## Exam Instructions

- 1. This exam consists of a total of ten questions.
- 2. Each question has four possible answers, A, B, C, and D.

3. Please select the answer that you think best corresponds to the question and fill in the corresponding bubble on the answer sheet.

4. You have two hours to complete the exam.

## Questions

- 1. Which of the following is not an example of a physical change in chemistry?
- A. Breaking glass
- B. Burning wood
- C. Freezing water
- D. Dissolving sugar in water
- 2. What is the symbol for sodium on the periodic table?
- A. Sa
- B. So
- C. Na
- D. Sn
- 3. What is the order of increasing reactivity in metals?
- A. Alkali Metals, Alkaline Earth Metals, Transition Metals, Post-Transition Metals
- B. Alkali Metals, Transition Metals, Alkaline Earth Metals, Post-Transition Metals
- C. Alkaline Earth Metals, Alkali Metals, Transition Metals, Post-Transition Metals
- D. Alkaline Earth Metals, Transition Metals, Alkali Metals, Post-Transition Metals

4. What is the term for the reaction that releases energy from the breakdown of sugars?

- A. Photosynthesis
- **B.** Respiration
- C. Fermentation
- D. Combustion

5. What is the process for separating the components of a mixture using their different boiling points?

- A. Filtration
- B. Magnetic attraction
- C. Sublimation
- D. Distillation

6. What is the symbol for oxygen on the periodic table?

- A. Ox
- B. O
- C. O2
- D. Oo
- 7. What is the equation for the combustion of methane gas?
- A. CH4 + 2O2  $\rightarrow$  2H2O + CO2
- $\mathsf{B.}\ \mathsf{CH4}+\mathsf{4O2}\to\mathsf{2H2O}+\mathsf{4CO2}$
- C. CH4 + O2  $\rightarrow$  H2O + 4CO2
- D. 2CH4 + 2O2  $\rightarrow$  2H2O + 4CO2
- 8. What is the Lewis Dot Structure for Nitrogen?
- A. N +
- B. N
- C. N-
- D. N2

9. What type of chemical reaction is the combination of two substances to form a single product?

- A. Combustion Reaction
- B. Decomposition Reaction
- C. Neutralization Reaction
- D. Synthesis Reaction

10. What is the name for a reaction taking place in an aqueous solution that produces ions?

- A. Solvation reaction
- B. Precipitation reaction
- C. Double replacement reaction
- D. Acid-base reaction