



# **BRAIN INTERNATIONAL SCHOOL**

**SESSION 2024-25**

**CLASS: VIII**

**TERM 2 REVISION SHEET**

**SUBJECT: SCIENCE**

## **CHAPTER 2: MICRO-ORGANISMS: FRIEND AND FOE**

### **1. Multiple Choice Question:**

- (i) The unicellular organisms that sour milk to make curd are
- |              |              |
|--------------|--------------|
| (a) bacteria | (b) viruses  |
| (c) fungi    | (d) protozoa |
- (ii) Microorganisms causing diseases are given this name:
- |               |                |
|---------------|----------------|
| (a) antigens  | (b) antibodies |
| (c) pathogens | (d) vectors    |

### **2. Assertion –Reason questions:**

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

- (i) Both A and R are true and R is correct explanation of the assertion.
- (ii) Both A and R are true but R is not the correct explanation of the assertion.
- (iii) A is true but R is false.
- (iv) A is false but R is true.

(a) **Assertion:** Algae form a green sheet on the surface of stagnant water.

**Reason:** Algae are heterotrophic organisms.

(b) **Assertion:** The fungi live on or inside other plant and animal.

**Reason:** They are able to grow anywhere on land and water.

### **3. Observe the figure and answer the following questions:**

- i. Write the name of the disease.
- ii. Name the causative agent of this disease.
- iii. Name any two plant diseases and the microbes that cause them.



#### 4. Answer the following questions:

1. How can we control the spread of diseases caused by mosquitoes?
2. Why should we avoid standing close to a tuberculosis patient while he/she is coughing?
3. How do microorganisms clean the environment?
4. What is 'dehydration' of food? In what way is this technique useful?
5. Discuss five methods of food preservation.

### Chapter 4: Combustion and flame

#### 1. Multiple Choice Question:

- (i) Burning of charcoal in a closed room will produce  
(a) Carbon dioxide  
(b) Nitrogen dioxide  
(c) Carbon monoxide  
(d) All of these
- (ii) The following can't be used to extinguish electric fires  
(a) blanket      (b) water      (c) Carbon dioxide      (d) all of these

#### 2. Assertion –Reason questions:

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

- (i) Both A and R are true and R is correct explanation of the assertion.
- (ii) Both A and R are true but R is not the correct explanation of the assertion.
- (iii) A is true but R is false.
- (iv) A is false but R is true.

- (a) **Assertion:** A candle burns with a flame.

**Reason:** On burning, wax of candle vaporizes, catches fire and forms flame.

- (b) **Assertion:** Carbon dioxide gas is used as a fire extinguisher.

**Reason:** Carbon dioxide gas is non inflammable and heavier than oxygen.

### 3. Read the passage and answer the questions that follow:

We find that a combustible substance cannot catch fire or burn as long as its temperature is lower than ignition temperature. Have you ever seen cooking oil catching fire when a frying pan is kept for a long on a burning stove? Kerosene oil and wood do not catch fire on their own at their room temperature. But if kerosene oil is heated a little, it will catch fire. The increase of fuel consumption has harmful effects on the environment. Combustion of coal has resulted in many hazardous fires in coal mine. We generally have fireworks on festival days when a cracker is ignited.

- i. What is meant by global warming? Mention cause for the same.
- ii. What do you mean by a spontaneous combustion?
- iii. Explain acid rain and its consequences.

### 4. Answer the following questions:

1. Write in brief about the reasons of forest fires.
2. Although wood has a very high calorific value, we still discourage its use as a fuel. Explain.
3. In an experiment 25 kg of a fuel was completely burnt. The heat produced was measured to be 190,000 kJ. Calculate the calorific value of the fuel.
4. (a) Draw a labelled diagram of a candle flame and explain what happens in each zone.  
(b) Anu wants to boil water quickly in a test tube. On observing the different zones of the flame, she is not able to decide which zone of the flame will be best for boiling water quickly. Help her in this activity.

