

# DELHI PUBLIC SCHOOL, JAMMU

## SESSION (2019-20)

### QUESTION BANK

**Class: VIII**

**Subject: Science**

#### **Q1. Read the following paragraphs and answer the questions.**

A. A charged object can attract another object with opposite charge and also an uncharged object. Therefore, attraction by a charged object does not indicate whether the object being tested is charged or not. Thus, repulsion is the sure test of electrification.

- What is a charged object?
- Write any two methods of charging any uncharged object?
- If the object to be tested is repelled by a negatively charged object, what is the charge on it?

B. In 1752, on a dark June afternoon in Philadelphia, the 46 years old American Scientist decided to fly a kite. With the help of his son William, he attached his kite to a silk string, tying an iron key to the other end. Next, they tied a thin metal wire to the key and inserted the wire into a Leyden jar.

- Who was this American scientist? Name any one of his inventions.
- What is the use of Leyden jar?
- What was proven by this famous 'Kite Experiment'?

C. When earthquake occurs, the earth shakes, the base of the seismograph fixed to the earth also shakes. The freely suspended bob of pendulum does not shake. A pen is attached below the pendulum under which is fixed roller with a graph paper. Since, the graph paper on the rotating drum shakes with the shaking of the earth, the pen attached to suspended bob draw the vibrations produced by earthquake on the graph paper.

- What is a seismograph?
- What is a seismogram?
- Name a scale used to describe the magnitude of earthquake?

D. It is the most important component of the living cell. Nucleus is a large and spherical structure present in all the cells. After staining it can be easily seen with the help of microscope.

- Name four parts of the nucleus?
- What is the function of the chromosome?
- Why is the nucleus so important to Eukaryotic cell?

E. Cell organelles are small structures scattered in the cytoplasm. Various types of organelles present in cell perform different functions. These are mitochondria, Golgi bodies, ribosome, endoplasmic reticulum, etc.

- Name any cell organelles present in plant cell but absent in animal cell?
- What is the function of Endoplasmic Reticulum?
- What are plastids? Name its three types.

F. An English Scientist discovered the cell in 1665. He observed slices of cork under his self designed crude microscope. He noticed a large number of compartments in the cork slice resembling the structure of a honey comb. He had actually seen the dead walls of plant cell.

- What is a cell?
- Who discovered cell?
- What is the purpose of staining the cells before observation?

G. The liquids that conduct electricity are solutions of acids, bases and salts. Distilled water is a poor conductor of electricity. The passage of an electric current through a conducting solution causes chemical reaction or may cause formation of bubbles of a gas on the electrodes, deposits of metals on electrodes, changes the color of solution etc. When electric current is passed through an aqueous solution of common salt, it decomposes the chemical compound into its ions.

- What is electrolysis?
- What is the chemical name of common salt?
- Name the two liquids which are good conductor of electricity.

H. Chromium metal is quite expensive and hence it is not economical to make whole object out of chromium. So, the object is made of a cheaper metal (like iron or steel) and only a thin coating of chromium metal is deposited all over

its surface by electroplating. After chromium plating, it looks as if the whole iron (or steel) object is made of the chromium metal. Similarly tin 'cans' used for storing food are made by electroplating tin metal on to iron. Due to tin plating over the surface of iron, the food does not come in contact with iron and is protected from getting spoilt.

- a)What is electroplating?
- b)What is the purpose of electroplating?
- c)Name the metal which is usually electroplated on car parts made of steel.

I. Light is a form of energy. Light enables us to see the world around us. In the absence of light we are unable to see anything. We detect light with our eyes. When light falls on the surface on an object, some of it sent back and the process of sending back the light rays which fall on the surface of an object is called the reflection of light. A highly polished and smooth surface is the best reflector of light and because of this Wproperty; entire light is reflected in a definite direction which enable us to see our image on the plane mirror.

- a)Any thing which gives out light rays is called \_\_\_\_\_.
- b)We see the image of our face when we look into the mirror because of \_\_\_\_\_ of light.
- c)Name a metal which is the best reflector of light.

