Standard: VIII

Summative Assessment - Term II 2025-26

BASIC SCIENCE MODEL QUESTION PAPER 2

Time: 2 Hours Total Score: 60

Instructions

- The first 15 minutes is cool-off time. This time is meant for reading the questions and planning your answers.
- This question paper includes separate sections for Physics, Chemistry, and Biology.
- Questions 7, 8, and 10 in each section contain internal choices. Answer only one from the options provided.

PART I: PHYSICS

Time: 40 Minutes **Score: 20**

Section - A

Answer questions 1 and 2. (1 score for each question) (2x1=2)

1. Which among the following devices is used to detect the presence of electric charge on an object? 1

a) Barometer

b) Electroscope

c) Thermometer

d) Speedometer

2. Observe the relationship in the first pair and complete the second pair.

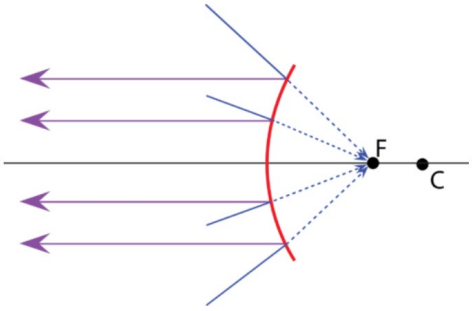
Soft Iron : Temporary Magnet

Steel : 2

Section - B

Answer questions 3 to 8. Questions 7 and 8 have a choice. (2 scores for each question) (6x2=12)

3. Observe the figure showing the reflection of light on a curved mirror.



a) Identify the type of spherical mirror shown. 3b) What is the specific name of the point from which the rays appear to diverge?

4. A student noted that a plastic scale rubbed on dry hair attracts small pieces of paper.

a) Which form of electricity is responsible for this attraction?
b) What happens to the charge if the scale is brought in contact with the earth?

5. Classify the following into Magnetic substances and Non-magnetic substances:

[Iron, Plastic, Nickel, Rubber]

6. "Objects in the mirror are closer than they appear" is written on the side-view mirrors of vehicles.

a) Which type of mirror is used here?

b) Write one characteristic of the image formed by this mirror that makes it suitable for this purpose.

7. (A) An iron nail is converted into a magnet by winding an insulated copper wire around it and passing electricity.

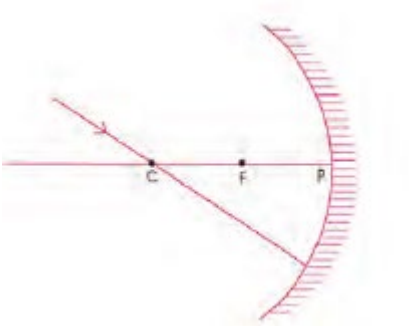
a) What is this arrangement called?
b) Suggest one method to increase the magnetic strength of this arrangement.

OR

(B) A bar magnet is suspended freely.

a) In which direction does it align itself?
b) Which property of the earth is responsible for this alignment?

8. (A) Observe the given figure showing the path of a light ray.



a) Copy the diagram and draw the path of the reflected ray.
b) State the reason for this path of reflection.

OR

(B) Lightning conductors are installed on tall buildings to protect them.

a) Which part of the lightning conductor facilitates point discharge?
b) How does the earthing in the lightning conductor protect the building?

Section - C

Answer questions 9 and 10. Question 10 has a choice. (3 scores for each question) (2x3=6)

9. A concave mirror forms a real, inverted, and magnified image.

a) Where should the object be placed in front of the mirror to get such an image?
b) If the object is placed at the principal focus (F), where will the image be formed?
c) Write one practical use of concave mirrors.

10. **(A)** Explain the phenomenon of **Magnetic Induction** using the example of a pin chain hanging from a bar magnet

OR

(B) Match the following columns correctly:

Column A	**Column B**
1. Lodestone	a. Device to store charge
2. Capacitor	b. Natural Magnet
3. Alnico	c. Artificial Magnet

PART II: CHEMISTRY

Time: 40 Minutes Score: 20

Section - A

Answer questions 1 and 2. (1 score for each question) (2x1=2)

1. Which of the following metals is found in the liquid state at room temperature? a) Sodium

b) Mercury

c) Magnesium

d) Aluminium

2. When a blue litmus paper is dipped into a solution, it turns red. The nature of the solution is:

a) Basic

b) Neutral

c) Acidic

d) Saline

Section - B

Answer questions 3 to 8. Questions 7 and 8 have a choice. (2 scores for each question) (6x2=12)

3. Give reasons for the following:

a) Iron window bars in houses close to the seashore corrode faster.
b) Sodium metal is stored in kerosene.

4. A student takes some water in a test tube and adds a piece of Calcium Bicarbonate to it.

a) What type of hardness does this water possess?
b) Suggest a simple method to remove this hardness.

5. Complete the chemical equation for the reaction between Magnesium and dilute Hydrochloric Acid:

$Mg + 2HCl \rightarrow \ldots\ldots + H_2$

Name the salt formed in this reaction.

6. Water is known as a universal solvent.

a) Explain this statement.
b) How does this property contribute to the loss of purity of water in rivers?

