Science Final Exam Review

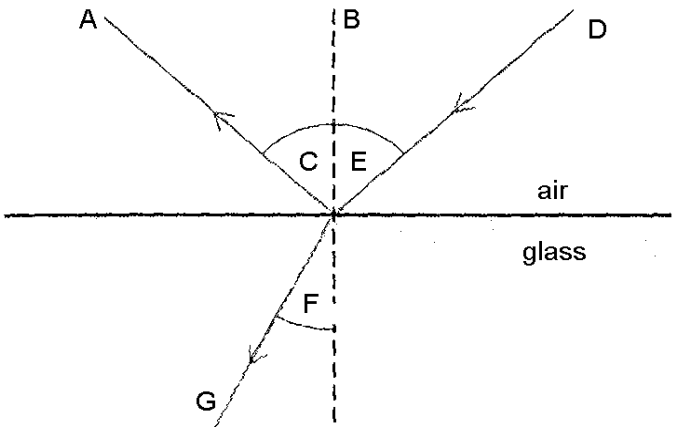
Part A. Questions

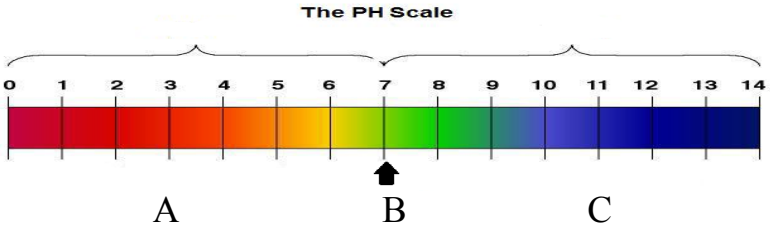
1. What observations tell you that a **chemical change** has occurred?
2. What are **ions**? How are they formed?
3. What are the **parts of a chemical equation**?
4. What are the properties of **acids**? **bases**?
5. What are **indicators**? Give some examples.
6. What are some of the different ways that **light is produced**? Describe them.
7. What is an **angle of incidence**? How would you find (measure) it?
8. What are two common **disorders of the eye**? (Reasons why people need glasses)
9. What **cell organelles** are found in a typical **animal** cell? What does each organelle do?
10. What are the **three organ systems** we learned about? Describe the purpose of each one.
11. How is **oxygen transported** between the organ systems?
12. What are the different **types of blood cells**? Where are they made?
13. What is **diffusion**? What is **osmosis**?
14. What is **weather**? What is **climate**?
15. What is the **most abundant greenhouse gas** produced by humans?

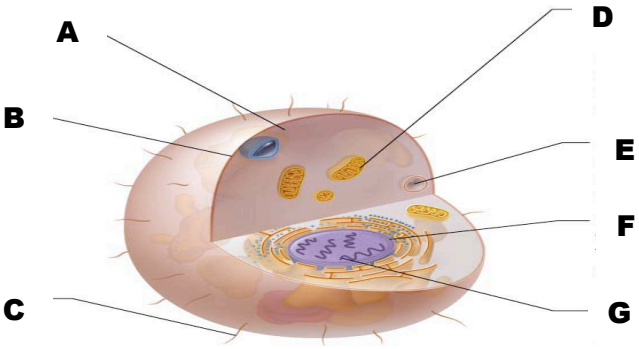
Part B. Definitions

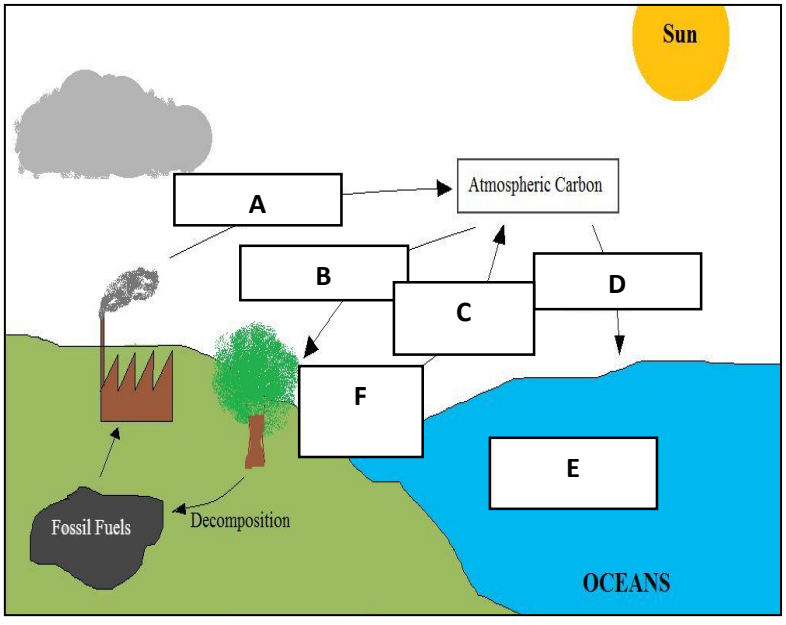
concave mirror
convex mirror
primary colours of light
secondary colours of light
stem cells
organelles
white blood cells
platelets
carbon footprint
greenhouse effect
albedo