J. Our eyes are a wonderful gift of nature. We must take proper care of our eyes and protect them from any kind of injury or damage so that they remain good throughout our life. Vitamins and minerals are essential for keeping the eyes healthy. Deficiency of vitamins in the diet is responsible for many ailments of the eye including night blindness. People with night blindness experience poor vision at night or in dim light. We should include those food items in our diet which contain vitamins to prevent night blindness and keeps our eye healthy.

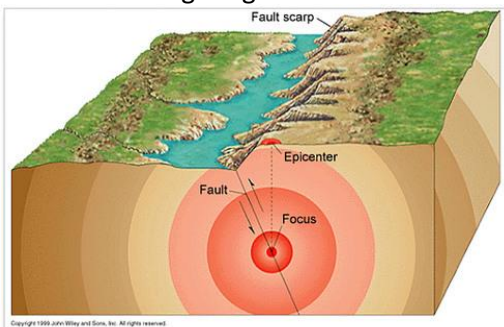
- a)What is night blindness?
- b)Which vitamin deficiency cause night blindness?
- c)Name any four food items which are rich in vitamins and help to prevent night blindness

K. Light travels very quickly in air or in a vacuum. When it travels from one medium (air) to other materials such as glass, water and oil, it bends or travels slower than in air. The speed of light in a medium depends on its optical density. If we dangle our legs from the side of a swimming pool, they appear to be quite short. Similarly, when we place a pencil obliquely in a beaker filled with water and look at it from above, it appears to be raised.

- a)What do you mean by refraction of light?
- b)Why does refraction occur?
- c)What happens when light travels from an optically denser medium to a rarer medium

## Q2. Look at the given diagrams and answer the questions.

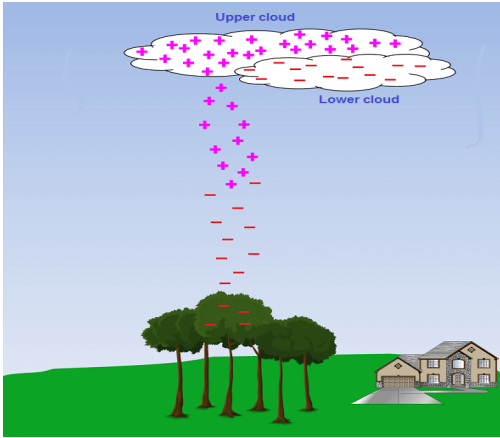
A. Look at the figure given below and answer the questions that follow:



1. What is an epicenter?
2. Give four main causes of earthquake.

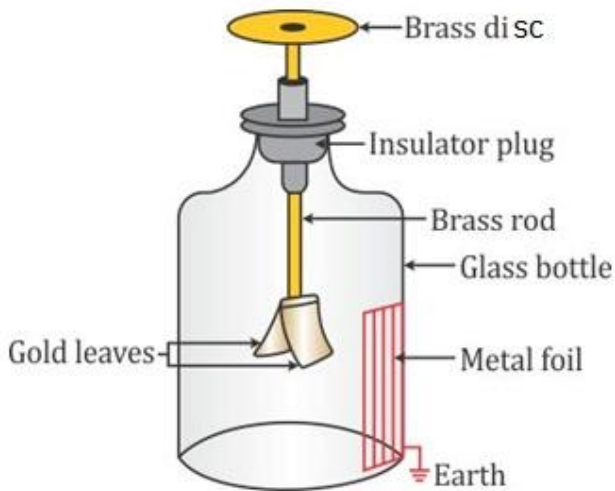
3. How many tectonic plates is the world divided into?

B.

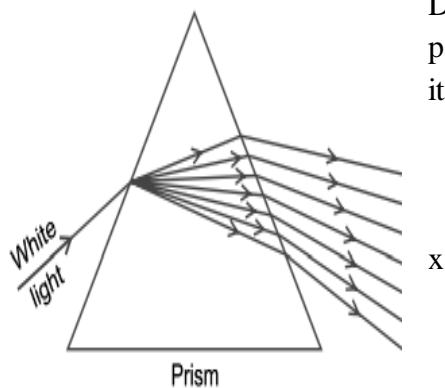


1. What is lightning?
2. Give any two useful effects of lightning.
3. Why are lightning strikes more frequent in hilly areas?