## CHAPTER 5: CONSERVATION OF PLANTS AND ANIMALS

### 1. Multiple Choice Question:

- (i) WWF works in the field of
  - (a) wildlife conservation.
  - (b) child labour
  - (c) forest conservation.
  - (d) water conservation
- (ii) Different species are classified into different threat categories in the
  - (a) Blue Data Book.
  - (b) Yellow Data Book.
  - (c) Black Data Book.
  - (d) Red Data Book

## 2. Assertion –Reason questions:

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

(i) Both A and R are true and R is correct explanation of the assertion.

(ii) Both A and R are true but R is not the correct explanation of the assertion.

(iii) A is true but R is false.

(iv) A is false but R is true.

(a) **Assertion:** If the habitat of an endemic organism is destroyed, the organism will become extinct.

**Reason:** Endemic species are restricted to a relatively small area.

(b) **Assertion:** Loss of one kind of organism from a region can harm all the other life forms.

**Reason:** All organisms are related with each other and their relationship is called food chain.

## 3. Read the passage and answer the questions that follow:

An ecosystem is all living things and nonliving things. And how they interact with each other. An ecosystem may be very small, like a backyard or a pond, or it can be a large like a pyre desert or a rainforest. There are freshwater ecosystems that cover less space than saltwater ecosystem. These parts are either living or nonliving parts, and are equally important to the ecosystem. The nonliving part of the ecosystem are called a biotic factor. All living things need nonliving things in order to survive. Some of these avoiding factors include water, mineral, sunlight and soil. Just like abiotic factors make it possible for organisms in an ecosystem to survive. Biotic factors are equally important for survival in an ecosystem. Fungi and bacteria are very important because they are called decomposers.

- i. What is an ecosystem?
- ii. A new species of plants is introduced to a habitat. What kind of a negative impact can this new species have on the biodiversity of the region?
- iii. What is the role of fungi and bacteria in an ecosystem?

## 4. Answer the following questions:

1. Explain reforestation and its useful effects.
2. An animal species that is widely distributed over the earth is said to be endemic. Do you agree? Give reasons.

3. (a) Does soil erosion affect the fertility of soil? How?  
(b) Why are wildlife sanctuaries important for conservation of plants and animals?
4. Define the following:  
a) national park                                  b) species                                  c) biosphere reserve

## **CHAPTER 7: REACHING AGE OF ADOLESCENCE**

### **1. Multiple Choice Question:**

- (i) Which of these is not a gland of the endocrine system?  
 (a) adrenal    (b) thyroid  
 (c) penis    (d) ovaries
- (ii) The belief that the mother is completely responsible for the sex of the child is wrong because the child  
 (a) gets sex chromosome only from the mother  
 (b) develops in the body of the mother.  
 (c) gets one sex chromosome from the mother and the other from the father.  
 (d) gets sex chromosome only from the father.

### **2. Assertion –Reason questions:**

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

**(i) Both A and R are true and R is correct explanation of the assertion.**

**(ii) Both A and R are true but R is not the correct explanation of the assertion.**

**(iii) A is true but R is false.**

**(iv) A is false but R is true.**

(a) **Assertion:** An adolescent needs a balanced diet.

**Reason:** Iron-rich food is good for adolescents.

(b) **Assertion:** Menarche is the start of first menstrual cycle in a girl.

**Reason:** Menarche marks the end of reproductive phase in a human female.

### **3. Read the passage and answer the questions that follow:**

Yaksh is a teenager. He observes many changes in his body like hair on his face and body, pimples on face and body, pimples on face and hoarse voice. He is very curious and so he asked about this to his science teacher in the class. The teacher explained him that all these changes are due to hormones released during adolescent period.

- i What do you understand by adolescent period?
- ii What changes occur in the shape of the body at puberty?
- iii Yaksh pancreas was found to produce insufficient insulin hormone. Which disease is he likely to suffer from? How we can control such type of disease?

