

Biology Practice Test

Name:

Date:

Block:

This practice test is designed to help you determine what concepts you DO know and more importantly what concepts you DO NOT know!

Go through the practice test THREE times:

(1) On your own (2) With your notes (3) With another student



Each time, if you cannot answer a question, draw a circle around it to identify that you should review this concept when preparing for the test.

True or False: Identify the following statements as true or false. If FALSE, rewrite the UNDERLINED WORD(S) with the correction (1 mark each)

1. _____ The Cell Theory states that all organisms are composed of one or more cells

2. _____ An example of a prokaryotic cell is an animal cell

3. _____ Binary fission is a type of sexual reproduction that occurs in bacteria

4. _____ Mitosis is a stage that occurs during Interphase

5. _____ Meiosis happens during asexual reproduction

Multiple Choice: Choose the BEST answer (1 mark each)

_____ 6. What is the role of a golgi body?

- a. Storage compartment for waste
- b. Jelly-like substance that contains organelles
- c. Sorts protein and packs them into vesicles
- d. Transports protein through here from the ribosome

_____ 7. Which structure separates the inside contents of the cell with the outside environment?

- a. Nucleus
- b. Cell membrane
- c. Ribosome
- d. Mitochondria

- _____ 8. Which is NOT a part of the structure of DNA?
- a. Phosphate
 - b. Nucleotide base
 - c. Deoxyribose sugar
 - d. Nucleic acid
- _____ 9. An advantage of asexual reproduction is that...
- a. It creates genetic diversity
 - b. A population will likely survive changes in their environment
 - c. Reproduction occurs quickly
 - d. Two parents are needed
- _____ 10. What is the first step of binary fission?
- a. Growth of cell
 - b. Segregation of DNA
 - c. Replication of DNA
 - d. Splitting of cells
- _____ 11. Reproduction by budding occurs when
- a. A tree produces new green shoots in springtime
 - b. Planaria are cut in half and grow back the missing parts
 - c. Amoebas divide in half
 - d. Yeast cells produce new smaller cells that break off and float away
- _____ 12. Cells are NOT likely to divide if
- a. There are not enough nutrients to support cell growth
 - b. The DNA within the nucleus has not been replicated
 - c. The DNA has been damaged in any way
 - d. All of the above
- _____ 13. DNA is duplicated during this stage of the cell cycle identified as
- a. Cytokinesis
 - b. Interphase
 - c. Prophase
 - d. Replication
- _____ 14. In mitosis, the chromosomes are pulled to the middle of the cell during
- a. Anaphase
 - b. Metaphase
 - c. Prophase
 - d. Telophase
- _____ 15. If a zygote of an organism has 30 chromosomes, how many chromosomes will its body cells have when it develops?
- a. 15 chromosomes
 - b. 30 chromosomes
 - c. 45 chromosomes
 - d. 60 chromosomes
- _____ 16. During fertilization...
- a. The nuclei of the gametes fuse together to form a zygote
 - b. The nuclei of the zygotes fuse together to form a gamete
 - c. Diploid cells become haploid cells
 - d. 46 chromosomes become 23

_____ 17. During which stage of meiosis does crossing over occur?

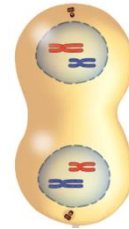
- a. Prophase I
- b. Metaphase I
- c. Prophase II
- d. Metaphase II

_____ 18. If you start with one diploid cell during meiosis, what do you end up with at the end of meiosis?

- a. Two haploid cells
- b. Four haploid cells
- c. Two diploid cells
- d. Four diploid cells

_____ 19. While looking through a microscope, you observe the following. What is the name of this phase in meiosis?

- a. Anaphase I
- b. Anaphase II
- c. Telophase I
- d. Telophase II



_____ 20. While looking through a microscope, you observe the following. What is the name of this phase in meiosis?

- a. Anaphase I
- b. Anaphase II
- c. Telophase I
- d. Telophase II



Short Answers

1. Write out the complimentary sequence of the following DNA strand (1 mark)

Strand 1: A T G C T G A C

Strand 2:

2. In binary fission, if you start with two parent cells, how many daughter cells will you end up with? (1 mark)

3. Identify two disadvantages for a species to reproduce sexually (2 marks)

a.

b.

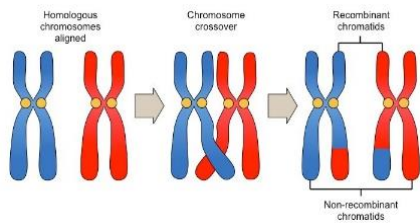
4. List three methods of asexual reproduction and provide a brief description of each (3 marks)

a.

b.

c.

5. Describe what is happening in the diagram below (2 marks)



6. Draw a diagram of two cells going from metaphase II \rightarrow anaphase II \rightarrow telophase II \rightarrow cytokinesis. You should end up with four cells (4 marks)