[Class – 10th
Subject – Chemistry]

M.m – 18

① A sample of Soil is mixed with water and allowed to settle. The clear supernatant solution turns the pH paper yellowish orange. Which of the following would change the colour of this pH paper to Greenish-Blue ?

(a) Lemon Juice (b) Vinegar (c) Common Salt (d) An Antacid — ½

② When aqueous solution of Sodium Carbonate (Na_2CO_3) reacts with HCl(aq) it gives —

(a) NaOH, $H_2(g)$ and $CO_2(g)$ (b) NaCl, H_2O, $CO_2(g)$. — 1

(c) $NaHCO_3$, $H_2(g)$ and $CO_2(g)$ (d) $NaHCO_3$, $H_2O(l)$ and $CO_2(g)$.

③ Which of the following give correct increasing order of acid Strength

(a) $H_2O < CH_3COOH < HCl$ (b) $H_2O < HCl < CH_3COOH$ — 1

(c) $HCl < CH_3COOH < H_2O$ (d) $CH_3COOH < H_2O < HCl$.

④ What will you observe when :– (i) Methyl Orange is added to dilute Hydrochloric Acid.
(ii) A drop of phenolphthalein is added to solution of lime water — 2

⑤ Which one of the following can be used as an acid-base indicator by a visually impaired student?

(i) Litmus (b) Turmeric (c) Vanilla (d) Petunia leaves — 1

⑥ A metal Carbonate X on reacting with an acid gives a gas which when pass through a solution Y gives the carbonate back. Identify X and Y and write down the Reaction. — 2

⑦ How is the concentration of Hydronium Ions (H_3O^+) affected when a solution of an acid is diluted ? — 2

⑧ Why does the Rain water conduct electricity but distilled water cannot. Explain. — 3

⑨ Which Gas is usually liberated when an acid reacts with a metal ? Explain with help of activity that how will you test for the presence of this gas ? — 5