

05.2020



Dr. Rajesh Verma, Assistant professor and Head, U.G. Department of zoology, D.K. College Durgam, (Buxar). Notes for B.Sc part 1st. paper 2 (A).

Question :- carbon cycle ko classify karke hue sachitko vartan kare ?

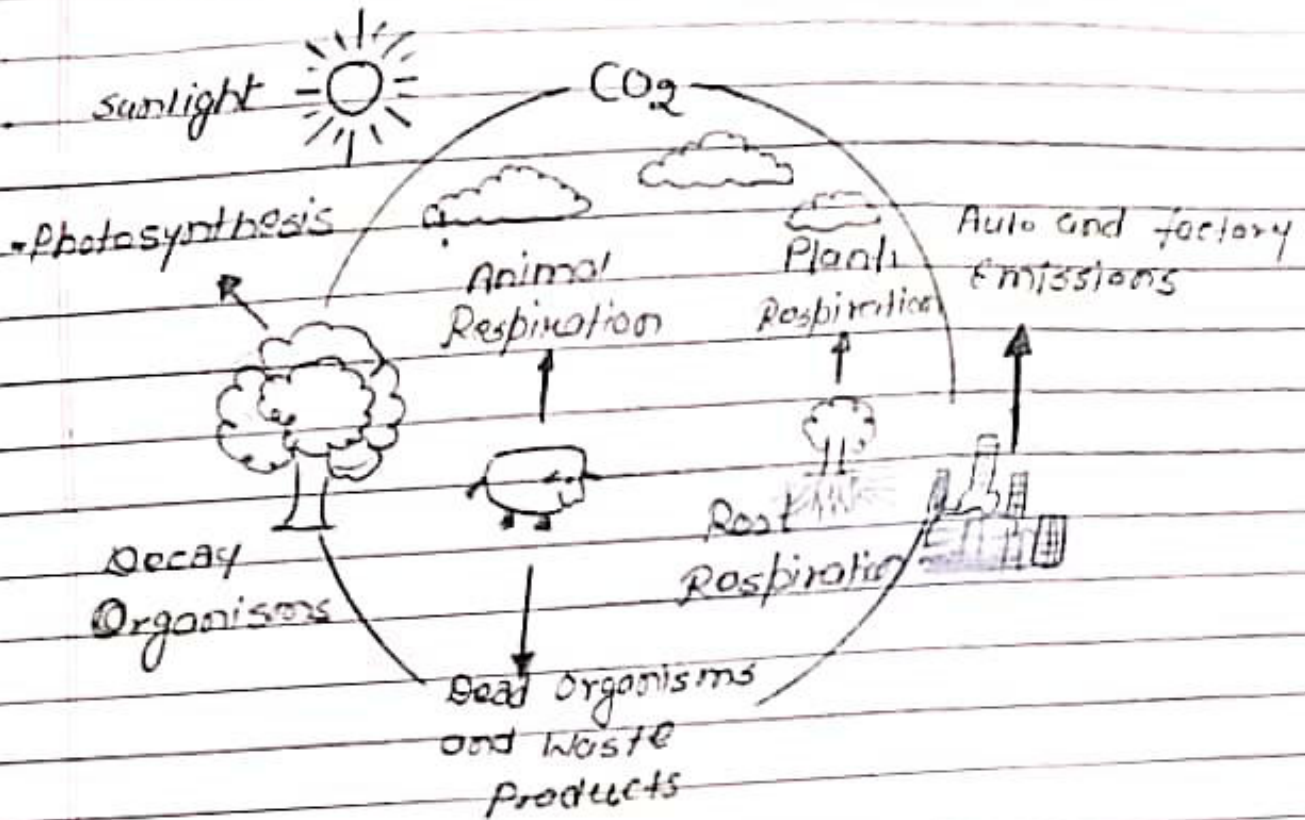
Answer :- Carbon Cycle :-

The carbon cycle is the biogeochemical cycle by which carbon is exchanged among the biosphere, pedosphere, geosphere, hydrosphere and atmosphere of the earth. Carbon is the main component of biological compounds as well as a major component of many minerals such as lime-stone. Along with the nitrogen cycle and the water cycle, the carbon cycle comprises a sequence of events that are key to make earth capable of sustaining life. It describes the movement of carbon of as it is recycled and reused throughout the biosphere, as well as long-term processes of

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carbon sequestration to and release from  
carbon sinks.



Fossils and Fossil fuels.

## Carbon cycle

Main Components :-

Carbon pools in the major reservoirs  
on earth.

