

Date: 9-05-2021

Class: 10th Genesis

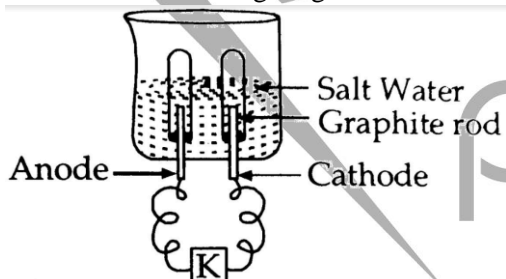
Subject: Science

Test code: SECT01(21041308)

Chemistry

M. Marks: 20

- Name the type of reaction for the following? (2 marks)
 - Vegetable matter changing into compost.
 - Burning of natural gas.
 - Silver items turning black when left exposed to air.
 - Change in colour of copper sulphate for blue and green on dipping a nail in it.
- (a) When a metal 'X' is added to salt solution of a metal 'Y', following chemical reaction takes place:
 $\text{Metal X} + \text{Salt solution of 'Y'} \rightarrow \text{Salt solution of 'X'} + \text{Metal 'Y'}$. (2 marks)
 (b) Mention the inference you draw regarding the reactivity of metal 'X' and 'Y' and also about the type of reaction. State the reason of your conclusions.
- State reason for the following: (2 marks)
 - Potato chips manufacturers usually flush bags of chips with nitrogen gas. (3 marks)
 - Iron articles lose their shine gradually.
- Observe the following diagram and answer the questions that follow: (3 marks)



- Identify the gases evolved at anode and cathode.
 - Why are the amounts of gases collected in the two test tubes are of not the same volume?
 - What type of reaction is this?
 - Why should we use salt water?
- A student has been collecting silver coins and copper coins. One day she observed a black coating on silver coins and a green coating on copper coins. Which chemical phenomenon is responsible for these coatings? (3 marks)
 Write the chemical name of black and green coatings.
 - Fill in the missing data in the following table: (3 marks)

Name of the salt	Formula	Salt obtained from	
		Base	Acid
(i) Ammonium chloride	NH_4Cl	NH_4OH	—
(ii) Copper sulphate	—	—	H_2SO_4
(iii) Sodium chloride	NaCl	NaOH	—
(iv) Magnesium nitrate	$\text{Mg}(\text{NO}_3)_2$	—	HNO_3
(v) Potassium sulphate	K_2SO_4	—	—
(vi) Calcium nitrate	$\text{Ca}(\text{NO}_3)_2$	$\text{Ca}(\text{OH})_2$	—

7. (a) Tooth enamel is one of the hardest substance in our body. Explain the changes in pH of the mouth which indicate tooth decay. How does tooth paste help in preventing it? (5 marks)
- (b) What is the nature of the salt if the pH of its solution is greater than 7? Name the acid and base would be used to prepare the following salts:
- (i) Potassium sulphate.
- (ii) Ammonium chloride.



Pinnacle