Subject: Science **Assessment Worksheet: 01**

Class: X **Name of Student.....**

Darken the circle against the correct option of the following questions with a pencil / pen:

① Symbol of Sodium, Copper and Magnesium are respectively

(a) Na, Mg and Cu **(b)** Na, Cu and Mg

(c) Mg, Na and Cu **(d)** Cu, Na and Mg

② Symbol of Chlorine and Chloride are respectively

(a) Cl and cl^- **(b)** Cl^- and cL

(c) Cl and Cl^- **(d)** cl^- and cl

③ Formula formed by the combination of Silver and Iodine is

(a) Agi **(b)** AGI

(c) AgI **(d)** agI

④ Valency of Potassium and chlorine are respectively

(a) +1 and +1 **(b)** +1 and +2

(c) +1 and -1 **(d)** -1 and +1

⑤ The correct formula of Calcium phosphate is

(a) $Ca_3(PO_4)$ **(b)** $Ca_3(PO_4)_2$

(c) $Ca\ (PO_4)_2$ **(d)** $Ca_2(PO_4)_3$

⑥ The atoms of the same element, having the same atomic number but different mass numbers are

(a) Isobars **(b)** Isotopes

(c) Isomers **(d)** Isotherm

⑦ Chemical formula of Aluminium hydroxide is

(a) Al (OH) **(b)** $Al\ (OH)_2$

(c) $Al\ (OH)_3$ **(d)** $Al_3(OH)$

⑧ Atomic number of an atom is equal to ..... present in an atom.

(a) Number of electrons **(b)** Number of protons

(c) Number of neutrons **(d)** Both (a) and (b)

⑨ Sodium is written as $_{11}Na^{23}$ which indicates that it has

(a) atomic number 23 and mass number 23.

(b) atomic number 11 and mass number 11

(c) atomic number11 and mass number 23

(d) atomic number11 and mass number 34

⑩ $Mg(OH)_2$ is

(a) Magnesium oxide **(b)** Magnesium hydroxide

(c) Milk of Magnesia or Magnesium hydroxide **(d)** Magnesium oxyhydrogen

Class: X **Assessment Worksheet: 2**

Subject: Science **Name of the Student……**

- **This ASSESSMENT SHEET is of 20 Marks.**
- **It has been divided into TWO SECTIONS.**
- **SECTION-I contains Multiple Choice Questions (MCQ) of 1 mark each.**
- **SECTION-II contains Short Answer Type Questions of 3 marks each.**

SECTION-I

Read the given paragraph carefully and answer the following questions. (1 X 5 = 5)

You are familiar with a number of elements like Iron, Silver, Aluminium, Sulphur, Calcium, Potassium, Copper, Carbon, Nitrogen, Oxygen etc. They can be classified as metals and non-metals on the basis of their chemical and physical properties.
As your know that metals are always solid (except mercury- liquid at room temperature), Hard (except sodium and potassium which are soft metals) , Sonorous (except Sodium and Potassium), Lustrous (except Lead), good conductor of heat and electricity(except Graphite) malleable(can be converted into sheets), ductile (can be converted into wire).

1. Mercury is a metal which is …….. at room temperature.
(a) solid (b) liquid (c) gas (d) both solid and liquid

2. Which property of metals is used for making bells and strings of musical instruments like Sitar and Violin?
(a) Sonorous (b) Malleability. (c) Ductility (d) Conductivity

3. A metal X is soft and can be cut with a knife. This is very reactive to air and cannot be kept open in air. Identify the element from the following
(a) Mg (b) Na (c) P (d) Ca

4. Aluminium is used for making cooking utensils. Which of the following properties of Aluminium are responsible for the same?
(i) Good conductor of heat (ii) sonorous (iii) Ductility (iv) hard
(a) (i) and (ii) (b) (i) and (iii) (c) (ii) and (iii) (d) (i) and (iv)

5. Nitrogen is a
(a) metal (b) non -metal (c) metalloid (d) neither metal nor metal

SECTION-II (3 X 5 = 15)

6. It is observed that a pencil sharpener gets attracted by both the poles of a magnet while its body is not attracted by the magnet. Name the material that might have been used to make its parts.