#### **4. Answer the following questions:**

1. In human females each time during maturation and release of egg, the inner wall of uterus thickens. Is this thickening permanent? Give reasons.
2. Many adolescent boys look awkward and disproportionate. Why is that so?
3. Name the hormone which would be released during the following situations:
  - (a) a frightened person.
  - (b) growth of a child to adult.
  - (c) development of caterpillar to moth.
  - (d) development of tadpole to frog
4. Explain in detail the reproductive phase of life in humans.

### **Chapter 9: Friction**

#### **1. Multiple Choice Question:**

- (i) A big wooden box is being pushed on the ground from east to west direction. The force of friction due to ground will act on this box towards:
  - (a) north direction      (b) south direction      (c) east direction      (d) west direction
- (ii) Four similar cars having exactly the same mass are running at the same speed on the same road when brakes are applied at the same time. The cars come to a stop after covering distances of 5 m, 5.5 m, 4.8 m and 5.2 m respectively. The friction between the brake pads and discs will be the maximum in the car which travels the distance of:
  - (a) 5 m                      (b) 5.5 m                      (c) 4.8 m                      (d) 5.2 m

#### **2. Assertion –Reason questions:**

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

- (i) Both A and R are true and R is correct explanation of the assertion.
- (ii) Both A and R are true but R is not the correct explanation of the assertion.
- (iii) A is true but R is false.
- (iv) A is false but R is true.

(a) **Assertion:** A bicycle can be slowed down by dragging your feet along the ground.

**Reason:** When we drag our feet in the ground, the force of friction acts between our feet and the ground.

(b) **Assertion:** The handle of a cricket bat or a badminton racket is usually rough.

**Reason:** Rough surfaces decrease friction.

### 3. Answer the following questions:

1. What do you understand by the term friction? How does friction depend on nature of the surface?
2. What is the difference between static friction and sliding friction? For a given pair of objects, which of the two is greater?
3. Give reasons:
  - (a) Why are one out tyres discarded?
  - (b) Why is sewing machine often oiled?
4. How is friction responsible for the damage of some parts of the machines? What are the methods used to reduce that damage?
5. Explain with the help of diagrams, how the use of oil reduces friction between two surfaces in contact with each other.

## CHAPTER 10: SOUND

### 1. Multiple Choice Question:

- (i) Musical sound is produced by
  - (a) Regular vibrations
  - (b) irregular vibrations.
  - (c) still vibrations.
  - (d) no vibrations.
- (ii) One hertz is equal to
  - (a) One vibration per minute.
  - (b) ten vibrations per minute.
  - (c) Sixty vibrations per minute.
  - (d) 600 vibrations per minute.

### 2. Assertion –Reason questions:

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

- (i) Both A and R are true and R is correct explanation of the assertion.
- (ii) Both A and R are true but R is not the correct explanation of the assertion.
- (iii) A is true but R is false.
- (iv) A is false but R is true.

(a) **Assertion:** Trees planted along roadside help in the reduction of noise pollution.

**Reason:** Plants absorb sound and so help in minimizing noise pollution.

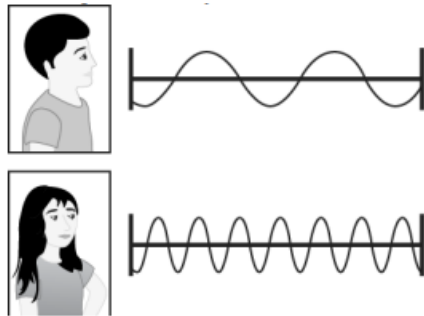
(b) **Assertion:** The frequency determines the shrillness or pitch of a sound.

**Reason:** The loudness of sound depends on its amplitude.

### 3. Read the passage and answer the questions that follow:

Two students are at two ends of a room. One of the students claps softly but another student is unable to hear the sound. The student takes a long metal rod and asks his friend to put the ear on the rod at the another end. The student taps the metal rod with the same intensity and the sound is heard by his friend.