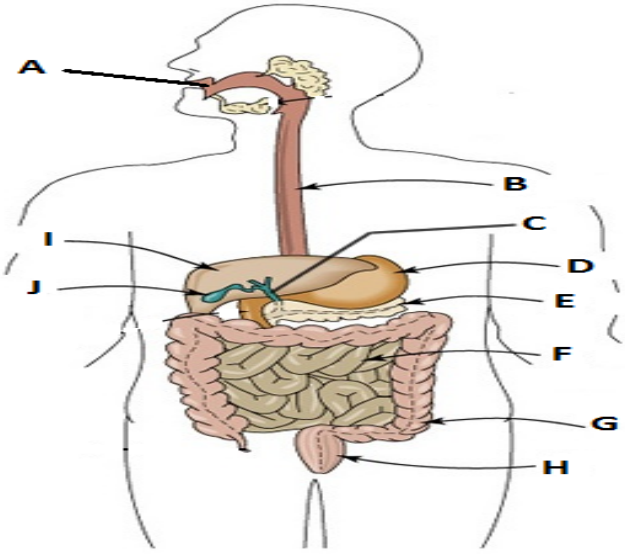
Part C. Diagrams











Part D. Short Answer

Chemistry Questions

1. Write the **chemical formula's** for the following compounds:

(Ionic Compound) a) calcium chloride _____

(Ionic Polyatomic Compound) b) magnesium hydroxide _____

(Molecular Compound) c) carbon tetrafluoride _____

2. Write the **chemical names** of the following compounds:

(Ionic Compound) a) CaI_2 _____

(Ionic Compound) b) NaF _____

(Molecular Compound) c) P_2O_5 _____

3. For each of the statements, write whether it describes a change that is **chemical** or **physical**:

Sugar dissolves in water _____

Potatoes are cut into slices _____

A book is burned _____

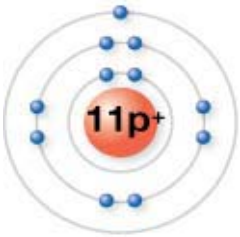
4. a. Identify the name of the atom below: _____

b. How many electron shells does this atom have? _____

c. Would this atom form an **anion** or a **cation?** _____

d. What charge would the ion have (# and sign)? _____

e. How many electron shells would the ion have? _____



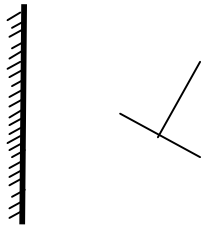
5. Acids are often transported over long distances in containers on trains. Occasionally, one of the containers may leak, or an accident may lead to an acid spill. What would emergency workers do to treat the acid that has spilled? Explain. **(2 marks)**

_____

_____

Optics Questions

6. Use the rules of reflection and ray diagrams to determine (draw) where the **image** will be located. Then, identify the SALT characteristics.



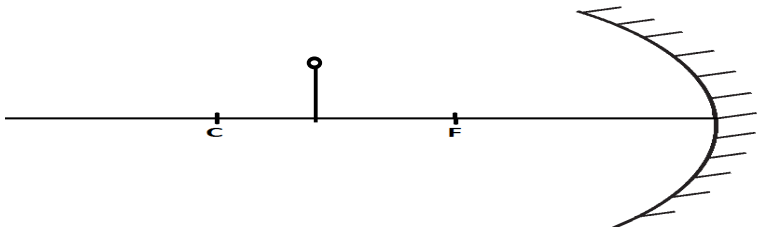
S: _____

A: _____

L: _____

T: _____

7. Locate the **image** in the curved mirror using a ray diagram. Then, identify the SALT characteristics.



Mirror Type: _____

S: _____

A: _____

L: _____

T: _____