



SHIKSHA CLASSES

Sub. : Science
Std. : Xth - CBSE

Question Paper
2. Acids, bases and Salts.

Marks : 30
Time : 1 Hour.

SECTION (A)

(Each - 1 Mark)

Q.1 : What is the range of pH universal indicator solution?

OR

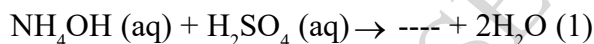
On putting two drops of dilute hydrochloric acid on the pH paper the colour developed on the pH paper is

- a) Red b) Green c) Blue d) Violet

Q.2 : Copper sulphate crystals when heated strongly lose their water of crystallization to give anhydrous copper sulphate accompanied by a change in colour. What is the colour change occurred?

OR

:In the following reaction, identify the salt formed.



- a) NH_4NO_3 b) $(\text{NH}_4)_2\text{SO}_4$ c) $(\text{NH}_4)_3\text{PO}_4$ d) $(\text{NH}_4)_2\text{S}$

For question number 3 to 5 two statements are given one labeled Assertion (A) and other labeled Reason (R) select the correct answer to these questions from the codes (a), (b), (c) and (d) as given below

- a) Both A and R are true and R is correct explanation of the assertion.
b) Both A and R are true but R is not the correct explanation of the assertion.
c) A is true but R is false.
d) A is false but R is true.

Q.3 : **Assertion (A)** : NaCl is basic salt.

Reason (R) : Hydrolysis of NaCl reveals the formation of NaOH and HCl.

Q.4: **Assertion (A)** : The acid must always be added to water with constant stirring.

Reason (R) : Mixing of an acid with water decreases the concentration of H⁺ ions per unit volume.

Q.5: **Assertion (A)** : HCl gas does not change the colour of dry blue litmus paper.

Reason (R) : HCl gas dissolves in the water present in wet litmus paper to form H⁺ ions.

Q.6 : Write two uses of bleaching powder.

OR

: The sample of soil from a particular place was tested for its pH value. It came out to be 5. Which one of the following should be added to the soil to make it suitable for the plant growth? i. Calcium chloride ii. Calcium Hydroxide iii. Calcium oxide

Choose the correct option :

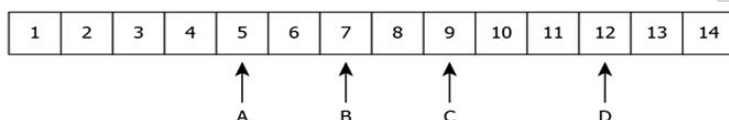
- a) Both (i) and (ii) b) Both (ii) and (iii) c) Only (i) d) Only (iii)

Q.7 : Read the following and answer any two questions from 5(i) to 5(iii). (2)

Equal length of magnesium ribbon are taken in two test tubes A and B. H_2SO_4 is added to test tube A and H_2CO_3 in the test tube B in equal amounts.

- i) Identify the test tube showing vigorous reaction.
a) Test tube A b) Test tube B c) Both A & B d) None of these
- ii) Name the gas liberated in both the tubes.
a) H_2 b) CO_2 c) SO_2 d) O_2
- iii) Out of two acid which one will have lower pH value?
a) H_2SO_4 b) H_2CO_3 c) Both acids d) None of these

Q.8 : The image shows the pH values of four solutions on a pH scale.



Which solutions are alkaline in nature?

- (a) A and B (b) B and C (c) C and D (d) A and D

Q.9: The pH of a solution is 7. How can you increase its pH?

- (a) By adding a small amount of acid (b) By adding a small amount of base.
(c) By adding a small amount of salt. (d) By passing carbon dioxide gas through it.

Q.10 : Which one of the given is incorrect?

- (a) Acids turns blue litmus paper red
(b) Aqueous solutions of acids conduct electricity
(c) Acids react with certain metals to form hydrogen gas
(d) None of these

Q.11: At what temperature is gypsum heated to form Plaster of Paris?

- (a) $90^\circ C$ (b) $100^\circ C$ (c) $110^\circ C$ (d) $120^\circ C$

Q.12: Which of the following acids are edible?

- (A) Citric acid (B) Tartaric acid (C) Hydrochloric acid (D) Carbonic acid
(a) (A) and (B) are correct (b) (A), (B) and (D) are correct
(c) (A), (B) and (C) are correct (d) All are correct

Q.13: Bleaching powder's chemical name is _____

- (a) Calcium hypo-Oxychloride (b) Calcium Oxychloride
(c) Calcium Chloride (d) Calcium Chloro-Oxide

Q.14: Common salt beside being used in the kitchen can also be used as the raw material for the production

of

- (A) Baking powder (B) Washing soda (C) Black ash (D) Slaked lime
(a) (B) and (C) (b) (A) and (C) (c) (A) and (B) (d) (B) and (D)

SECTION (B)

(Each - 2 Mark)

Q.15: Name the acid present in the following.

- i) Tomato ii) Vinegar

Q.16: A student detected the pH of four unknown solution A, B, C and D as follows 11, 5, 7 and 2. Predict the nature of the solution.

OR

State the chemical name of plaster of paris. Write a chemical equation to show the reaction between plaster of paris and water.

SECTION (C)

(Each - 3 Mark)

Q.17: What is neutralisation reaction? Give two examples.

OR

: Compounds such as alcohols and glucose also contain hydrogen but are not categorised as acids. Describe an activity to prove it.

Q.18: When electricity is passed through a common salt solution sodium hydroxide is produced along with the liberation of two gases x and y. The gas x burns with a pop sound whereas y is used for disinfecting drinking water.

- i) Identify x and y.
ii) Give the chemical equation for the reaction stated above.
iii) State the reaction of y with dry slaked lime.

SECTION (D)

(5 Mark)

Q.19: State and explain what is fire extinguisher? Also write which gas is used as a fire extinguisher.

OR

: A compound 'A' is used in fire extinguishers as an antacid and its small amount is also used in making bakery items. Identify the compound and also explain the reason for above mentioned uses of the compound 'A'.

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