

CHEMISTRY

CRACKING AND NATURAL RESOURCES OF ORGANIC COMPOUND

(INTERMEDIATE AND APTITUDE TEST LEVEL NOTES)

There are three main natural resources of organic compounds

- 1- Coal
- 2- Natural Gas
- 3- Petroleum

1-Coal:

Coal is one of the most important sources of organic compounds. The destructive distillation of coal produce Coal gas (used as a fuel) , Coaltar and Coke(pure carbon use as a reducing agent)

Fractional Distillation of Coaltar:

The main components obtained after the fractional distillation of Coaltar are benzene , Toluene , Xylene , Naphthalene, Phenanthrene, Anthrasene, Phenols, Pyradine etc. Usually 100Kg of Coaltar produces 2 Kg of benzene

2- Natural Gas:

Natural gas is a mixture of Hydrocarbons and gases having low molecular weights. The main component of natural gas is methane gas present upto 94% in natural gas. The percentage of other components are
Ethane = 1.05% , Propane = 0.28%, butane = 0.17%, Nitrogen 3.88 % and Carbon dioxide = 0.02%

3-Petroleum:

Petroleum is present in depth of earth surface. It is a mixture of solid, viscous liquids and gases. It consist of Alkanes, Alkenes, Alkynes , Cycloalkanes, Aromatic compounds etc. The Fractional distillation of petroleum is done to separate all these fractions.