

03/26/14, natural selection & adaptations

Student:

Class:

Date:

Instructions

Chose the best answer. Hit the diagram key in the top right to view a diagram.

1. What is natural selection?
 - A. organisms produce more offspring that can possibly survive.
 - B. when a new species arise from isolation
 - C. a nonfunctional adaptation that is no longer useful.
 - D. when members of a species are better suited for their environments, they reproduce at a higher rate.

2. In the diagram of Darwin's Finches, why do the finches have differently shaped beaks?
 - A. depends on where they live
 - B. depends on what they eat
 - C. depends on their camouflauge
 - D. depends on their species

3. The phylogenetic tree shown in the diagram represents what in the fossil record?
 - A. the similarities in the embryonic development of an organism.
 - B. the development of an organism through its life cycle.
 - C. which genes are dominant and which are recessive.
 - D. the relatedness of species through the decent of a common ancestor.

4. In the diagram representing the vertebrate bodies, which organism are the most closely related.
 - A. Pig, Monkey and Salamander
 - B. Pig, Monkey, Human
 - C. Chicken, Pig, Salamander
 - D. Salamand, human, pig

5. A fertilized egg is called a _____.
- A. Zygote
 - B. Blastocyst
 - C. Embryo
 - D. Fetus
6. The illustrations in the diagram represent similarities between species, what is the term used to describe this phenomenon?
- A. Vestiges
 - B. Speciation
 - C. Phylogeny
 - D. Homologies
7. What is a species?
- A. the smallest classification of organisms that can reproduce and produce fertile offspring
 - B. a classification of organisms that show similarities in their physical characteristics.
 - C. a classification of organisms that have similar reproduction habits.
 - D. a classification of organisms that have similar eating habits.
8. What is a nonfunctional adaptation that is no longer useful?
- A. homology
 - B. phylogeny
 - C. vestige
 - D. ontogeny
9. What is DNA and where is it found in a cell?
- A. a special set of instructions inside of a gene, located in the cytoplasm of the cell.
 - B. traits that show up less often, located in the nucleus
 - C. special set of instructions inside of a gene, located in the nucleus of the cell.
 - D. traits that show up more often, located in the mitochondria of the cell

10. What is the difference between a genotype and a phenotype?
- A. a genotype is the genetic makeup, a phenotype is the recessive traits in the organism
 - B. a genotype is the genetic makeup, a phenotype is the physical features of the organism
 - C. a genotype is the dominant traits, a phenotype is the recessive traits of an organism
 - D. a genotype is the genetic makeup, the phenotype is the dominant traits of an organism
11. A rabbit with 2 grey fur alleles mates with a rabbit that has 2 brown fur alleles. Brown is dominant. What color fur will their offspring have? Will the offspring be heterozygous or homozygous?
- A. Grey, Heterozygous
 - B. Grey, Homozygous
 - C. Brown, Homozygous
 - D. Brown, Heterozygous
12. How many homologous pairs of chromosomes does a human have?
- A. 23
 - B. 46
 - C. 26
 - D. 43
13. If a person has down syndrome, how many chromosomes does he/she have? On what homologous pair is it located?
- A. 45, extra chromosome on autosome # 21
 - B. 47, extra chromosome located on autosome # 21
 - C. 45, missing chromosome on autosome # 21
 - D. 47, missing chromosome on autosome #21
14. What type of cell division is responsible for cell growth and repair and makes identical daughter cells?
- A. meiosis
 - B. mitosis
 - C. meiosis and mitosis
 - D. neither meiosis or mitosis

15. During which phase of cell division do cells spend their most time? What are they doing during this time?

- A. Interphase, growing and replication DNA
- B. Prophase, growing and condensing the chromosomes
- C. Metaphase, lining up in homologous pairs
- D. Anaphase, spindle fibers pulling chromatids apart

16. What is the purpose of Meiosis?

- A. to make identical copies of the same cell
- B. to make sex cells, also known as sperm and egg
- C. to replicate the DNA
- D. to repair wounds

17. How do Yeast Cells reproduce? Would this be sexual or asexual? Would this be mitosis or meiosis?

- A. budding, sexual, meiosis
- B. budding, asexual, meiosis
- C. budding, asexual, mitosis
- D. budding, sexual, mitosis