7. A magnet has two poles-north pole and south pole. State whether it will be an attraction or repulsion?

a. NORTH- NORTH. b. SOUTH - SOUTH c. NORTH- SOUTH

8. What are electromagnets , how its strength can be changed?

9. A bar magnet has no markings to indicate its poles. How would you find out near which end are its north and south poles located?

10. If a magnet is broken into two pieces. The new magnets formed will have two poles. Justify this statement.

Subject: Science **Assessment Worksheet: 03**

Class: X **Name of Student……**

Assertion and Reason

For question number **1,2,3,4** and **5**, two statements are given- one labeled **Assertion (A)** and the other labeled **Reason (R).** Select the correct answer to these questions from the codes a, b, c and d. as given below. **Darken the circle against the correct option of the following questions with pencil/pen:** **1 X 5**

a. Both A and R are true, and R is correct explanation of the assertion.
b. Both A and R are true, but R is not the correct explanation of the assertion.
c. A is true, but R is false.
d. A is false, but R is true

1. **Assertion(A):** Quicklime reacts vigorously with water releasing a large amount of heat.
Reason(R): The above chemical reaction is an exothermic reaction

a. O b. O c. O d. O

2. **Assertion(A):** $Fe_2O_3 + 2Al \longrightarrow Al_2O_3 + 2Fe$
The above chemical equation is an example of displacement reaction.
Reason(R): Aluminium being more reactive than Iron(Fe), displaces Iron(Fe) from its oxide.
a. O b. O c. O d. O

3. **Assertion(A):** White silver chloride turns grey in sunlight.
Reason (R): Decomposition of silver chloride in presence of sunlight takes place to form silver metal and chlorine gas.
a. O b. O c. O d. O

4. **Assertion(A):** The balancing of chemical equations is based on law of conservation of mass.
Reason (R): Total mass of reactants is equal to total mass of product.
a O b. O c. O d. O

5. **Assertion(A):** Respiration is an exothermic reaction.
Reason(R): Respiration is a process in which glucose combines with oxygen and decompose to carbon dioxide and water. This reaction also release some energy.
a O b. O c. O d. O

Multiple choice questions:

Darken the circle against the correct option of the following questions (6 -10) with pencil/pen: **1 X 5**

6. Combustion of methane is an example of-
   a. Exothermic reaction O
   b. Endothermic reaction O
   c. Combustion O
   d. Decomposition reaction. O

7. When an iron nail is put in an aqueous solution of Copper Sulphate. The colour of Copper Sulphate changes to
   a. Green to blue O
   b. Blue to green O
   c. Green to colourless O
   d. Blue to colourless O

8. The solution of a substance 'X' is used for white wash. Substance 'X' is -
   a. Calcium oxide O
   b. Calcium hydroxide O
   c. Calcium chloride O
   d. Calcium carbonate O

9. What type of chemical reactions take place when electricity is passed through water?
   a. Displacement O
   b. Combination O
   c. Decomposition O
   d. Double displacement O

10. Give the ratio in which hydrogen and oxygen are present in water (by volume).
   a. 1:2 O
   b. 1:1 O
   c. 2:1 O
   d. 1:8 O

Subject: Science **Worksheet:4**

Class: X **Name of Student: .....**

ACIDS, BASES and SALTS

Read the passage given below and choose the correct option of Question Number 1 to 5 by putting a tick mark (√) against them. **1X5**

When Copper vessel is exposed to moist air for a long time .it acquires green coating. Copper corrodes by oxidation. In this process of corrosion copper reacts with moisture and gases present in the Air (oxygen and carbon dioxide) to form Copper hydroxide and Copper Carbonate which is green in colour**.** This gives a green colour to the surface of copper metal.The mixture formed is basic in nature, which reacts with the acid (citric acid) present in lemon to form a Copper Citrate which is washed away with water. As a result, the green-coloured substance formed is removed from the surface of the vessel and the shining surface is seen.

1. Chemical formula of Copper Carbonate is
   a. $Cu\ (CO_3)_2$
   b. $Cu\ _2CO_3$
   c. $CuCO_3$
   d. $Cu_2\ (CO_3)_2$
2. Copper vessel is tarnished due to
   a. Reduction
   b. Oxidation
   c. Both Oxidation and Reduction
   d. All of the above
3. Reaction between acid and base is called as
   a. Oxidation
   b. Reduction
   c. Neutralisation
   d. Corrosion
4. Copper Citrate is a/an
   a. Acid
   b. Base
   c. Salt
   d. Acid and salt both
5. An aqueous solution turns red litmus solution blue. Excess addition of which of the following solution would reverse the change?
   a. Baking powder
   b. Lime
   c. Ammonium hydroxide solution
   d. Hydrochloric acid

Question numbers 6 to 10 are Short Answer Type Of Questions: Answer the given questions in brief. **3X 5**

6. What will be the action of the following substances on litmus paper?

   Dry NaOH, Vinegar, Lemon juice, Carbonated soft drink, Curd, Soap solution

Ans.....
.....
.....
.....
.....
.....
.....