7. (A) Analyse the statement: "Buttermilk should not be stored in aluminium vessels."

a) Which substance present in buttermilk reacts with aluminium?
b) What is the general name of the gas liberated during the reaction of metals with acids?

OR

(B) Stainless steel is an alloy used to make utensils.

a) What are the main constituents of Stainless Steel?
b) Why are alloys used instead of pure iron for making utensils? 35

8. (A) pH value indicates the acidic or basic nature of a solution.

a) What is the pH value of a neutral solution?
b) Suggest a substance that can be added to soil to reduce its acidity.

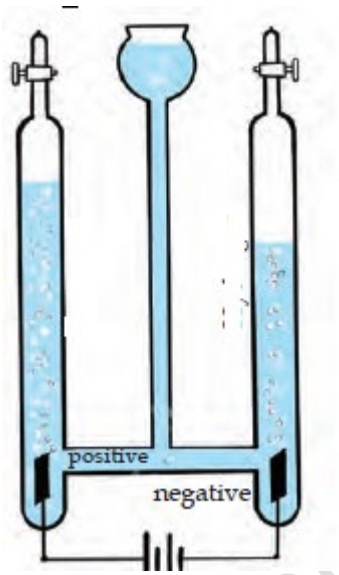
OR

(B) a) What is meant by **Surface Tension**?
b) Why can insects walk on the surface of water?

Section - C

Answer questions 9 and 10. Question 10 has a choice. (3 scores for each question) (2x3=6)

9. Observe the arrangement for the electrolysis of water.



a) Which gas is collected at the negative electrode?
b) What is the ratio of hydrogen to oxygen produced?
c) Why is a small amount of acid added to water before electrolysis?

10. (A) Two test tubes contain solution A and solution B. A drop of phenolphthalein turns solution A pink, while solution B remains colourless.

a) Which solution is alkaline?
b) Name the reaction that occurs when solution A and solution B are mixed in specific proportions to form salt and water.
c) Write the chemical equation for the reaction between Sodium Hydroxide (NaOH) and Hydrochloric Acid (HCl).

OR

(B)

a) Write the chemical formula of Sulphuric acid.
b) Which non-metal oxide reacts with water to form Sulphuric acid?
c) Explain the environmental impact of "Acid Rain".

PART III: BIOLOGY

Time: 40 Minutes Score: 20

Section - A

Answer questions 1 and 2. (1 score for each question) (2x1=2)

1. Who proposed the Five Kingdom Classification?

a) Carl Linnaeus

b) Robert H. Whittaker

c) Aristotle

d) J.C. Bose

2. Identify the odd one out based on the cell organelles:

Centriole, Lysosome, Chloroplast, Cell Membrane.

(Hint: Presence in animal cells vs plant cells)

Section - B

Answer questions 3 to 8. Questions 7 and 8 have a choice. (2 scores for each question) (6x2=12)

3. Classify the following organisms into Prokaryotes and Eukaryotes:

[Bacteria, Amoeba, Cyanobacteria, Human]

4. Observe the food chain given below:

Grass -→ Grasshopper -→ Frog -→ Snake -→ Eagle

a) Identify the secondary consumer in this chain. 52b) What is the position of an organism in a food chain called?

5. Write two main differences between a Plant Cell and an Animal Cell regarding the cell wall and vacuoles.

6. "Taxonomy is the branch of science that deals with classification."

a) Who is known as the Father of Taxonomy?
b) According to Binomial Nomenclature, which two parts constitute the scientific name of an organism?

7. (A) Match the items in Column A with Column B.

Column A (Tissue)	Column B (Function)
i. Xylem	a. Transport of food
ii. Phloem	b. Transport of water and minerals
iii. Collenchyma	c. Flexibility and support
iv. Sclerenchyma	d. Strength and support (Dead cells)

OR

(B) Identify the parts of the cell from the hints given:

a) Energy production centre of the cell.

b) Network of tubules that serves as pathways for conducting materials.

8. (A) Biodiversity conservation is classified into In-situ and Ex-situ.

a) Define In-situ conservation. 58b) Give one example of Ex-situ conservation. 59

OR

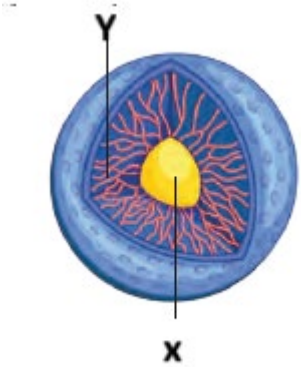
(B) Analyze the following ecological interactions and name them:

a) A leech sucking blood from a dog. 60b) A flower and a butterfly mutually benefiting each other. 61

Section - C

Answer questions 9 and 10. Question 10 has a choice. (3 scores for each question) (2x3=6)

9. Observe the illustration of the Cell Nucleus.



a) Identify the part labelled as the "regulatory centre of the cell".
b) What is the function of the chromatin reticulum during cell division?
c) Name the fluid found inside the nucleus.

10. (A) Prepare a flowchart showing the Six Kingdom Classification proposed by Carl *(Hint: Monera is divided into two. List the other four kingdoms also).*

OR

(B)

a) What is the importance of Decomposers in an ecosystem?

b) Construct a food web using the following organisms:

Grass, Rabbit, Grasshopper, Frog, Snake, Eagle.