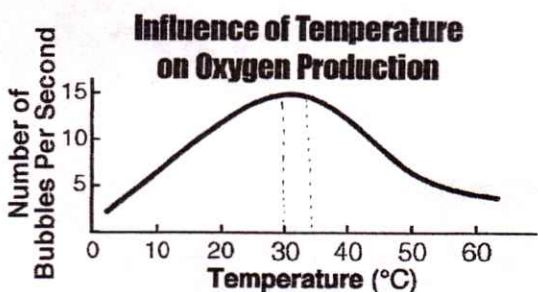


Name: _____

- 1) Which statement *best* describes enzymes?
- The rate of activity of an enzyme might change as pH changes.
 - Temperature changes do not affect enzymes.
 - Every enzyme controls many different reactions.
 - Enzymes are produced from the building blocks of carbohydrates.
- 2) Which statement describes a similarity between all enzymes, antibodies, and hormones?
- Their ability to replicate identical copies ensures continuation of the species.
 - They are made by and carried by the blood.
 - Their chemical structure is critical to their ability to function.
 - They work better at 100°C than 37°C.
- 3) The enzyme amylase will affect the breakdown of carbohydrates, but it will not affect the breakdown of proteins. The ability of an enzyme molecule to interact with specific molecules is most directly determined by the
- shapes of the molecules involved
 - number of molecules involved
 - amount of glucose present in the cell
 - sequence of bases present in ATP
- 4) The graph below shows the results of an action of the enzyme catalase on a piece of meat. Evidence of enzyme activity is indicated by bubbles of oxygen.



Which statement *best* summarizes the activity of catalase shown in the graph?

- The enzyme works better at 5°C than at 65°C.
 - The enzyme works at the same level in all environments.
 - The enzyme works better at 35°C than at either temperature extreme.
 - The enzyme works better at 10°C than at 50°C.
- 5) Three days after an organism eats some meat, many of the organic molecules originally contained in the meat would be found in newly formed molecules of
- oxygen
 - glucose
 - starch
 - protein
- 6) A wet-mount slide preparation of a specimen is stained in order to
- remove water from the slide
 - use the high-power lens
 - make cell structures more visible
 - eliminate some organelles
- 7) Which one of the following substances is an inorganic molecule?
- fat
 - water
 - starch
 - DNA
- 8) A company that manufactures a popular multivitamin wanted to determine whether their multivitamin had any side effects. For its initial study, the company chose 2,000 individuals to take one of their multivitamin tablets per day for one year. Scientists from the company surveyed the participants to determine whether they had experienced any side effects. The *greatest* problem with this procedure is that
- only one brand of vitamin was tested
 - no control group was used
 - the sample size was not large enough
 - the study lasted only one year
- 9) An investigation is carried out to determine the effect of exercise on the rate at which a person can squeeze a clothespin.
- What is the independent variable in the given investigation?
- exercise
 - rate of squeezing
 - number of participants
 - control
- 10) In an experiment to test the effect of exercise on the number of times a clothespin can be squeezed in 1 minute, the dependent variable would be the
- test subject
 - clothespin
 - amount of exercise
 - number of squeezes



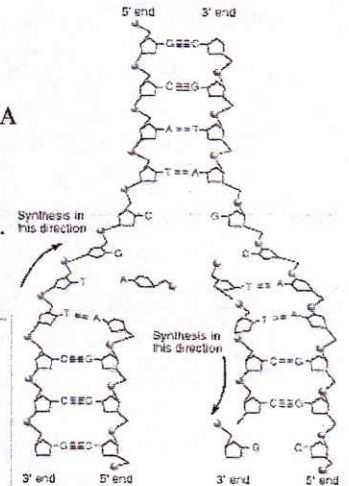
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Homework # 2.1 DNA Worksheet

Objectives: • Know the building blocks and structure of DNA • Replicate DNA

Structure of Nucleic Acids

- The building blocks of nucleic acids are known as _____.
- Draw and label the three parts of a nucleotide.



- Give the complementary nitrogen bases of the following:

<u>DNA</u>	<u>RNA</u>
G A T G C A C G T A A C T A C :	G A T G C A C G T A A C T A C :

Function of DNA

- The acronym DNA stands for _____.
- DNA makes up chromosomes, which are located in the _____ of a cell.
- Small sections of a DNA molecule that determine genetic traits are called _____.

Structure of DNA

- The sugar found in DNA is _____.
- The pyrimidine bases are _____ and _____.
- The purine bases are _____ and _____.
- In complimentary base pairing, _____ bonds with _____ and _____ bonds with _____.

Diagram of DNA molecule

- A DNA molecule consists of _____ strands.
- DNA is a long chain made of repeating units called _____.
- Nucleotides are attached by bonds between the _____ and the phosphate group.
- DNA is shaped like a _____ helix.