7. Which acid is use to be injected into the body by the sting of honey bee? Which chemical is use to neutralize its effect and why?

Ans.....
.....
.....
.....
.....
.....
.....

8. What are indicators? Write three examples of natural and artificial indicators.

Ans.....
.....
.....
.....
.....

9. What is dilution? Is it an exothermic or endothermic reaction? What are the precautions to be taken while doing dilution?

Ans:.....
.....
.....
.....
.....
.....
.....

10. What are antacids? Describe with examples. How does these help in indigestion?

Ans.....
.....
.....
.....
.....
.....

Subject: Science **Assessment Worksheet: 5**

Class: X Name of Student.....

Acids, Bases and Salts & Metals and Non-Metals

Darken the circle against the correct option of the following questions(1-10) with pencil or pen. **1X10**

1. Fixed number of water molecules associated with one formula unit of a substance is called as
   a. Crystallization. O
   b. Water of crystallization. O
   c. Water of hydration. O
   d. Dilution O

2. Chemical formula of Gypsum is
   a. $CaSO_4. H_2O.$ O
   b. $CaSO_4.2H_2O$ O
   c. $CaSO_4.3H_2O$ O
   d. $CaSO_4.4H_2O.$ O

3. Colour of dehydrated Copper Sulphate is
   a. Black. O
   b. Blue. O
   c. White O
   d. Green O

4. A chemical is used for disinfecting drinking water to make it free from germ. Its chemical formula is
   a. CaOCl O
   b. $CaOCl_2$ O
   c. $CaOCl_3$ O
   d. $CaOCl_4.$ O

5. Slaked lime is
   a. Calcium Oxide O
   b. Calcium Oxychloride. O
   c. Calcium Carbonate. O
   d. Calcium Hydroxide. O

6. An element reacts with oxygen to give a compound with a high melting point. This compound is also soluble in water. The element is likely to be-
   a. Calcium O
   b. Carbon O
   c. Silicon O
   d. Iron O

v

7. The non – metal which can conduct electricity is-
   a. Graphite O
   b. Iodine O
   c. Silicon O
   d. Diamond O

8. The compounds which react with acids as well as bases to produce salts and water are called as
   a. Acidic oxides O
   b. Basic oxides. O
   c. Amphoteric oxides. O
   d. Neutral oxides. O

9. The metal which is liquid at room temperature is
   a. Na O
   b. Hg O
   c. Mg O
   d. Mn O

10. The property of metals used for making strings of musical instruments like Sitar is -
   a. Sonorous O
   b. Malleability O
   c. Ductility. O
   d. Conductivity. O

Subject: Science **Worksheet:**

Class: 10 **Name of Student……**

ASSESSMENT WORKSHEET (LIGHT)

Question 1 to 5 carry 1 marks each. Question 6 and 7 carry 2 marks each. Question 8 and 9 carry 3 marks each and question 10 carry 5 marks.

Read the following paragraph and answer the questions from 1 to 5

The spherical mirror forms different types of images when the object is placed at different locations. When the image is formed on screen, the image is real and when the image does not form on screen, the image is virtual. When the two reflected rays meet actually, the image is real and when they appear to meet, the image is virtual.
A concave mirror always forms a real and inverted image for different positions of the object. If the object is placed between the focus and pole. the image formed is virtual and erect.
A convex mirror always forms a virtual, erect and diminished image. The convex mirror is used as a rear view mirrors in automobiles because it can form small and erect image of an object.

(1) When an object is placed at the centre of curvature of a concave mirror, the image formed is
(a) larger than the object (b) smaller than the object (c) same size as that of the object (d) highly enlarged

(2) No matter how far you stand from a mirror, your image appears erect. The mirror is likely to be
(a) Plane (b) Concave (c) Convex (d) either plane or convex.

