

SC10F Practice Exam

Part B – Free Response

Reproduction

1. Give one advantage and one disadvantage each for sexual reproduction and asexual reproduction.

	Advantage	Disadvantage
Asexual Reproduction		
Sexual Reproduction		

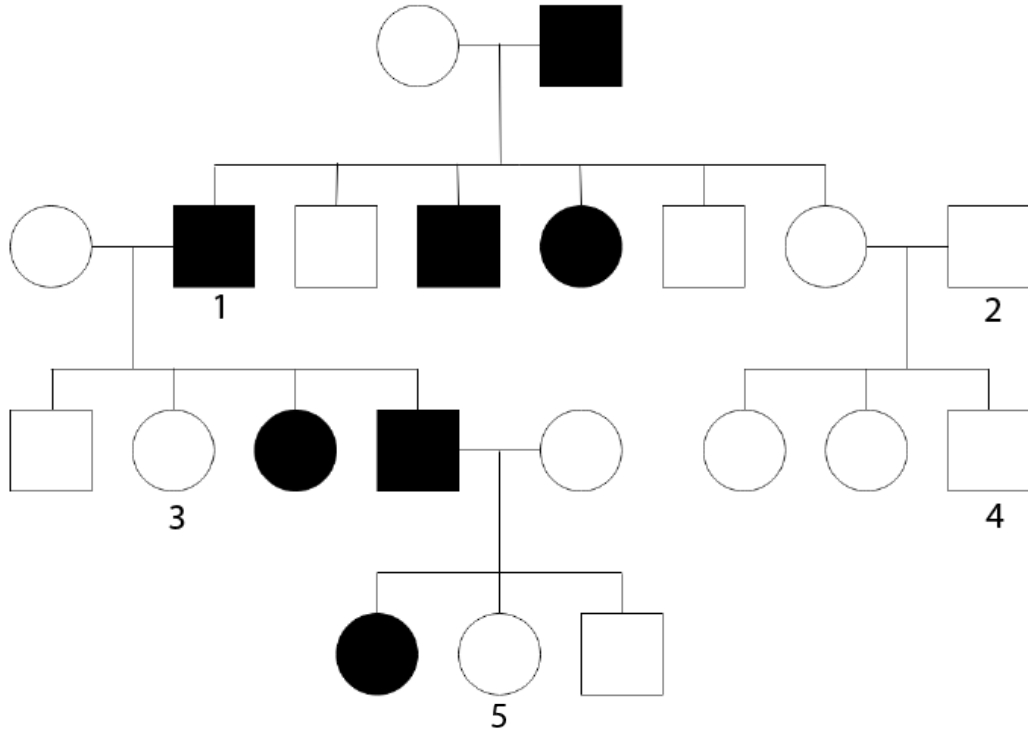
2. Fill in the blanks with words from the word bank.

The male _____ cell and the female _____ fuse together to produce a _____ that travels down the fallopian tube to the _____. It grows as it travels and becomes a blastocyst. The blastocyst embeds in the lining of the uterus forming an _____. The embryo begins to grow and become more complex. After about eight weeks, it has developed specialized cells and most organs. At this stage it is now referred to as a _____.

egg	embryo	fetus	sperm	uterus	zygote
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3. Color blindness is a sex-linked recessive trait. Show how two parents who are not color blind can have a child who is color blind.

4. The following pedigree tracks an autosomal recessive trait.



List the possible genotypes for the 5 labeled people.

Atoms and Elements

5. Explain what is meant by a chemical change and a physical change.

Chemical change	Physical change

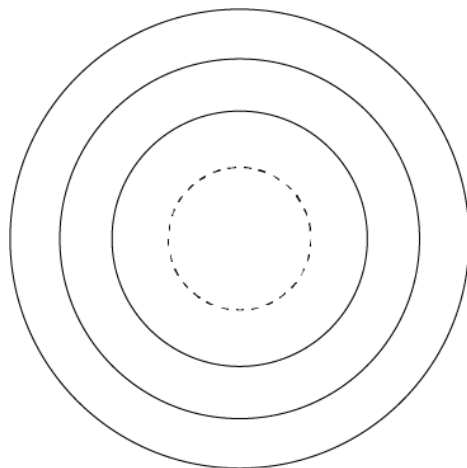
6. Indicate if each of the following is a chemical or physical change.

- (a) burning leaves _____
- (b) cutting paper _____
- (c) boiling water _____
- (d) dissolving sugar in water _____

7. Answer the following questions about the element iron.

- (a) The chemical symbol for iron is _____.
- (b) The atomic number of iron is _____.
- (c) The mass number of iron is _____.
- (d) One atom of iron contains _____ protons.

8. Draw a Bohr model diagram for an atom of magnesium.



12. How much electrical energy is transformed when a 60 W light bulb is left on for 24 hours?

13. A TV uses 120 W of power.

(a) How much energy in kWh does the TV use if you watch it for 4 hours?

(b) Electricity costs \$0.10 per kWh. How much would it cost to watch TV 4 hours a day, every day, for the whole year?