

Date - 11.02.2025

Department of Botany - B.Sc - Part - II. Hons

online class - J.J. College, Ara

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E. Copy.

Group - B. paper - III - Ecology

Time - 8:30 - 9:30

Question → Discuss phosphorus cycle?

Ans → The phosphorus cycle is a sedimentary type of mineral cycle. The plants take phosphorus in the form of orthophosphate from soil. The animals eat them and thus phosphorus is transferred to animals. Due to death and decay this again becomes available to soil from where the plants take it. The transfer of phosphorus takes a cyclic pathway which involves following steps:-

- (i) The chief sources of phosphorus are phosphatic rocks and natural deposits of phosphorus.
- (ii) The phosphorus is released in the form of orthophosphate by weathering of rocks mainly.
- (iii) Major part of phosphorus reaches into oceans with land drainage in the form of dissolved phosphate and only small amount remains available to the plants in the form of soluble orthophosphate from soil.
- (iv) This phosphorus is transferred to animals through the food chain.
- (v) Only a small amount of phosphorus is utilized by the plant that continues in the phosphorus cycle.
- (vi) Large amount of phosphorus reaches to the oceans and becomes deposited in shallow or deep sediments.
- (vii) The phosphate of shallow sediment is through about to the land by birds and fishes. Thus again comes to cycle?
- (viii) The phosphorus lying in deep sediments undergoes geological cycle and thus is lost from the cycle.
- (ix) Some phosphorus takes part in the teeth and bone formation of animals which after a very long time becomes available to soil from where to soil from where the plants take it.

P.T.O