(3) A convex mirror has wider field of view because
(a) The image formed is much smaller than the object. (b) The image formed is much closer to the mirror
(c) both (a) and (b) (d) none of these.

(4) To get an image larger than the object, one can use
(a) Convex mirror (b) Concave mirror (c) either a convex mirror or a concave mirror (d) Plane mirror.

(5) If the image is virtual, erect and enlarged for the object position between pole and focus of mirror. Mirror is
(a) Plane (b) Concave (c) Convex (d) either plane or convex.

(6) (i) Explain why a ray of light passing through the centre of curvature of a concave mirror, is reflected along the same path.
(ii) The speed of light reduced to 0.5 times when it enters from air to another medium. Find the refractive index of medium.

(7) The outer surface of a hollow sphere of aluminum of radius 50 cm is to be used as a mirror. What will be the focal length of this mirror? Which type of spherical mirror will it provide?

(8) An object 2 cm in size is placed 30 cm in front of a concave mirror of focal length 15 cm. At what distance from the mirror should a screen be placed in order to obtain a sharp image? What will be the nature and the size of the image formed?

(9) At what distance should an object be placed from a convex lens of focal length 18 cm to obtain an image at 24 cm from it on the other side. What will be the magnification produced in this case?

(10) Draw the ray diagram in each case to show the position of the image when the object is placed:

(i) at the centre of curvature of a concave mirror
(ii) between the pole P and focus F of a concave mirror
(iii) in front of a convex mirror
(iv) at 2F of a convex lens
(v) in front of a concave lens

Subject: Science **Assessment Worksheet:7**

Name of Student.....

- **ASSESSMENT SHEET is of 10 Marks.**
- **It has been divided into TWO SECTIONS.**
- **SECTION-I contains Multiple Choice Questions (MCQ) of 1 mark each.**
- **SECTION-II contains CASE STUDY QUESTIONS, which are Multiple Choice Questions (MCQ) of 1 mark each.**

SECTION-I

1. A solution of substance X is used for white washing. Here X is:

   A. CaO ○
   B. $Ca(OH)_2$ ○
   C. NaCl ○
   D. KCl ○

2. Identify the substances that is oxidized and the substance that is reduced in the following reaction:
   $CuO_{(s)} + H_{2(g)}$ ----------> $Cu_{(s)} + H_2O_{(l)}$

   A. H_2, CuO ○
   B. H_2, H_2O ○
   C. H_2, Cu ○
   D. Cu, H_2 ○

3. When diesel, in the presence of oxygen gas, burns inside the engine of a bus, carbon dioxide and water are produced. The temperature inside the engine becomes very high. Which of the following statements is correct?

   A. The burning of diesel is an example of a physical change. ○
   B. Heat energy is taken out from the surroundings. ○
   C. Oxygen and diesel are the reactants in this process. ○
   D. This process is triggered by light energy. ○

4. Rusting is a process which requires

   A. Air ○
   B. Moisture ○
   C. Heat ○
   D. Both A and B ○

5. Magnesium ribbon burns in air with a dazzling white flame. This is due to the formation of a white solid. This white solid dissolves in water and gives a solution which turns red litmus blue. Which type of reaction is performed in above process?

   A. Combination reaction ○
   B. Decomposition reaction ○

C. Redox reaction ○
D. Oxidation reaction ○

SECTION-II

CASE STUDY QUESTIONS

Read the given paragraph carefully and answer the following questions:

In 1909 Sorenson devised a scale (known as pH scale) on which the strength of acid solutions as well as basic solutions could be represented by making use of the hydrogen ion concentrations in them. Sorensen linked the hydrogen ion concentrations of acid and base solutions to the simple numbers 0 to14 on pH scale.In everyday life, pH plays an important role on daily basis like in farming, the best crops are usually obtained with neutral or slightly acidic soil (pH 6.5 to 7.0), tooth decay starts when the pH of mouth is lower than 5.5 ,Bee-sting leaves an acid which causes pain and irritation etc.

