

SCIENCE - PRACTICE REMEDIAL EXAM  
I TRIMESTER / 9TH GRADE / JR. HIGH SCHOOL

**I. Select if the sentences describe advantages or disadvantages of nanoparticles.**

| Sentences                                                                     | Advantage or disadvantage? |
|-------------------------------------------------------------------------------|----------------------------|
| Larger surface area, so they have different properties.                       |                            |
| They can accumulate in soil and water, potentially harming entire ecosystems. |                            |
| Stronger or lighter materials.                                                |                            |
| Unknown toxicity and health risks.                                            |                            |
| Research, development, and scaling up nanotechnology are expensive.           |                            |
| Improve medicine delivery to cancer cells.                                    |                            |

**II. How are nanoparticles used in bandages to treat infections?**

- a) By magically healing in seconds.
- b) By generating high heat that burns away bacteria.
- c) The nanoparticle sphere detects the infection and the antibiotic is released.
- d) By constantly keeping the zone wet.
- e) By acting as a regular bandage.
- f) By increasing the amount of bacterias.

**III. Select if the sentence belongs with a biofuel or fossil fuel.**

They are a non-renewable source: \_\_\_\_\_

They're made of petroleum: \_\_\_\_\_

They have fewer effects on the environment than fossil fuels: \_\_\_\_\_

They are a renewable source: \_\_\_\_\_

**IV. Which of the following best describes how conventional cars operate?**

- a) They run only on electricity.
- b) They are powered only by biofuels and have electric components.
- c) They run only on combustion engines by burning fossil fuel.
- d) They use a combination of an internal combustion engine and an electric motor.

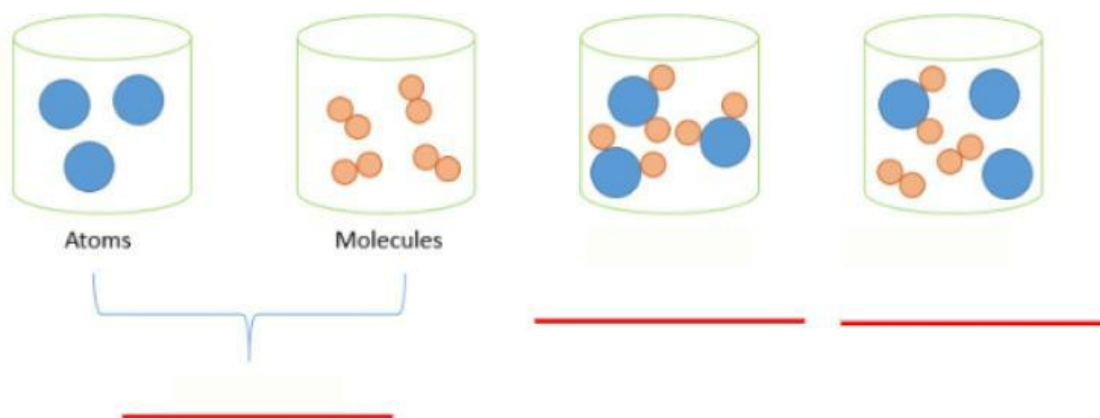
**V. Which of the following best defines a mixture?**

- a) A physical combination of two or more substances.
- b) A compound.
- c) A reactive element.
- d) Great amount of the same element.

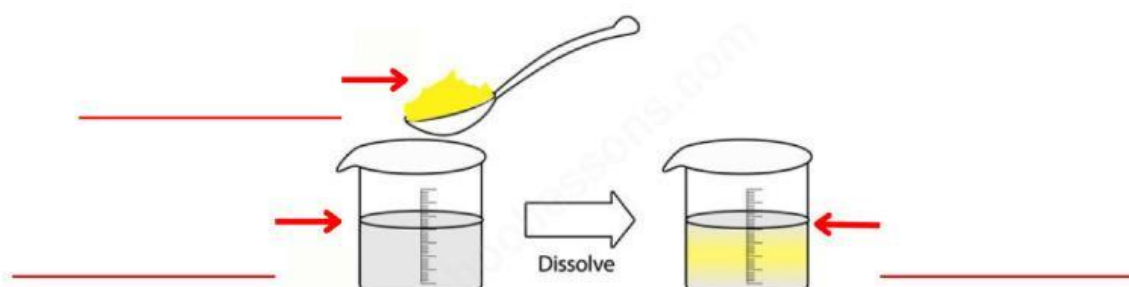
**VI. Select if the next sentences are advantages or disadvantages of having a car.**

