Esha Summer Project 2023

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Grade- 12

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Chemistry:

Acids, Bases and Salts

1) How can you differentiate between acids and bases?

   (a) Checking for production of protons- It is a physical test

   (b) Checking for production of OH- ions – it is a physical test

   (c) Litmus test- it is a physical test – correct answer

   (d) Litmus test- it is a chemical test

2) Which of the following is a strong acid?

   (a) HCl [pH - 1] – correct answer

   (b) CH_3COOH [pH - 5]

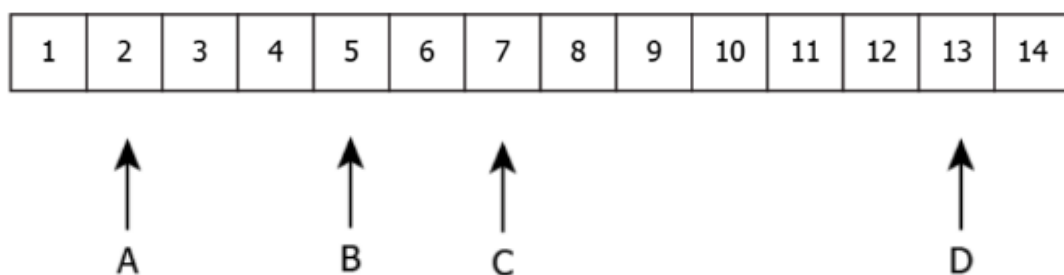   (c) Lemon juice [pH - 2.2]

   (d) Pure Milk [pH – 6]

3) Which of the following contains lactic acid?

   (a) Orange

   (b) Curd – correct answer

   (c) Vinegar

(d) Black coffee

4) Acid + metal always releases which gas?

    (a) Nitrogen

    (b) Hydrogen – correct answer

    (c) Oxygen

    (d) Hydrogen sulphide

5) Which of the following are acidic and alkaline, based on their pH values as indicated in the following figure?

1	2	3	4	5	6	7	8	9	10	11	12	13	14

    ↑   ↑   ↑   ↑

    A   B   C   D

    (a) Acidic – A and D; Alkaline – B and C

    (b) Acidic – A and B; Alkaline – D – correct answer

    (c) Acidic – A; Alkaline – B

    (d) Acidic – B and C; Alkaline – C and D

6) Sodium carbonate reacts with hydrochloric acid and produces –

    (a) NaCl

    (b) CO_2

    (c) H_2O

    (d) All of the above – correct answer

7) What is the chemical formula of bleaching powder?

(a) $NaHCO_3$

(b) $Na_2CO_3.10H_2O$

(c) $CaOCl_2$ – correct answer

(d) NH_4Cl

8) 'Acidic and basic solutions in water conduct electricity because they produce --------- and ---------- ions respectively'.

   (a) Hydrogen; Hydroxide – correct answer

   (b) Hydroxide; Hydronium

   (c) Hydronium; Hydrogen

   (d) Hydroxide; Hydrogen

9) What is the chemical formula of POP (Plaster of Paris)?

   (a) $CaSO_4.2H_2O$

   (b) $CaSO_4.3H_2O$

   (c) $CaSO_4.1/2H_2O$ – correct answer

   (d) $CaCO_3.1/2H_2$

10) Which acid is present in tamarind?

   (a) Tartaric acid – correct answer

   (b) Oxalic Acid

   (c) Lactic Acid

   (d) Citric Acid

<u>ANSWER KEY:</u>

1)   (c)

2)   (a)

3)   (b)

4)   (b)

5)   (b)

6)   (d)

7)   (c)

8)   (a)

9)   (c)

10)   (a)