18. List the phases of the mitosis in order.

- A. Prophase, Interphase, Metaphase, Telophase, Anaphase, Cytokinesis
- B. Interphase, Metaphase, Prophase, Anaphase, Telophase, Cytokinesis
- C. Interphase, anaphase, metaphase, cytokinesis, telophase, prophase
- D. Interphase, prophase, metaphase, anaphase, telophase, cytokinesis

19. What is a Genetically Modified Organism?

- A. when an organism's genetic information is duplicated/cloned
- B. when a gene from one organism is purposely moved to improve or change another organism
- C. when a gene is altered to form a trisomy
- D. when the genetic makeup of an organism is erased

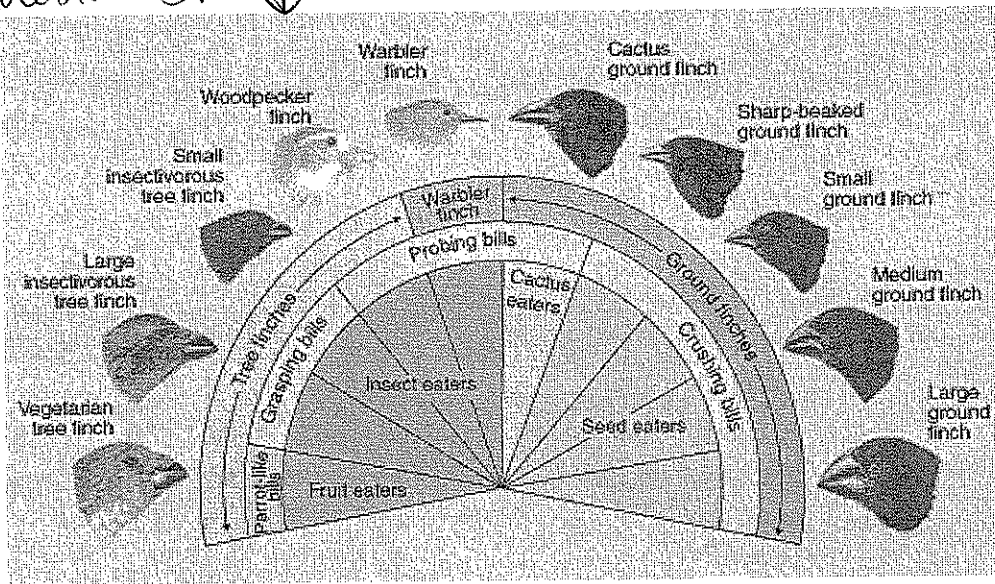
20. What is a stem cell?

- A. an undifferentiated cell, one whose job has not yet been determined
- B. a cell in the stem of a plant
- C. a differentiated cell that has the ability to change its function
- D. an differentiated cell that has a specific job

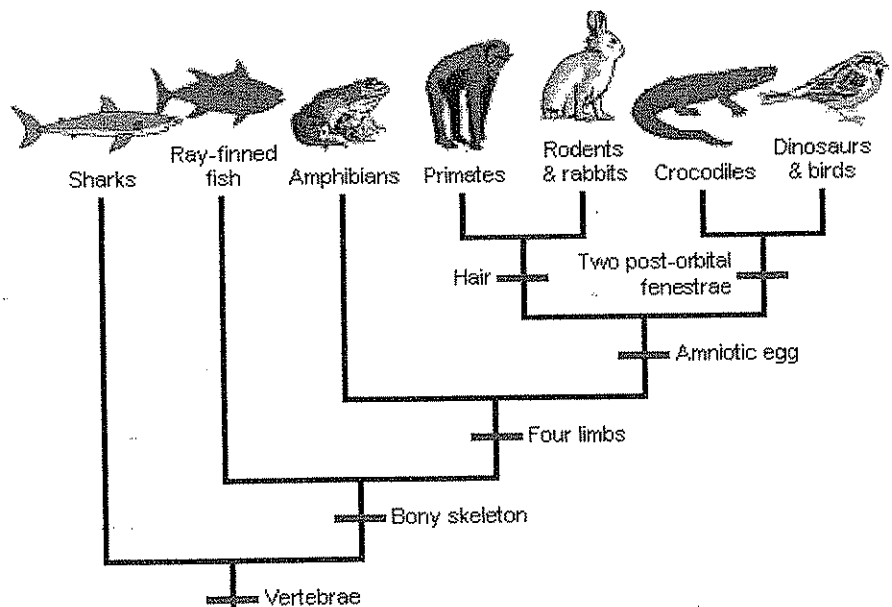
21. What is the primary goal of stem cell research?

