Test Your Knowledge of …

DNA, Proteins and the Cell

1. T F Most proteins are made from 20 different amino acids.

2. DNA is composed of twisted pairs of :
   A) Ribonucleic acids B) Amino acids C) Nucleic acids on a sugar-phosphate backbone
   D) Adenine, Guanine, Cytosine, and Uracil E) None of the Above

3. DNA stores information in what are called "base pairs" with four chemicals known as:
   A) Cytosine, Guanine, Adenine, and Tryptophan B) Adenine, Guanine, Cytosine, and Thymine
   C) Adenine, Phosphate, Ribose, and Tyrosine D) Adenine, Guanine, Cytosine, and Uracil

4. Mitochondria is an organelle that makes:
   A) DNA B) Energy C) Amino acids D) Adenine Triphosphate E) B and C

5. T F DNA requires energy to read its information.

6. T F DNA constructs its own micro-copy machines with the help of proteins.

7. T F RNA polymerase copies both strands of DNA.

8. T F Helicase is a motor protein that rotates and unwinds DNA so its information can be copied.

9. T F RNA polymerase can copy an entire strand of DNA along with its compliment strand.

10. A gene contains information :
    A) that can be copied B) to make a protein C) in a 4-letter code D) A, B, and C

11. DNA and cell membranes closely monitor, or regulate:
    A) what goes in and out of the cell B) the PH of the cytosol
    C) levels of calcium and magnesium D) A, B, and C

12. In order to make a protein, the information on the DNA molecule must be transferred:
    A) to an RNA molecule B) by osmosis C) by DNA polymerase D) to a mitochondria

13. T F To make a specific protein requires building a specific RNA molecule with the help of helicase, ATP, RNA polymerase, and information from a correctly copied section of one DNA strand.

14. To make a protein requires:
    A) editing and capping an RNA molecule B) copying a section of DNA C) escorting an RNA molecule
    D) a ribosome E) correctly folding a polypeptide F) All of the above

Answers on Back

Answers to Intelligent Design vs. No Intelligence Req.

1) A, 2) D, 3) F, 4) T, 5) T, 6) F, 7) T, 8) T, 9) T, 10) T, 11) F – they only discovered its twisted-pair structure, 12) T, 13) F, 14) F, 15) F