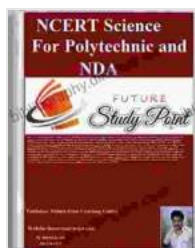


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Language : English
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Enhanced typesetting : Enabled
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Print length : 362 pages



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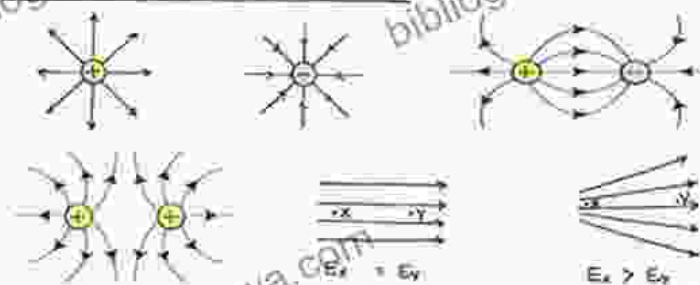
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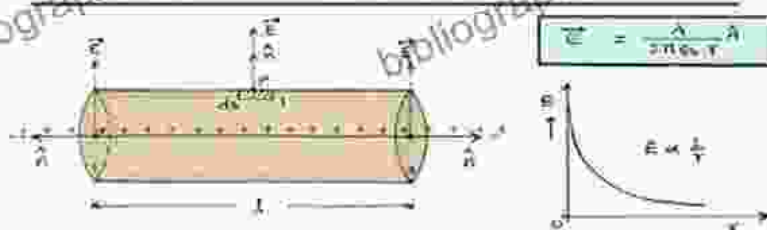
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Chapter-1: Electric Charges and Fields

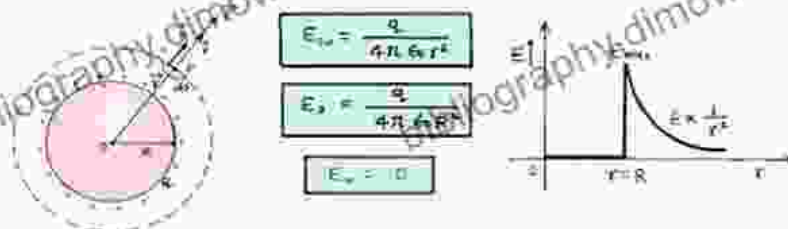
Properties of Electric Field Lines



(1) Field due to an infinitely Long straight Uniformly charged wire



(2) Electric Field Intensity due to a Uniformly Charged spherical shell



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NCERT Solution for class 10 Science Chapter 1 Chemical reactions and equations

In-text questions set 1 Page number – 6

1. Why should a magnesium ribbon be cleaned before burning in air?
Solution:
 Magnesium ribbon should be cleaned before burning in air because Magnesium metal reacts with the atmospheric oxygen and forms Magnesium Oxide (MgO) layer which is a very stable compound. In order to prevent further reactions with Oxygen, it is therefore necessary to clean the ribbon by removing the layer of MgO.

2. Write a balanced equation for the following chemical reactions.

i) Hydrogen + Chlorine \rightarrow Hydrogen chloride
 ii) Barium chloride + Aluminium sulphate \rightarrow Barium sulphate + Aluminium chloride
 iii) Sodium + Water \rightarrow Sodium hydroxide + Hydrogen

Solution:
 i) $\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$
 ii) $3\text{BaCl}_2 + \text{Al}_2(\text{SO}_4)_3 \rightarrow 2\text{AlCl}_3 + 3\text{BaSO}_4$
 iii) $2\text{Na} + 2\text{H}_2\text{O} \rightarrow 2\text{NaOH} + \text{H}_2$

3. Write a balanced chemical equation with state symbols for the following reactions

i) Solutions of Barium chloride and Sodium sulphate in water react to give insoluble Barium sulphate and solution of Sodium chloride.
 ii) Sodium hydroxide solution in water reacts with hydrochloric acid solution to produce Sodium chloride solution and water.

Solution:
 i) $\text{BaCl}_2 + \text{Na}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + 2\text{NaCl}$
 ii) $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$

In-text questions set 2 Page number – 10

1. A solution of a substance 'X' is used for whitewashing.
 (i) Name the substance 'X' and write its formula.
 (ii) Write the reaction of the substance 'X' named in (i) above with water.

Solution:
 (i) The substance 'X' which is used in whitewashing is quick lime or Calcium Oxide and its formula is CaO .
 (ii) $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$

2. Why is the amount of gas collected in one of the test tubes in Activity 1.7 double of the amount collected in the other? Name this gas.
Solution:

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In-text questions set 1

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Solution:



In-text questions set 2

Page number – 10

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(ii) Write the reaction of the substance 'X' named in (i) above with water.

Solution:

(i) The substance 'X' which is used in whitewashing is quick lime or Calcium Oxide and its formula is CaO .

(ii)



2. Why is the amount of gas collected in one of the test tubes in Activity 1.7 double of the amount collected in the other? Name this gas.

Solution:

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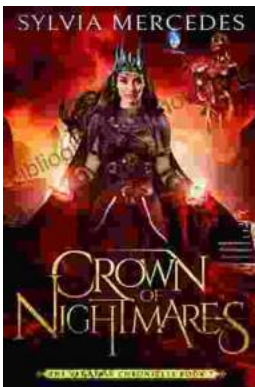
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