Bio EOC practice quiz 3

1-17-17

1. **Which best describes how meiosis contributes to genetic variation?**
   1. **Increase the rate of reproduction with each generation**
   2. **Produces a new individual different from either parent**
   3. **Decreases the risk of lethal mutations being transmitted**
   4. **Forms new DNA that can resist environmental change**
2. **Some microorganisms, such as yeast, produce energy in oxygen-free environments through the process of** 
   1. **Mitosis**
   2. **Photosynthesis**
   3. **Aerobic respiration**
   4. **Anaerobic respiration**
3. **Which is an organelle that performs cellular respiration and is paired with its correct function?**
   1. **Chloroplast- converts light energy into chemical energy**
   2. **Chloroplast- converts chemical energy into light energy**
   3. **Mitochondrion- converts energy found in glucose into energy for use by the cell**
   4. **Mitochondrion- converts cellular energy into glucose chemical energy**
4. **Which biomolecule contains nitrogenous bases?**
   1. **Lipid**
   2. **Protein**
   3. **Nucleic acid**
   4. **Carbohydrate**
5. **Which statement best describes the primary function of DNA replication?**
   1. **To ensure daughter cells have a complete copy of the DNA**
   2. **To prevent mutations from occurring in the cells**
   3. **To provide genetic variation within specific organisms**
   4. **To allow prokaryotic cells to undergo meiosis**

1. **An ion must cross the cell membrane through active transport instead of passive transport when the ion is**
   1. **Negatively charged**
   2. **Carried across by a protein**
   3. **Going against the concentration gradient**
   4. **Too small to move independently**
2. **In certain species of guinea pigs, black fur is dominant to white fur. If a white male guinea pig is crossed with a black homozygous dominant female, what is the probability of having offspring with black fur?**
   1. **100%**
   2. **75%**
   3. **50%**
   4. **25%**