Answer:** B

**Explanation:** In **allopatric speciation**, species arise because groups from an original population become isolated geographically from each other.

25. **Answer:** A

**Explanation:** Among the vertebrates, fish are the first to have developed a vertebral column. The earliest fish are composed of hagfish and lampreys.