- A. to clone other organisms
- B. to grow new bones
- C. to repair damaged tissue that can't repair itself
- D. to grow new limbs

Question 2 ↓

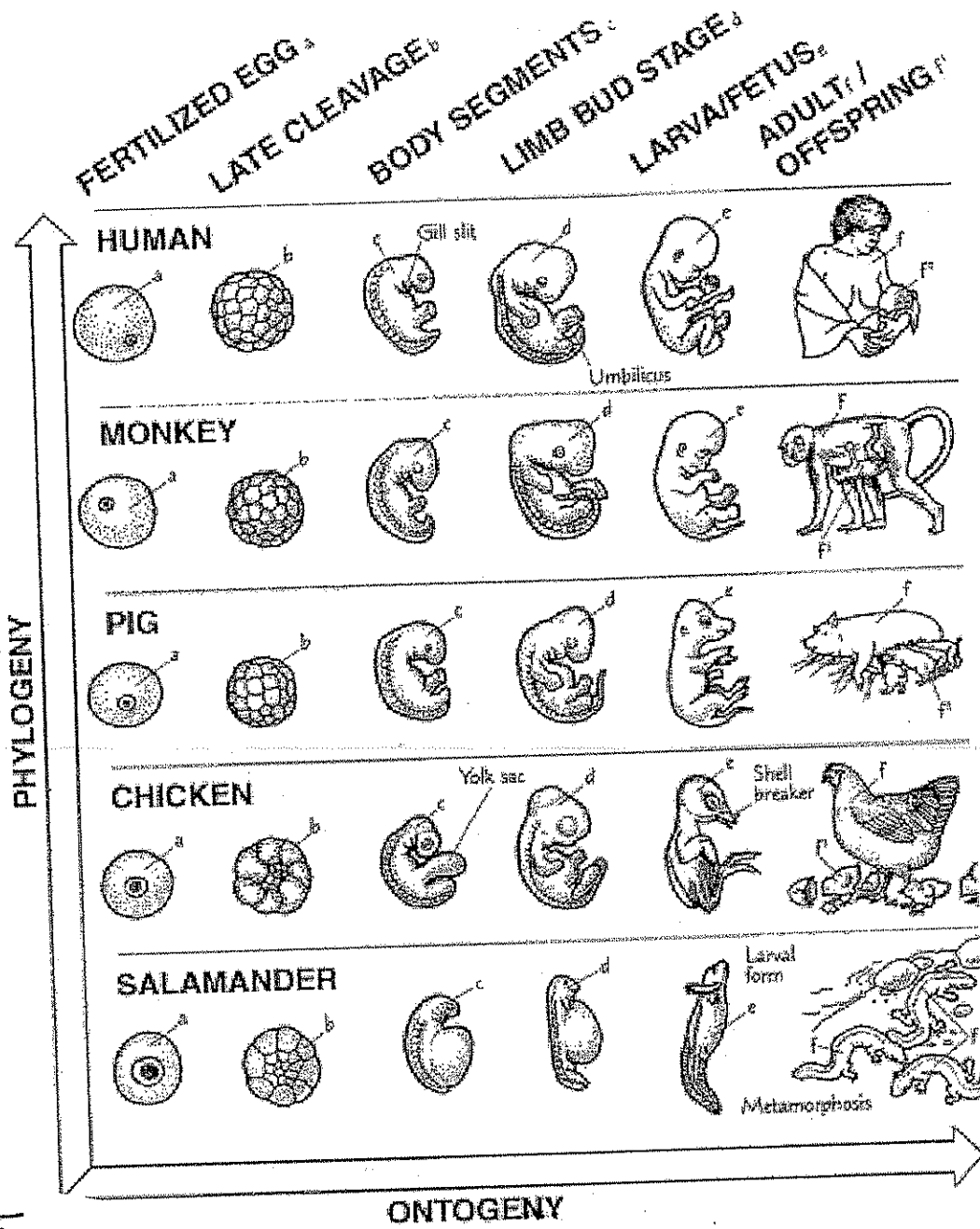


Question 3 →



THE VERTEBRATE BODY

Question 4



Question 5