6. Which of the following substance is added by farmers if the soil is acidic?
   A. Common salt ○
   B. Slaked lime ○
   C. Vinegar ○
   D. Limestone ○

7. Rain is called an acid rain when the pH is:-
   A. Above 8.5 ○
   B. Below 6.5 ○
   C. Below 5.6 ○
   D. Between 7-8 ○

8. During indigestion, which acid is produced by the stomach that causes irritation and pain?
   A. Hydrochloric acid ○
   B. Sulphuric acid ○
   C. Nitric acid. ○
   D. Phosphoric acid ○

9. Which of the following salt is used to give relief on the stung area -
   A. Washing soda. ○
   B. Caustic soda ○
   C. Baking soda ○
   D. Bleaching powder ○

10. Which of the following type of medicines is used for the treatment of hyperacidity in the stomach?
   A. Antiseptic ○
   B. Antibiotic ○
   C. Analgesic ○
   D. Antacid ○

Subject: Science **Assessment Worksheet:8**

Class: X Name of Student……

- **ASSESSMENT SHEET is of 10 Marks.**
- **It has been divided into TWO SECTIONS.**
- **SECTION-I contains Multiple Choice Questions (MCQ) of 1 mark each.**
- **SECTION-II contains CASE STUDY QUESTIONS, which are Multiple Choice Questions (MCQ) of 1 mark each.**

SECTION-I

1. The enzyme that breaks down starch into simpler form is known as
   - A. Amylase. ○
   - B. Lipase ○
   - C. Pepsin ○
   - D. Trypsin ○

2. The rate of breathing in aquatic organisms is much faster than that seen in terrestrial organisms, because-
   - A. the amount of dissolved oxygen in water is fairly high as compared to the amount of oxygen in the air. ○
   - B. the amount of dissolved oxygen in water is fairly low as compared to the amount of oxygen in the air. ○
   - C. Aquatic organisms need more oxygen to breath than terrestrial animals. ○
   - D. aquatic organisms do not have developed organs for breathing. ○

3. Arteries and veins connected by a network of extremely narrow tubes are called:
   - A. Sieve tubes ○
   - B. Capillaries ○
   - C. Vena cava ○
   - D. Valves ○

4. The process by which soluble products of photosynthesis are sent to different parts of the plants is known as -
   - A. Transpiration ○
   - B. Respiration ○
   - C. Translocation ○
   - D. Excretion ○

5. An artificial kidney is a device to remove nitrogenous waste products from the blood through-
   - A. Diaphragm ○
   - B. Dialysis ○
   - C. ECG ○
   - D. Electrolysis ○

SECTION-II

CASE STUDY QUESTIONS

Read the given paragraph carefully and answer the following questions:

You are familiar with a number of elements like Iron, Silver, Aluminium, Sulphur, Calcium, Potassium, Copper, Carbon, Nitrogen, Oxygen etc. They can be classified as metals and non-metals on the basis of their chemical and physical properties.As your know that metals are always solid (except mercury- liquid at room temperature), Hard (except sodium and potassium which are soft metals) , Sonorous (except Sodium and Potassium), Lustrous (except Lead), good conductor of heat and electricity, malleable(can be converted into sheets), ductile (can be converted into wire).

6. Mercury is a metal which is …….. at room temperature.
   A. solid
   B. liquid
   C. gas
   D. both solid and liquid

7. The property of metals used for making bells is
   A. Sonorous
   B. Malleability.
   C. Ductility
   D. Conductivity

8. A metal X is soft and can be cut with a knife. This is very reactive to air and cannot be kept open in air. The element is-
   A. Mg
   B. Na
   C. P
   D. Ca

9. Aluminium is used for making cooking utensils. Which of the following properties of Aluminium are responsible for the same?
   (i) Good conductor of heat (ii) sonorous (iii) Malleable (iv) hard