C.



1. What is an electroscope?
2. Give two uses of gold-leaf electroscope.
3. What is the observation when a charged object is touched with the brass disc of gold leaf electroscope?



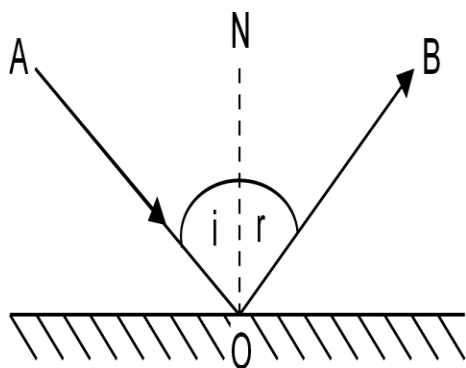
D In the figure given below ,a narrow beam of white light is shown to pass through a triangular glass prism. After passing through the prism, it produces a spectrum XY on that screen.

a)Name the phenomenon.

b) State the colors seen at X and Y.

c) Which color of light deviates maximum in the dispersion of white light by prism?

E In the figure given below, a beam of light ray (AO) from the light box strikes the mirror surface at the point (O), and bounces back in the same medium as (OB).

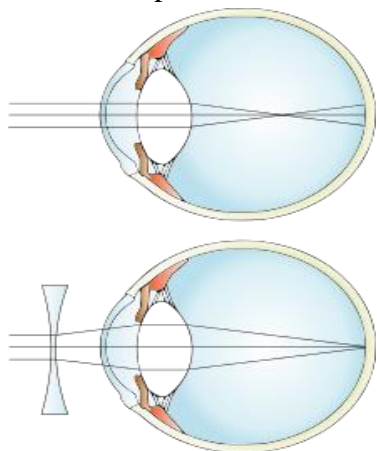


a) Name the phenomena.

b) What is meant by point of incidence?

c) If the angle between the plane mirror and the incident ray is  $45^\circ$ , the angle of reflection is \_\_\_\_\_.

F. In the figure given below, a 14 years old student is not able to see clearly the questions written on the blackboard placed at a distance of 5 m from him.

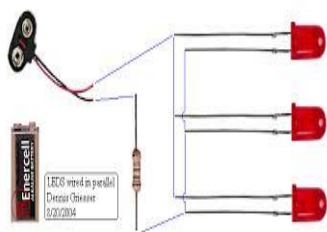


a) Name the defect of vision he is suffering from.

b) Name the type of lens used to correct his defect.

c) Give reason for this defect in his eyes.

G. In the figure given below, a device is used to detect the current flowing through the wire.



a) Name the device which is connected with the electric tester.

b) What is the advantage of this device in testing the electrical conductivity of liquids?

c) The longer lead of the device is always connected to the \_\_\_\_\_ terminal of the battery.

H. Boojho set up this circuit for purification of copper. Observe the circuit carefully and answer the following questions.

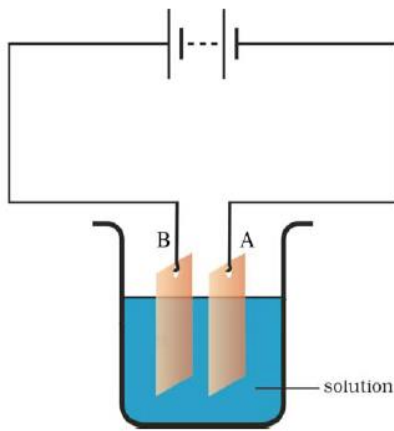


Fig. 14.8

- What will be nature of plate A?
- What is this method of purification called?
- What will be the nature of the solution?