- What can be concluded by this observation?
- Define the different characteristics of sound along with their SI unit.
- A student learns that the sound travels in a waveform. The image shows the sound waves produced by a man and a woman. What can be concluded from the image?



### 4. Answer the following questions:

- Can sound travel through vacuum? Describe an experiment to explain your answer.
- A boy on a hill A fires a gun. The other boy on hill B hears the sound after 4s. If the speed of sound is 330m/s, find the distance between the two hills.
- The town hall building is very close to Vipin's house. There is a clock on the top of the town hall building, which rings the bell every hour. Vipin noticed that the sound of the bell appears to be much clearer at night.
- How do we hear sound? Explain and draw the diagram of human ear.
- With the help of a diagram explain how a pendulum completes one oscillation. Also mark its mean position and amplitude.



## CHAPTER 11: CHEMICAL EFFECTS OF ELECTRIC CURRENT

### 1. Multiple Choice Question:

- (i) Which of the following is statements is incorrect?
- (a) The apparatus used for electrolysis is called Volta Meter.
  - (b) Electro plating corrode. See metal underneath.
  - (c) most liquid conduct electricity.
  - (d) Iron rust in the presence of oxygen and moisture.
- (ii) Bob's uncle has set up an electroplating factory near his village. He should dispose off the waste of the factory
- (a) in the nearby river
  - (b) in the nearby pond
  - (c) in the nearby cornfield
  - (d) according to the disposal guidelines of the local authority

### 2. Assertion –Reason questions:

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

- (i) Both A and R are true and R is correct explanation of the assertion.
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- (iii) A is true but R is false.
- (iv) A is false but R is true.

(a) **Assertion:** Sodium chloride is a strong electrolyte.

**Reason:** Acetic acid is a weak electrolyte.

(b) **Assertion:** Anode is an electrode which is connected to a positive terminal of battery.

**Reason:** Oxygen bubbles are born at electrode.

### 3. Read the passage and answer the questions that follow:

William Nicolson, a British chemist proved by his experiments that when an electric current is passed through certain liquids or solutions that conduct electricity, chemical changes occur. This is called the chemical effect of electric current. The chemical decomposition of a liquid or solution while passing an electric current is called electrolysis. The liquid or solution that breaks up during electrolysis is called an electrolyte. He proved that if electrodes connected to terminals of a battery were immersed in water and the current was passed through the water; bubbles of oxygen and hydrogen were produced.

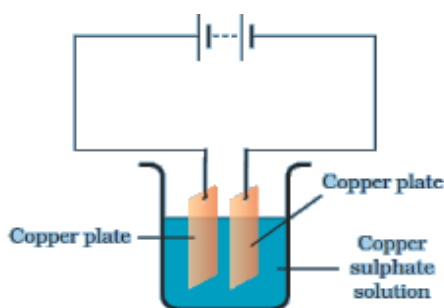
Using the same information, Sandhya and Shilpa performed an experiment to show that water can conduct

electricity. Shilpa fixed a zero-watt bulb in the circuit, but Sandhya told her to use LED as it glows even in low voltage. They used distilled water to test the conductivity but no current passed through the circuit. Sandhya decided to add an ingredient to convert distilled water into a conducting solution.

- i Distilled water does not conduct electricity. What substances can be added to distilled water in small amounts to make it a good conductor of electricity? Why?
- ii Formation of gas bubbles can be observed when an electric current is passed through an electrode which is immersed in a conducting solution. Which type of effect causes the formation of gas bubbles?
- iii What are electrodes? Which electrode is connected to the negative terminal of the battery?