   A. (i) and (ii)
   B. (i) and (iii)
   C. (ii) and (iii)
   D. (i) and (iv)

10. Nitrogen is a
   A. metal
   B. non -metal
   C. metalloid
   D. neither metal nor metal

Subject: Science **Assessment Worksheet: 9**

Class: X Name of Student……

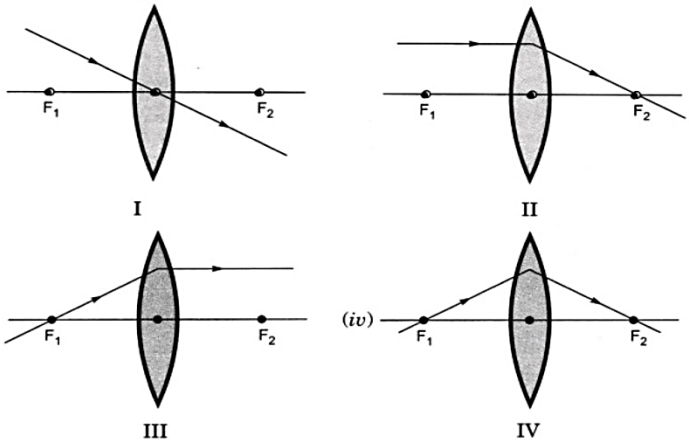
- **This ASSESSMENT SHEET is of 10 Marks.**
- **It has been divided into TWO SECTIONS.**
- **SECTION-I contains Multiple Choice Questions (MCQ) of 1 mark each.**
- **SECTION-II contains CASE STUDY QUESTIONS, which are Multiple Choice Questions (MCQ) of 1 mark each.**

SECTION-I

1. Give an example of a phenomenon where Tyndall effect can be observed.
   A. Red colour of sky
   B. Rainbow formation in the sky
   C. Twinkling of stars
   D. None of these

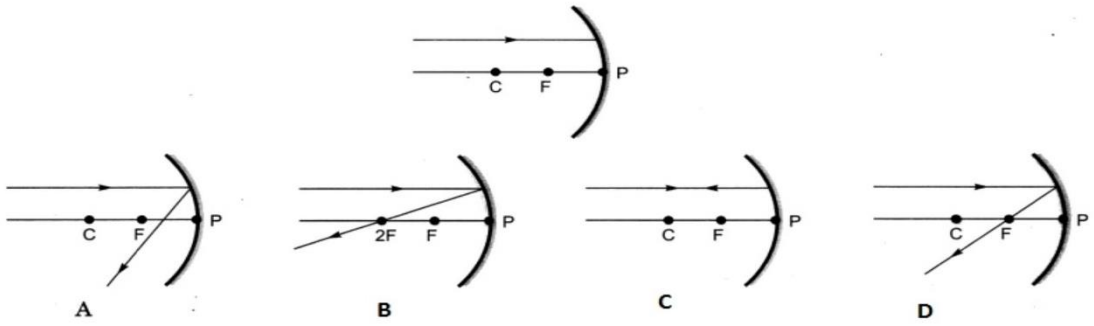
2. What is the cause of dispersion of white light on passing through a prism?
   A. Different colours have different speeds in the prism.
   B. Non parallel surfaces of the prism.
   C. Both A and B
   D. Neither A nor B

3. The diagrams showing the correct path of the ray after passing through a lens are –
   A. I and II only
   B. II and III only
   C. I, II and III
   D. I, II and IV



4. Name the atmospheric phenomenon due to which the sun can be seen above the horizon about two minutes before actual sunrise.
   A. Scattering of light.
   B. Internal reflection of light
   C. Atmospheric refraction
   D. Refractive Index

5. Which of the following ray diagrams is correct for the ray of light incident on a concave mirror as shown in figure?



A. A ○
B. B ○
C. C ○
D. D ○

6. The colour which bends the least while passing through a glass prism is-
A. Violet. ○
B. Red ○
C. Blue ○
D. Green ○

SECTION-II

CASE STUDY QUESTIONS

Read the given paragraph carefully and answer the following questions:

The refractive indices of four media A, B, C and D are given in the following table:

Medium	A	B	C	D
Refractive Index	**1.33**	**1.50**	**1.52**	**2.40**

7. If light, travels from one medium to another, in which case the change in speed will be minimum-
A. When light moves between A and B. ○
B. When light moves between B and C ○
C. When light moves between C and D ○
D. When light moves between A and D ○

8. If light, travels from one medium to another, in which case the change in speed will be maximum-

A. When light moves between A and B. ○
B. When light moves between B and C ○
C. When light moves between C and D ○

D. When light moves between A and D ○

9. The refractive index of diamond is 2.42. What is the meaning of this statement in relation to speed of light?
   A. Speed of light in diamond is 2.42 times speed of light in free space. ○
   B. Speed of light in diamond is1/ 2.42 times speed of light in free space. ○
   C. Speed of light in diamond is same as of speed of light in free space. ○
   D. Speed of light in diamond is twice the speed of light in free space. ○

10. Light travels fastest in-

   A. Water. ○
   B. Air ○
   C. Glass ○
   D. Diamond ○