

ROLL NUMBER				
-------------	--	--	--	--

SET A



INDIAN SCHOOL MUSCAT

FIRST PERIODIC TEST

SCIENCE

CLASS: X

Subject Code: 086

Time Allotted: 50 mts.

21.04.2022

Max. Marks: 20

GENERAL INSTRUCTIONS:

All questions are compulsory.

PHYSICS

1. Give one difference between real and virtual image. 1
2. Calculate the radius of curvature of a concave mirror whose focal length is 18cm. 1
3. Why do we prefer a convex mirror as rear view mirror in vehicles? 1
4. Define principal axis and pole of a concave mirror. 2
5. Draw a ray diagram to show the formation of image, when an object is placed between the principal focus(F) and centre of curvature (C) of a concave mirror. Mention the position and nature of the image. 2

CHEMISTRY

6. Colour of magnesium oxide is 1
(A) White (B) Blue (C) Grey (D) Pink
7. When calcium carbonate is heated it decomposes into ----- and ----- 1
8. Directions: Choose the correct option 1
A. Both assertion and reason are correct, and reason is the correct explanation for assertion.
B. Both assertion and reason are correct, but reason is not the correct explanation for assertion.
C. Assertion is correct, but reason is incorrect.
D. Assertion is incorrect but reason is correct.

Assertion (A): Brown fumes are produced when lead nitrate is heated.

Reason (R): Nitrogen dioxide gas is produced as a byproduct due to the decomposition of lead nitrate.

9. "We need to balance a skeletal chemical equation." Give reason to justify the statement. 1
10. What is observed when a solution of potassium iodide solution is added to a solution of lead nitrate? 1
11. The following diagram displays a chemical reaction. Observe carefully and answer the following questions. 2



- (a) Identify the type of chemical reaction that will take place and define it. How will the colour of the salt change?

Write the chemical equation of the reaction that takes place.

BIOLOGY

12. Which part of the leaf is involved in absorption of light energy during photosynthesis? 1
13. Name the bio-catalysts present in the living organisms which help in breaking down complex substances into simpler ones before they can be used for the upkeep and growth of the body. 1
14. (i) Define nutrition. 2
- (ii) Write a balanced chemical equation for photosynthesis.
15. (i) Draw a neat diagram of an open stomata. 2
- (ii) Label guard cells, stomatal pore.
- (iii) State the function of guard cells.

End of the Question Paper



INDIAN SCHOOL MUSCAT

FIRST PERIODIC TEST

SCIENCE

CLASS: X

Subject Code: 086

Time Allotted: 50 mts.

21.04.2022

Max. Marks: 20

GENERAL INSTRUCTIONS:

All questions are compulsory.

PHYSICS

1. Define principal focus of a convex mirror. 1
2. Calculate the focal length of a convex mirror whose radius of curvature is 42cm. 1
3. Give two uses of concave mirror. 1
4. Give any two differences between real and virtual image. 2
5. Draw a ray diagram to show the formation of image, when an object is placed beyond the centre of curvature (C) of a concave mirror. Mention the position and nature of the image. 2

CHEMISTRY

6. When a magnesium ribbon is burnt in air, the ash formed is-----in colour. 1
7. The following reaction is used for the preparation of oxygen gas in the laboratory: 1

$$2\text{KClO}_3(s) \xrightarrow{\text{Heat}} 2\text{KCl} + 3\text{O}_2(g)$$

Which of the following statement about the reaction is correct?

 - (a) It is a decomposition reaction and endothermic in nature.
 - (b) It is a combination reaction.
 - (c) It is a decomposition reaction and accompanied by release of heat.
 - (d) It is a photochemical decomposition reaction and exothermic in nature.
8. Directions: Choose the correct option 1
 - A. Both assertion and reason are correct, and reason is the correct explanation for assertion.
 - B. Both assertion and reason are correct, but reason is not the correct explanation for assertion.
 - C. Assertion is correct, but reason is incorrect.

D. Assertion is incorrect but reason is correct.

Assertion: Balancing a chemical equation is important to study a chemical reaction.

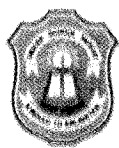
Reason: A balanced equation tells about energy changes that take place.

9. Write the balanced equation for the following chemical reactions. 1
Potassium + Water \rightarrow Potassium hydroxide + Hydrogen
10. In electrolysis of water, why is the volume of gas collected over one electrode double that of gas collected over the other electrode? 1
11. When ferrous sulphate crystals are heated in a dry boiling tube. 2
(i) List any one observation.
(ii) Name the type of chemical reaction taking place.
(iii) Write the chemical equation for the reaction.

BIOLOGY

12. Name the stored form of carbohydrates in plants and animals. 1
13. How do terrestrial plants take up water and other materials like nitrogen, phosphorus, iron and magnesium used in photosynthesis? 1
14. (i) Draw a neat diagram of a closed stomata. 2
(ii) Label guard cells, chlorophyll.
(iii) Write the function of chlorophyll.
15. (i) Why is diffusion insufficient to meet oxygen requirement of the multicellular organisms? 2
(ii) Write a balanced chemical equation for photosynthesis.

End of the Question Paper



INDIAN SCHOOL MUSCAT

FIRST PERIODIC TEST

SCIENCE

CLASS: X

Subject Code: 086

Time Allotted: 50 mts.

21.04.2022

Max. Marks: 20

GENERAL INSTRUCTIONS:

All questions are compulsory.

PHYSICS

1. Define principal focus of a concave mirror. 1
2. Why do we prefer a convex mirror as rear view mirror in vehicles? 1
3. Calculate the focal length of a concave mirror whose radius of curvature is 34cm. 1
4. Give any two differences between real and inverted image. 2
5. Draw a ray diagram to show the formation of image, when an object is placed at the centre of curvature (C) of a concave mirror. Mention the position and nature of the image. 2

CHEMISTRY

6. If magnesium is gently heated, it forms 1

(A) Magnesium oxide

(C) Magnesium nitrite

(B) Magnesium sulfide

(D) Magnesium carbonate
7. Directions: Choose the correct option 1

A. Both assertion and reason are correct, and reason is the correct explanation for assertion

B. Both assertion and reason are correct, but reason is not the correct explanation for assertion

C. Assertion is correct, but reason is incorrect

D. Assertion is incorrect but reason is correct

Assertion: White silver chloride turns grey in the presence of light.

Reason: In the presence of sunlight, silver chloride decomposes to silver metal and chlorine gas.

8. Identify the type of reaction and balance the chemical equation in the following: 1
$$\text{CuO (S)} \xrightarrow{\text{Heat}} \text{Cu (s)} + \text{O}_2 \text{ (g)}$$
9. Why electrolysis carried out in acidified water? 1
10. Write the balanced equation for the following chemical reactions. 1
Sodium + Water \rightarrow Sodium hydroxide + Hydrogen
11. A solution of a substance 'X' is used for white washing. 2
(i) Name the substance 'X' and write its formula.
(ii) Write the reaction of the substance 'X' with water.

BIOLOGY

12. Which plants take up carbon dioxide at night and prepare an intermediate which is acted upon by the energy absorbed by the chlorophyll during the day? 1
13. Why is diffusion sufficient to meet oxygen requirement of the unicellular organisms? 1
14. (i) Why is nitrogen necessary for plants? 2
(ii) Write a balanced chemical equation for photosynthesis.
15. (i) Draw a neat diagram of an open stomata. 2
(ii) Label guard cells, stomatal pore.
(iii) State the function of guard cells.

End of the Question Paper