Chemistry Homework For O-II

The following aspects of Acids, bases and salts will be covered till 30th May, 2020. The worksheets will be uploaded in Google classroom.

THE CHARACTERISTIC PROPERTIES OF ACIDS AND BASES

(a) The meanings of acid and alkali in terms of the ions they contain or produce in aqueous solution and their effects on Universal Indicator paper

(b) How to test hydrogen ion concentration and hence relative acidity using Universal Indicator paper and the pH scale

(c) The characteristic properties of acids as in reactions with metals, bases and carbonates

(d) Qualitative difference between strong and weak acids in terms of the extent of dissociation

(e) Neutralisation as a reaction between hydrogen ions and hydroxide ions to produce water, $H^+ + OH^- \rightarrow H_2O$

(f) The importance of controlling the pH in soils and how excess acidity can be treated using calcium hydroxide

(g) The characteristic properties of bases in reactions with acids and with ammonium salts

(h) Classification of oxides as acidic, basic or amphoteric, based on metallic/non-metallic character

PREPARATION OF SALTS

(a) Description of the techniques used in the preparation, separation and purification of salts as examples of some of the techniques specified in syllabus proposed by Cambridge.

(b) The following methods for preparation of salts will be discussed.

i. Precipitation

ii. Titration

iii. Reactions of acids with metals, insoluble bases and insoluble carbonates

(c) Description of the general rules of solubility for common salts to include nitrates, chlorides (including silver and lead), sulphates (including barium, calcium and lead), carbonates, hydroxides, Group I cations and ammonium salts

(d) How to suggest a method of preparing a given salt from suitable starting materials.

(e) Description of the meanings of the terms hydrated, anhydrous and water of crystallisation.

Email: nadiazulfiqar34@gmail.com