Cheat Sheet

Chapter 22 Questions

1. **What is *Oxytenis modestia*?**
2. **What book did Charles Darwin publish?**
3. **What is evolution?**
4. **How did Aristotle view species?**
5. **Who developed the binomial format for naming species?**
6. **What are fossils?**
7. **What are strata?**
8. **What is paleontology?**
9. **What two scientists influenced Darwin's thinking?**
10. **What mechanism for evolutionary change did French biologist Jean-Baptiste de Lamarck propose?**
11. **Charles Darwin info on pg 469**
12. **What are adaptations?**
13. **What is natural selection?**
14. **Which scientist developed the same theory as Darwin?**
15. **What are the scientific names of the three living species of elephants?**
16. **What is artificial selection?**
17. **What are the 2 observations and 2 inferences that Darwin based his argument on?**
18. **What are *Pseudocreobotra wahlbergi* and *Hymenopus coronatus*?**
19. **What is *Jadera haematoloma*?**
20. **What are *Cardiospermum corindum* and *Koelreuteria elegans*?**
21. **What can MRSA and clone USA300 cause? Why did they become dangerous?**
22. **What is a new antibiotic that shows promise for treating MRSA?**
23. **What is homology?**
24. **What are vestigial structures?**
25. **What is an evolutionary tree?**
26. **What is convergent evolution?**
27. **What is the opposite of a marsupial?**
28. **What are analogous structures?**
29. **What is the order that includes whales, dolphins, and porpoises?**
30. **What is biogeography?**
31. **What is continental drift/Pangaea?**
32. **What is the genus of present-day horses?**
33. **What does endemic mean?**

Chapter 22 Answers

1. Dead-leaf moth in Peruvian rain forest, blends in well with forest floor habitat
2. The Origin of Species
3. Descent with modification
4. Fixed, unchanging, can be arranged on scale of increasing complexity (scala naturae)
5. Carolus Linnaeus, Swedish physician
6. Remains or traces from organisms of the past
7. superimposed layers of rock
8. study of fossils, developed by french scientist George Cuvier
9. Scottish geologist James HUtton (proposed gradual mechanisms created geologic features), leading geologist of Darwin's time Charles Lyell (proposed that geologic mechanisms proposed by Hutton were still at work).
10. Use and disuse principle - parts that are used extensively become larger and stronger, those that are not deteriorate

    Inheritance of acquired characteristics - organism could pass modifications to offspring
11.
12. Inherited characteristics of organisms that enhance their survival and reproduction in specific environments
13. Process in which individuals that have certain inherited traits tend to survive and reproduce at higher rates than do other individuals because of those traits
14. Alfred Russel Wallace, British naturalist
15. Asian (*Elephas maximus*), African (*Loxodonta africana* and *L. cyclotis*)
16. Human process where species are modified by selection/breeding of individuals with desired traits
17. O1: Members of population vary in their inherited traits
    O2: All species can produce more offspring than their environment can support
    I1: Individuals whose inherited traits give them a higher probability of surviving/reproducing tend to leave more offspring than other individuals
    I2: Unequal ability to reproduce will lead to accumulation of favorable traits
18. South African flower-eyed mantis and Malaysian orchid mantis (camoflauge)
19. Soapberry bug, uses hollow, needle-like "beak" to feed on seeds of fruits
20. Balloon vine and goldenrain tree
21. Strains of *S. aureus*, can cause "flesh-eating disease" and other fatal infections. Penicillin used in hospitals, but strains of *S. aureus* became resistant because of enzyme penicillinase (could destroy penicillin). Methicillin (deactivates enzyme that bacteria use to synthesize cell walls) used, some strains were able to synthesize cell walls with different enzyme, exchanged genes with members of different species to become resistant to multiple drugs
22. Teixobactin
23. Similarity due to common ancestry

24. Remnants of features that served a function in the organism's ancestors
25. Diagram that reflects evolutionary relationships among groups of organisms
26. The independent evolution of similar features in different lineages
27. eutherian
28. Similar function but not common ancestry
29. cetaceans
30. Scientific study of geographic distribution of species
31. Slow movement of Earth's continents, single large continents about 250 million-200 million years ago
32. Equus
33. Found nowhere else in the world