| Sentences                                                     | Advantage or disadvantage? |
|---------------------------------------------------------------|----------------------------|
| It's comfortable.                                             |                            |
| Crucial for reaching hospitals for emergencies.               |                            |
| You have independence for traveling.                          |                            |
| Easy to transport groceries, luggage, or large items.         |                            |
| They emit greenhouse gases that contribute to climate change. |                            |
| Contributes to traffic and stress in urban areas.             |                            |
| You have more privacy than public transportation.             |                            |

VII. Answer the correct names for the following images that represent particle models.



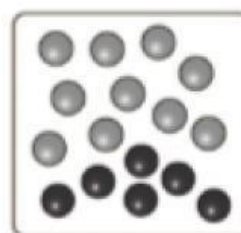
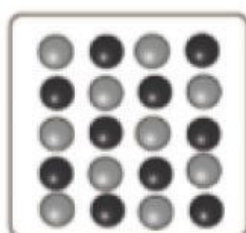
VIII. Label the next diagram with the correct names.



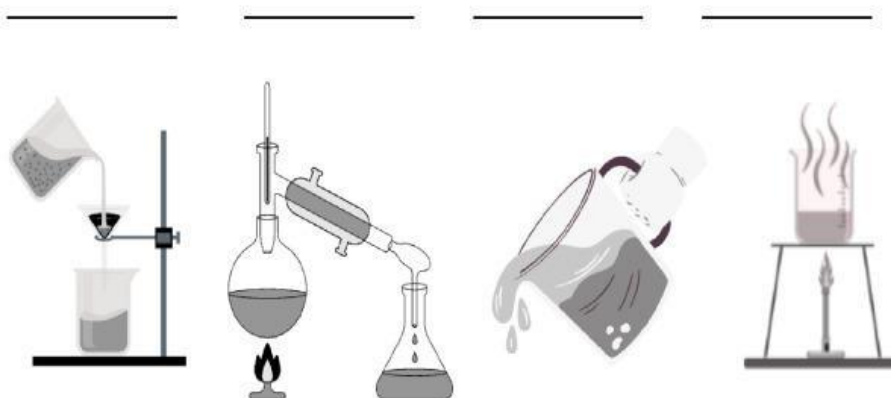
IX. Select the option that best describes the next images where the particle model was applied.

Answers: \_\_\_\_\_

\_\_\_\_\_



**X. Select the option that defines the name of the separation technique, according to the images.**



**XI. Select the option that defines the name of the separation technique.**

It is a separation method where a liquid is carefully poured off from a mixture, leaving behind a solid (like sediment) or a denser, immiscible liquid, relying on gravity to create distinct layers based on density: \_\_\_\_\_

It is a process of purifying a liquid compound by heating it into a vapor by the difference of boiling point that is then condensed back into a liquid:

\_\_\_\_\_

The process in which solid particles in a liquid or gaseous fluid are removed by the use of a filter medium that permits the fluid to pass through but retains the solid particles: \_\_\_\_\_

The process of a liquid changing to a gas, by heating until it reaches the boiling point: \_\_\_\_\_

**XII. Label the next diagram about the next specific separation technique with the correct names.**

|               |              |         |          |        |
|---------------|--------------|---------|----------|--------|
| conical flask | filter paper | residue | filtrate | funnel |
|---------------|--------------|---------|----------|--------|

