

DELHI PUBLIC SCHOOL, JAMMU
SESSION (2019-20)
QUESTION-BANK

CLASS: VII

Syllabus: Light

Transportation in Animals and Plants

Soil

Electricity and its effects

Q1. Read the following paragraphs and answer the questions

(A) Stand in front of the plane mirror and see if you can touch your image formed in the mirror. You cannot because the image seems to be behind the mirror. Such an image is called a virtual image. A virtual image cannot be formed on a screen. A real image is formed on a screen. Do you notice about the image formed? Is the image upright or inverted? If you are holding something in your right hand it appears as if you are holding in your left hand.

- (i) What is a virtual image?
- (ii) What is a real image?
- (iii) Write the characteristics of images formed by a plane mirror.

(B) A convex lens is thicker in the middle than at the edges. A concave lens is thicker at the edges than in the middle. The light falling on the lenses can be represented by rays. Parallel rays falling on a convex lens converge to a point, called the principal focus (F). In a concave lens, parallel rays appear to diverge from a point. This point is known as principal focus (F).

- (i) How can you identify a convex lens?
- (ii) How can you identify a concave lens?
- (iii) Draw a labeled ray diagram of convex lens and concave lens.

(C) Convex mirrors make things look smaller but you can see a lot more of the surroundings. Thus, they give you a wide field of view. So, convex mirrors are used in car wing mirrors, in supermarkets, in buses, so that the driver can view the whole bus. Concave mirror gives a wider view of the objects.

- (i) What is the nature of image formed by convex mirror?
- (ii) Write the uses of convex mirror.
- (iii) Write any one use of concave mirror.

(D) Platelets are colourless, round, tiny cells formed in the bone marrow. If a person gets injured, then blood starts flowing from the cut or wound at the site of injury. The body cannot afford to let blood flow out of the body. So, after sometime a **dark red clot** is formed which plugs the cut and the bleeding stops. The **blood clot** is formed due to the presence of platelets in blood.

- i) What is haemophilia or bleeder's disease?
- ii) What will happen if the blood does not have enough platelets?
- iii) Platelets are also called as?

(E) The process of removal of waste products produced in the cells of the living organisms is called **excretion**. In simple organisms, like *Amoeba*, *Paramecium* and *Hydra*, most of the waste products are

removed through the **body surface by diffusion** whereas in organisms like earthworms and leeches, specialised excretory organs like **nephridia** are present. **Malpighian tubules** are excretory organs in insects. In vertebrates, **kidneys** are the excretory organs.

i) Name different excretory organs in different organisms.

ii) Why is excretion necessary?

iii) What is the major excretory product in humans?

(F) Water evaporates through the stomata present on the surface of the leaves by the process of transpiration. The evaporation of water from the leaves produces a 'suction pull' which pulls the water from the roots upwards to great heights in tall trees. The suction pull produced in xylem vessels by transpiration in plants is similar to the one which we produce while drinking milkshake from a glass with a straw. Another function of transpiration is that it cools the plant in hot weather. This happens due to cooling caused by evaporation. The upward movement of water and minerals in a plant through xylem is called ascent of sap.

i) How does water reach to great heights in tall trees?

ii) Name the vessels involved in the transportation of water?

iii) Define ascent of sap

G Different types of soils are found at different places. The main factors that affect soil profile and bring about changes in the soil structure are characteristics of parent rock, cover and climate.

Wind, rainfall, temperature, Sunlight and humidity are some of the important climatic factors. The type of soil as well as the climatic factors determine the various types of vegetation and crops that might grow in any region.

i) Which soil is best for growing paddy?

ii) What are the main factors that affect soil profile?

iii) What is soil profile?

H Soil is a valuable natural resource. It helps in sustaining life on earth. So, we should protect soil by preventing its erosion. We can prevent its erosion by planting trees and plants in large numbers, preventing overgrazing and adopting step farming in hilly areas.

i) What is soil erosion?

ii) How can we prevent soil erosion?

iii) What are the main causes of soil erosion?

I. A miniature circuit breaker automatically switches off electrical circuit during an abnormal condition of the network means in overload condition as well as faulty condition. Nowadays we use an MCB in low voltage electrical network instead of fuse. MCB is much more sensitive to overcurrent than fuse. They can be reset manually to restore electricity.