Pool	Quantity (gigatons)
Atmosphere	720
Ocean (total)	38,400
Total inorganic	37,400



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Total organic	1,000
Surface layer	670
Deep layer	36,730
<u>Lithosphere</u>	
Sedimentary carbonates	> 60,000,000
kerogens	15,000,000
Terrestrial biosphere (total)	2,000
Living biomass	600 - 1,000
Dead biomass	1,200
Aquatic biomass	1-2
Fossil fuels (total)	4,130
Coal	3,510
Oil	230
Gas	140
Other (peat)	250

Carbon in the lower mantle :-

Carbon principally enters the mantle in the form of carbonate-rich sediments on tectonic plates of ocean crust, which pull the carbon into the mantle upon undergoing subduction. These subducted carbonates can interact with lower mantle silicates, eventually forming super-deep diamonds like the one found.

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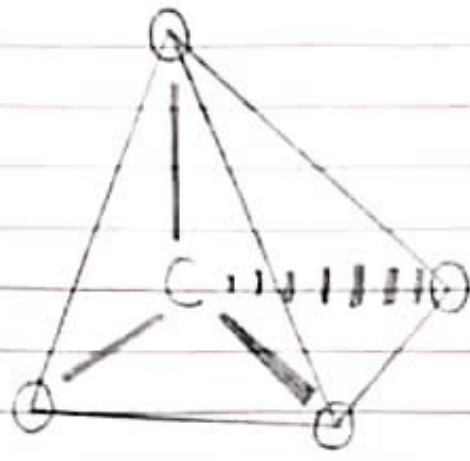
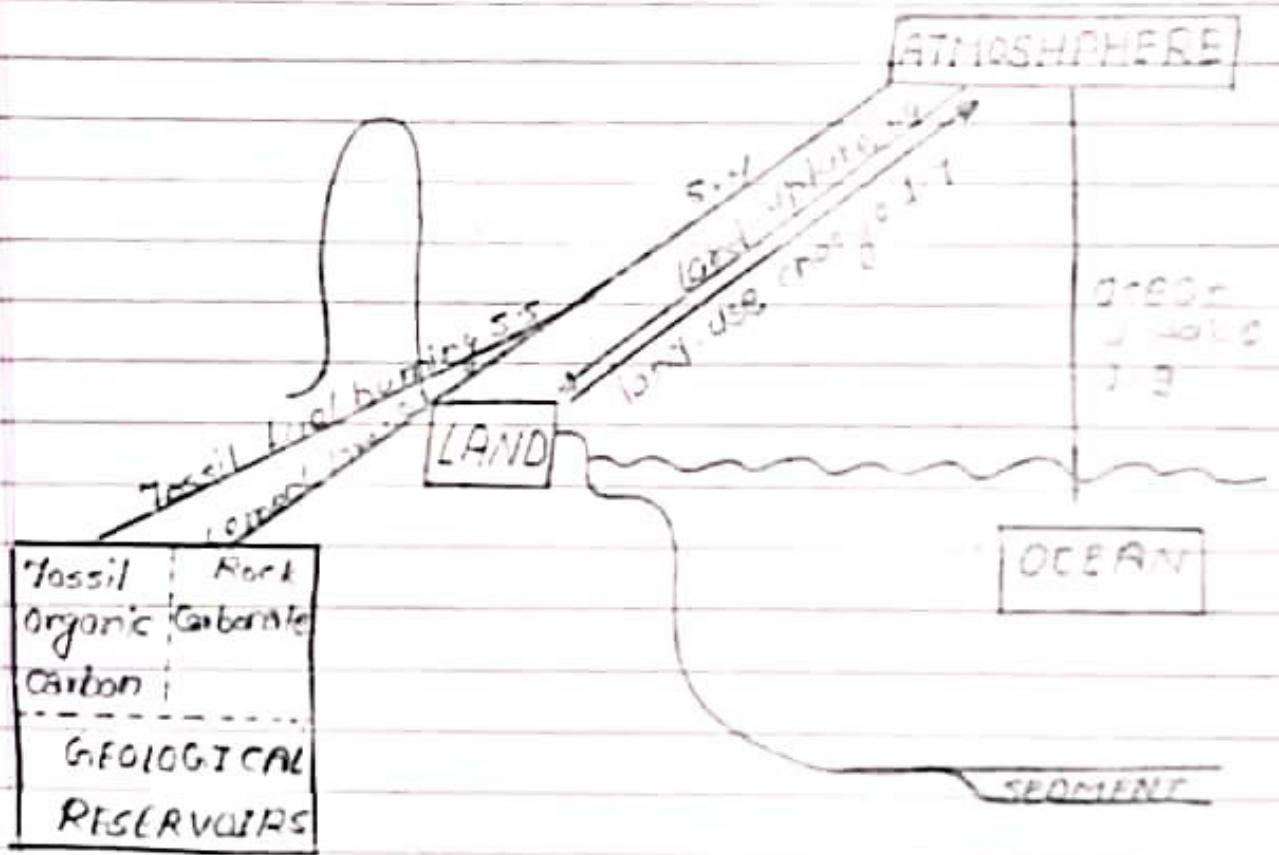


Diagram of carbon tetrahedrally bonded to oxygen

Human Influence :-



The human perturbation