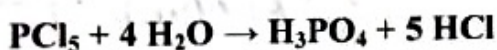
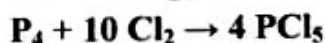
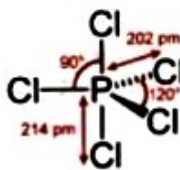


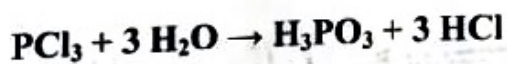
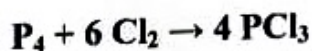
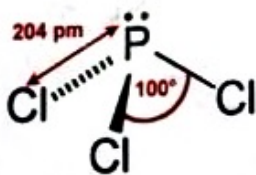
- Phosphorous Chloride:

Phosphorus Pentachloride is the chemical compound with the formula PCl_5 . It is one of the most important phosphorus chlorides, others being PCl_3 and POCl_3 . PCl_5 finds use as a chlorinating reagent. It is a colourless, water- and moisture-sensitive solid, although commercial samples can be yellowish and contaminated with hydrogen chloride.

Phosphorus Pentachloride



Phosphorus trichloride is a chemical compound of phosphorus and chlorine, having the chemical formula PCl_3 . It has a trigonal pyramidal shape. It is the most important of the three phosphorus chlorides. It is an important industrial chemical, being used for the manufacture of organophosphorus compounds for a wide variety of applications.



- Phosphoric Acids

1. Pyrophosphoric acid

Pyrophosphoric acid, also known under the name **diphosphoric acid**, is colorless, odorless, hygroscopic and is soluble in water, diethyl ether, and ethyl alcohol. The anhydrous acid has two different forms, which melt at 54.3°C and 71.5°C .

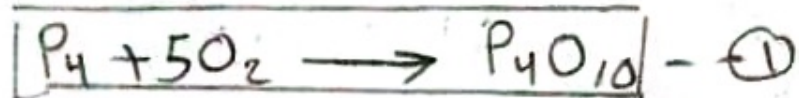
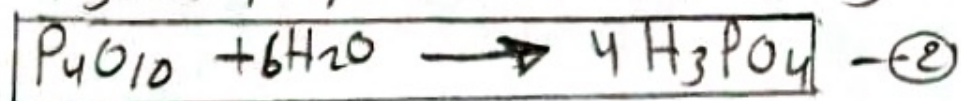
(4)

1/ phosphorous oxides

فوسفور اوكسيدات

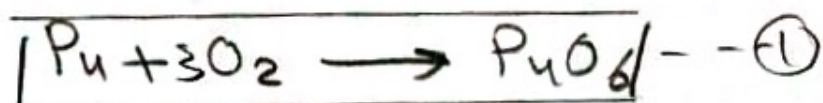
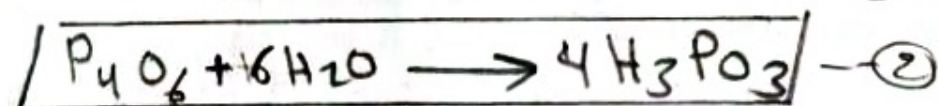
A - phosphorous pentoxide

* white crystalline solid

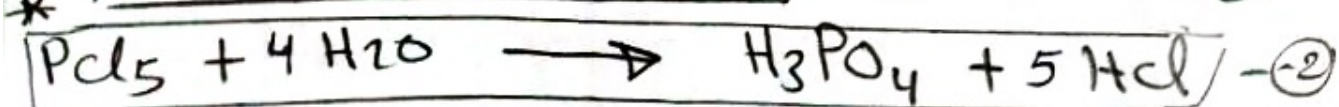
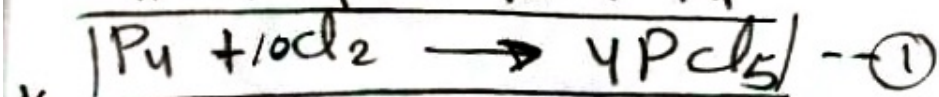
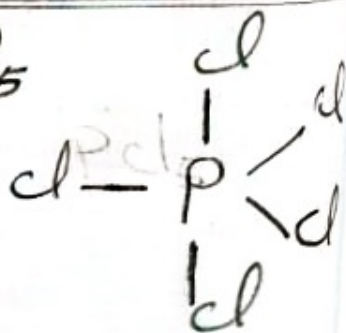
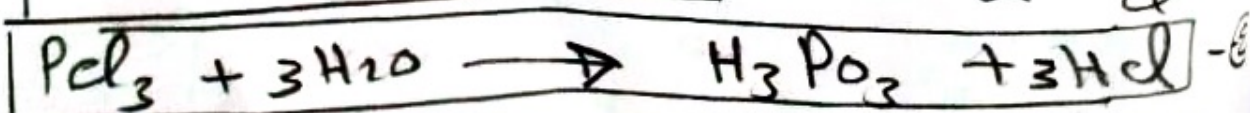
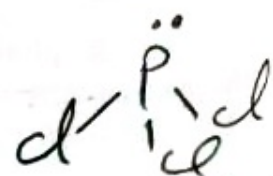
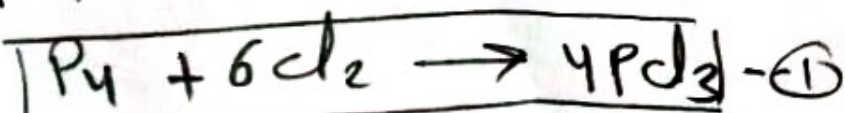
* prepare from P_4 * H_3PO_4 prepare from P_4O_{10} by reaction with H_2O 

B - phosphorous trioxide

* colorless solid

* prepare from P_4 * H_3PO_3 prepare from P_4O_6 by reaction with H_2O 2/ phosphorous chlorides PCl_5

A - phosphorous pentachloride

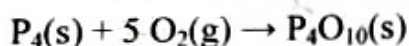
* prepare from P_4 B - phosphorous trichloride PCl_3 * prepare from P_4 

appearance, properties, and structure, black phosphorus is very much like graphite with both being black and flaky.

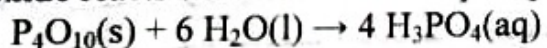
- Phosphorous Oxides:

Phosphorus Pentoxide is a chemical compound with molecular formula P_4O_{10} (with its common name derived from its empirical formula, P_2O_5). This white crystalline solid is the anhydride of phosphoric acid. It is a powerful desiccant and dehydrating agent.

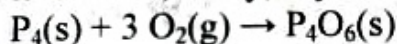
Phosphorus Pentoxide



Phosphorus pentoxide reacts with water to form phosphoric acid.



Phosphorus trioxide is the chemical compound with the molecular formula P_4O_6 . Although it should properly be named tetraphosphorus hexoxide, the name phosphorus trioxide preceded the knowledge of the compound's molecular structure, and its usage continues today. This colorless solid is structurally related to adamantane. It is formally the anhydride of phosphorous acid, H_3PO_3 , but cannot be obtained by the dehydration of the acid. It is a white, waxy, crystalline and highly toxic solid.



Phosphorus Trioxide



Phosphorus trioxide reacts with cold water to form phosphorous acid.