1. Why is MCB used?

2. What is working principle of MCB?

3. How do they work?

J We use various appliances based on heating effect of electric current

In our daily life. Some such appliances are electric room heater , hot plates,electric iron, hair dryers etc.All these contain a coil of wire called element

1..The coil of wire in an electric bulb is known as

- a) Element.
- b) Filament.
- c) Conducting wire.
- d) None of these.

2.What is meant by heating effect of electric current?

3.Name any two safety devices based on heating effect of electric current

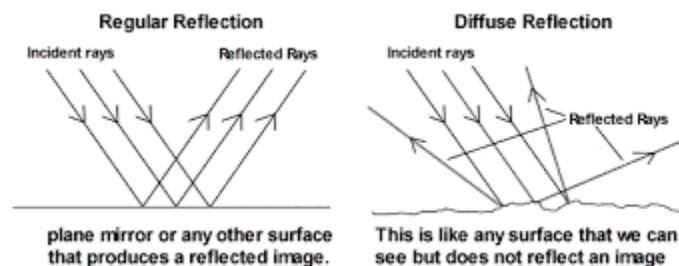
K In series combination the electric components are connected end to end along a same line .

It is such that the value of current in a series circuit remains same. A parallel circuit the negative terminals of all the cells are connected together with the help of wires Similarly the positive terminals of all the cells are connected together.

- a) What is series combination?
- b) How does parallel circuit work?
- c) Write an example of series and parallel combination.

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

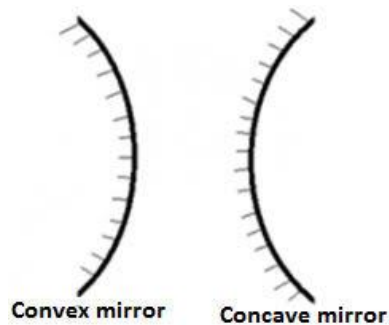
A) Diagram of regular surface and irregular surface



On the basis of above diagram answer the following questions:

- (i) Define regular reflection.
- (ii) Define irregular reflection.
- (iii) Name the type of reflection caused from different type of surfaces as: Glass, Metal sheet, Metal foil.

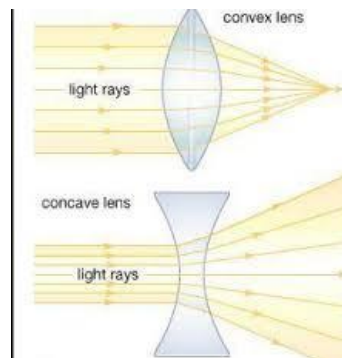
(B) Diagram of concave and convex mirror



On the basis of above diagram answer the following questions:

- (i) What are spherical mirrors?
- (ii) Name and define the mirror in figure (a)
- (iii) Name and define the mirror in figure (b)

(C) Diagram of concave and convex lens

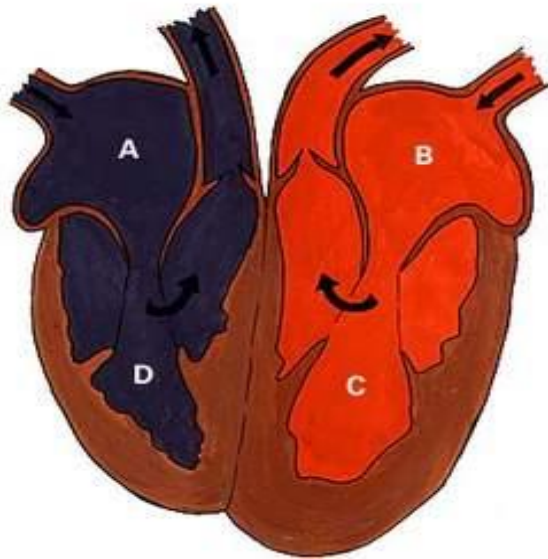


On the basis of

above diagram answer the following questions:

- (i) Define lens.
- (ii) Name and define the lens in figure (a)

