

Biology Final Review – Semester 1

Chapter 1 (What is Science?)

1. Biology is the study of life / living things
2. Information gathered during an experiment is known as _____.
a. Data b. Variable c. Theory
3. True or False: A theory is considered to be 100% true all the time and can never be revised.
4. How many variables should be tested during a single experiment?
a. One b. Two c. Three

Chapter 7 (Cells)

5. What is the name for the "control center" of the cell? nucleus
6. True or False: The cytoplasm is found outside of the nucleus
7. The job of the ribosome is to make _____
a. Carbohydrates b. Proteins c. New Cells
8. Which organelle is the "powerhouse" of the cell (it makes energy)?
a. Ribosomes b. ER c. Mitochondria
9. What is the thin, flexible barrier that surrounds a cell is the cell wall/cell membrane (circle one)
10. Eukaryotic cells (example: humans, plants, animals, fungi, etc) do/not have a nucleus. (circle one)
11. Prokaryotic cells (example: bacteria) do/do not have a nucleus. (circle one)
12. What type of cell would you expect to find a chloroplast?
a. Animal b. Fungi c. Plants
13. Osmosis is the diffusion of _____
a. Water b. Air c. Cytoplasm

Chapter 8 (Photosynthesis)

14. Plants make their own food through a process known as photosynthesis
15. Organisms that make their own food are known as _____
a. Autotrophs b. Heterotrophs
16. Organisms that cannot make their own food are known as _____
a. Autotrophs b. Heterotrophs

17. Plants take in energy by absorbing energy from _____
 a. The moon (b. The sun) c. Water
18. Which of the following affects the rate of photosynthesis?
 a. Temperature b. Light c. Water (d. All of these)
19. (True) or False: Plants are green because they reflect green light.
20. What is the name of the pigment that plants use to carry out photosynthesis?
 a. Phytochrome b. Auxin (c. Chlorophyll)

Chapter 9 (Cellular Respiration)

21. The process that our cells use to make energy is known as cellular respiration.
22. Muscle soreness is caused by _____ fermentation.
 (a. Lactic Acid) b. Alcoholic c. Glycolysis
23. Beer and wine are produced due to _____ fermentation.
 a. Lactic acid (b. Alcoholic) c. Glycolysis
24. The breakdown of a glucose molecule is known as _____.
 a. Lactic acid b. Alcoholic (c. Glycolysis)
25. **Aerobic** processes (do/do not) require oxygen. (circle one)
26. **Anaerobic** processes (do/do not) require oxygen. (circle one)
27. Food molecules are broken down during the process of cellular respiration.
 a. Food b. Protein c. Oxygen d. Carbon dioxide

Chapter 10 (Cell Growth and Division)

28. What are the phases of mitosis? (list in order)
prophase, metaphase, anaphase, telophase
29. The series of steps that cells go through as they grow and divide is known as the cell _____.
 a. Stage (b. Cycle) c. Growth.
30. Mitosis is also known as cell division.
31. Cancer is a disorder in which cells lose the ability to control their growth.
32. (True) or False: Normal cells will stop growing when they come into contact with other cells.
33. A tumor is a mass of cancer cells.

Chapter 11 (Introduction to Genetics)

34. Who was the famous scientist that is known as the "Father of Genetics?" Gregor Mendel
35. Traits are passed from parents to offspring

36. What type of plant did Mendel use for his experiments? pea plant
37. Organisms that have two different alleles for the same trait are known as heterozygous/homozygous (circle one)
38. Organisms that have two identical alleles for the same trait are known as heterozygous/homozygous (circle one)
39. The principle of dominance states that some alleles are dominant and others are recessive
40. What are gametes? sex cells
41. Gametes are produced during the process of _____
 a. Meiosis b. Mitosis c. Cytokinesis

Chapter 12 (DNA and RNA)

42. All of the cells genetic information is stored in DNA
43. DNA is copied during the process of _____
 a. Replication b. Transformation d. Transcription
44. RNA contains a sugar known as _____
 a. Glucose b. Ribose c. Deoxyribose
45. A mutation is a change in the cell's genetic material.
46. In eukaryotes, DNA is located in the nucleus/cytoplasm (circle one).
47. In prokaryotes, DNA is located in the nucleus/cytoplasm (circle one).
48. A mutation that occurs at a single nucleotide (or point) is known as a _____ mutation.
 a. Gene b. Point c. Frameshift

Directions – Define the following words

Chapter 1

Experiment –

Hypothesis –

Theory –

Variable –

Chapter 7

Cell –

Cell Membrane –