#### 4. Answer the following questions:

1. You have been given a sugar solution and a salt solution, along with two cells, two electrodes and electric bulb and wire. Without tasting the solution, how would you identify which one contains sugar and which one contains salt?
2. An electric current is passed through a conducting solution. List any three possible observations.
3. Give reasons:
  - (a) Chromium is used for electroplating.
  - (b) Bridges and automobiles are either painted or coated with zinc to prevent rusting.
4. You are provided with a magnetic compass, an empty matchbox, a battery of two cells and connecting wires. Using these objects, how will you make a tester for testing an electric circuit?
5. In the circuit given in the figure, Riya observed that copper is deposited on the electrode connected to the negative terminal of the battery. Raj tried to repeat the same experiment. But he could find only one copper plate. Therefore, he took a carbon rod as the negative electrode. Will copper be still deposited on the carbon rod? Explain your answer.



## **CHAPTER 12: SOME NATURAL PHENOMENA**

### **1. Multiple Choice Question:**

- (i) An electroscope is a device which is used to find if an object is  
(a) charged                      (b) magnetic                      (c) free of cracks                      (d) hot
- (ii) Which natural phenomena causes tsunamis and landslides?  
(a) Friction                      (b) Flood                      (c) Thunderstorms                      (d) Earthquake

### **2. Assertion –Reason questions:**

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

**(i) Both A and R are true and R is correct explanation of the assertion.**

**(ii) Both A and R are true but R is not the correct explanation of the assertion.**

**(iii) A is true but R is false.**

**(iv) A is false but R is true.**

(a) **Assertion:** An earthquake is a sudden shaking or trembling of the Earth.

**Reason:** Earthquake is caused by a disturbance deep inside the Earth's crust.

(b) **Assertion:** Electrical appliances are generally earthed.

**Reason:** Earthing prevents the user from getting electric shocks.

### **3. Answer the following questions:**

1. In an electroscope if a negatively charged body is brought in contact with the metal clip, the strips of the electroscope diverge. If now another charged object carrying equal amount of positive charge is brought in contact with the clip, what will happen?
2. You might have observed on a dry day that when you touch the screen of a television or computer monitor (with a picture tube), you get a slight shock. Why does it happen?
3. What is a seismograph? How does it work?
4. During the construction of a building the lightning conductor was left hanging in the air by mistake. Would the lightning conductor be still effective? Explain.
5. Draw a neat labelled diagram of an electroscope.

## CHAPTER 13 : LIGHT

### 1. Multiple Choice Question:

- (ii) An electroscope is a device which is used to find if an object is charged. If a light ray falls perpendicularly on the plane mirror, what will be the angle in which it will be reflected?
- (a) 45 degrees.                      (b) 90 degrees.                      (c) 180 degrees.                      (d) 360 degrees.
- (iii) An owl can see clearly at night, but not daytime, because it has
- (a) More rods and few cones.                      (b) Less rods and more cones.  
(c) More rods and more cones.                      (d) Less rods and less cones.

### 2. Assertion –Reason questions:

Select the correct answer to these questions from the codes (i), (ii), (iii) and (iv) as given below

(i) Both A and R are true and R is correct explanation of the assertion.

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(iii) A is true but R is false.

(iv) A is false but R is true.

(a) **Assertion:** Optic nerve takes the message of image formation to the brain.

**Reason:** Optic nerve picks the visual signals from retina and sends them to the brain.

(b) **Assertion:** When it rains in bright sunshine, a rainbow is observed in the sky.

**Reason:** White light consists of seven colors.

### 3. Answer the following questions:

1. Draw a neat labelled ray diagram to show the reflection of light from a plane mirror. Explain all the terms related to the reflection of light.
2. Explain the ways by which you can take care of your eyes.
3. How is the phenomenon of reflection used in making a kaleidoscope? What are the applications of a kaleidoscope?
4. A light ray strikes a reflective plane surface at an angle of 75 degree with the surface. Calculate.
  - (a) The angle of incidence.
  - (b) The angle of reflection.
  - (c) The angle made by a reflected ray and the surface.
  - (d) The angle made by the incident and reflected rays.
5. Explain and draw the structure of the human eye.