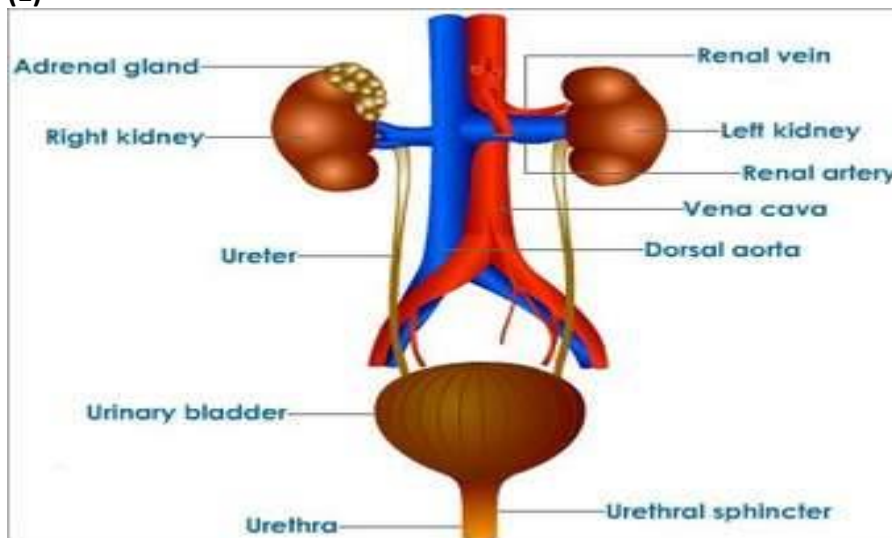
(D)



a

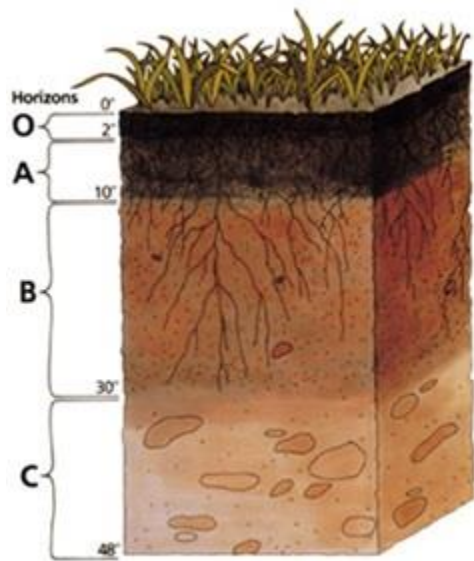
- Q1. The right side of the heart consists of _____ blood.
- Q2. Which vein carries the oxygenated blood?
- Q3. What is the function and location of bicuspid and tricuspid valve?
- Q4. How many chamber does the human heart has? Name each of them.

(E)



- Q1. Which organ system is depicted in this diagram?
- Q2. What is the function of urinary bladder?
- Q3. Which blood does the renal artery carry?
- Q4. What does this system does?

(F)



- a) A,B,C & O parts
- b) minerals and iron oxides?
- c) infertile?