H The bulb does not glow in the setup shown in the figure. List the three possible reasons;

I

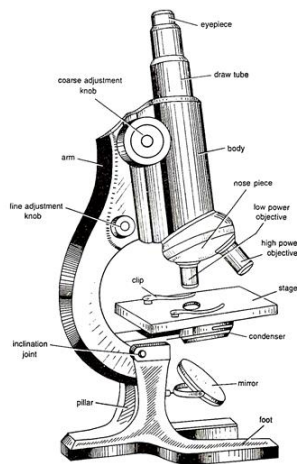
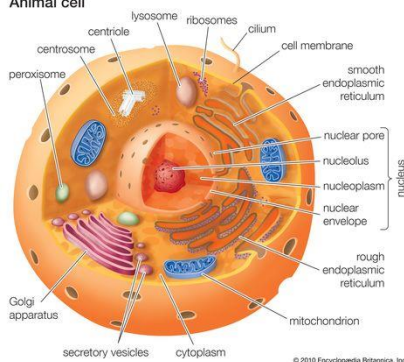


Fig. 278. A compound microscope

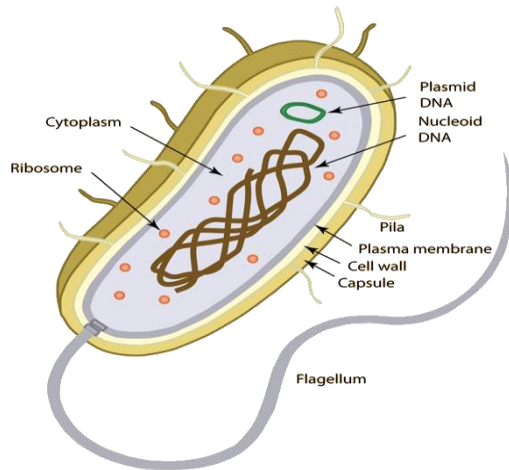
- Which lens is used in compound microscope?
- What are the 3 main parts of compound microscope?
- What is the magnification power of a compound microscope?

J) Animal cell



- What is the control center of a animal cell?
- Write the function of ribosome in an animal cell.
- Which organelle is known as the power house of the cell and why?

K)



- What are prokaryotic cells?
- What is the function of flagellum in bacterial cell?
- What organelles do prokaryotes have?

**Q3. For Question number 18 to 30, two statements are given, one labeled as Assertion (A) and the other labeled as Reason (R). Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below.**

- Both A and R are true and R is correct explanation of the assertion.
- Both A and R are true but R is not the correct explanation of the assertion.
- A is true but R is false.
- A is false but R is true.

**A. Assertion:** The process of charging an object by keeping near a charged object is called charging by Induction.

**Reasoning:** It is essential that both charged and uncharged object are touching each other.

**B. Assertion:** The lightning conductor at the top of high building has sharp pointed ends.

**Reason:** The surface density of charge at sharp points is very high resulting in setting up of electric wind.

**Assertion (A):** Cell is the fundamental structural and functional unit of all living organisms.

**Reason (R):** Anything less than a complete structure of a cell does not ensure independent living.

**C. Assertion :** Cell wall is a non-living rigid structure.

**Reason:** Cell wall does not give the shape to the cell.

**D. Assertion:** All living organisms are composed of cells and products of cells.

**Reason:** All cells arise from pre-existing cells.

**E. Assertion:** Owls can move freely during night.

**Reason:** They have large number of rods on their retina.

**F. Assertion:** A beam of light white light gives a spectrum on passing through a glass prism.

**Reason:** Speed of light outside the prism is different from the speed of light inside the prism.

**G. Assertion:** A ray incident along normal to the mirror retraces its path.

**Reason:** In reflection, angle of incidence is always equal to angle of reflection.

**H. Assertion:** Copper is used to make electric wires.

**Reason :** Copper has very low electrical resistance.

**I. Assertion :** Distilled water does not conduct electricity

**Reason :** Distilled water becomes a good conductor by adding alcohol in it.

**J. Assertion:** An atom becomes positively charged when it loses electron.

**Reason :** An atom is made up of subatomic particles.