Identify the Diagram and label the

Which layer is rich in soluble

Which layer lacks humus and is

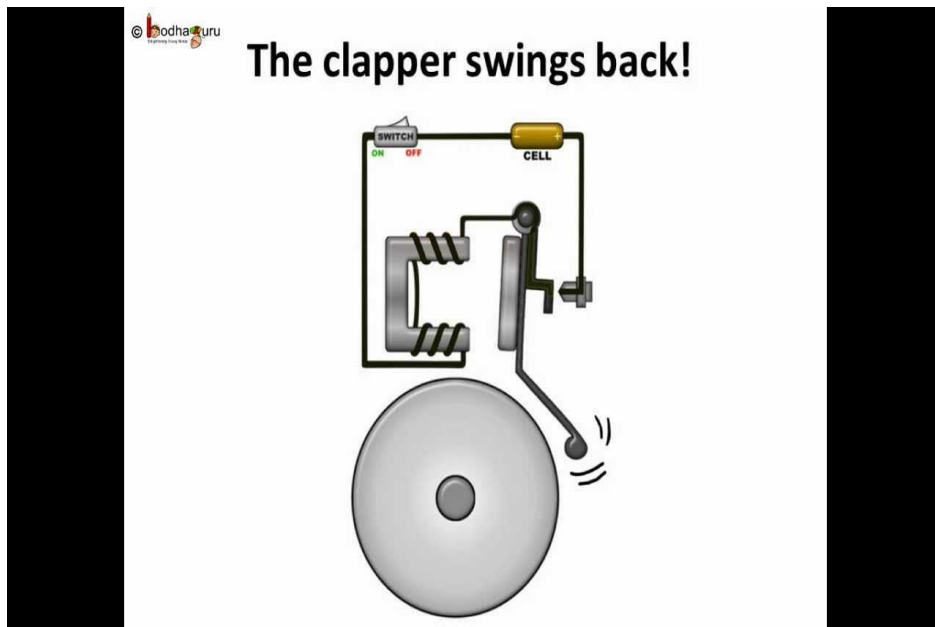
G



Q1. What procedure is being carried out in this picture?

Q2. Which type of patients have to undergo this procedure?

H



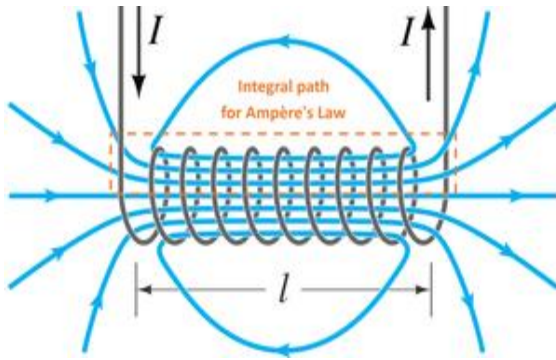
- 1) What is working principle of an electric bell?
- 2) What is armature in electric bell?

I



1. How do LEDs work?
2. How do LEDs lights save you money?
3. Which trade marks are used on these bulbs?

J



- What is solenoid and what it is used for?
- What is an example of solenoid?
- What is function of solenoid?

Q3. For Question 3 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 color of the leaf appears green due to reflection
Reason: The leaf absorbs green color and reflects all other colors.

B Assertion : A body can absorb all colors and can reflect all colors.
Reason:. A white colored body absorbs all colors

D Assertion:. Generally we feel cool in white colored clothes
Reason: A white body reflects all colors

E Assertion: We can see a person standing in front of us.
Reason: his is due to rectilinear propagation of light

F Assertion: Objects in the side mirror of a car appear closer than they actually are.
Reason: The side mirror is a concave mirror.

G Assertion: . We see an exact image of us when we look into a plane mirror.
Reason: The image formed by a plane mirror is virtual, erect and is at the same distance

H Assertion: If we are standing 30 west in front of a plane mirror then we can see the person 30 east to it.

Reason: The angle of incidence is equal to the angle of reflection.

- I **Assertion:** During a thunderstorm, flash of light is seen first and sound is heard afterwards
Reason: Speed of sound is greater than speed of light.

J **Assertion** doctor uses the stethoscope to listen to our heartbeat by placing it over the heart region of our chest.

Reason (R):

The diaphragm amplifies the sounds of heartbeat coming from our body. The rubber tube and ear pieces transmit these sounds to the ears of the doctor.

K **Assertion (A):**

A large number of fine root hair are present on the roots

Reason (R):

This increases the surface area of roots in contact with the soil due to which, more water and minerals are absorbed at a rapid rate.

L. **Assertion (A):**

The left side of heart is completely separated from its right side by means of a partition wall called 'septum'.

Reason (R):

Which allows blood to flow from left atrium to left ventricle.

M **Assertion:** Clayey Soil is required for growing paddy.

Reason : Clayey soil has good capacity to retain water,:

N **Assertion:**The uppermost layer of the soil is subsoil,

Reason: Subsoil is called B Horizon.

O **Assertion :** X- rays travel with the speed of light.

Reason: Xrays are electromagnetic rays.

P .**Assertion** Thorough the same current flows through the line wires and the filament of the bulb but the heat produced in the filament is much more higher than that in line wires

Reason : The filament of bulbs is made of material of high resistance

Q Assertion (A) Copper is used to make electric wires.

Reason(R) Copper has low electrical resistance.