



# SHIKSHA CLASSES

## BOARD QUESTION PAPER

Subject : Biology

Ch.: 14. Ecosystems and Energy Flow

Total Marks : 25

Class : XII

Time : 1 Hr.

### Section A

**Q.1.:** Select & write the most appropriate answer from the given alternatives for each sub-question. 4

- i) Which spatial pattern occurs vertically in an ecosystem?  
a) Zonation      b) Stratification      c) Y-shaped pattern      d) Pyramid
- ii) Considerable amount of GPP is utilized by plants in  
a) metabolism      b) respiration      c) homeostasis      d) excretion
- iii) The annual net primary productivity of the whole biosphere is approximately billion tonnes (dry weight) of organic matter.  
a) 10      b) 50      c) 100      d) 170
- i v) What is net primary productivity?  
a) Total rate of photosynthesis      b) Rate of energy storage by consumer  
c) Amount of organic matter stored by plants      d) Rate of energy used

**Q.2.:** Write the answer in ONE sentence:

- i) What is meant by nutrient cycling? 2
- ii) Which are the major producers in an aquatic ecosystem?

### Section B

**: Attempt any THREE.** 6

**Q.3.:** Distinguish between Natural ecosystem and artificial ecosystem.

**Q.4.:** Give reasons: Food chains do not exist in isolation, but are always interconnected to form food web.

**Q.5.:** Sketch and label ecological pyramids of energy and pyramid of biomass

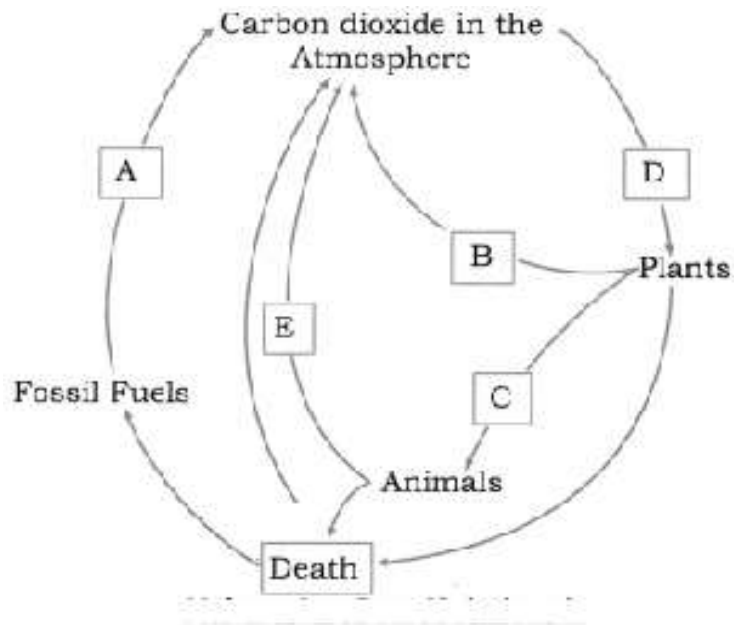
**Q.6.:** What is secondary productivity? What is annual net primary productivity of biosphere?

### Section C

Attempt any THREE.

9

- Q.7 : What is the maximum number of trophic levels in a food chain?
- Q.8 : Explain the following terms with reference to ecological succession.  
(i) Serai stages. (ii) Pioneers. (iii) Hydrosere.
- Q.9 : From algae to forest, explain in relation with the succession.
- Q.10 : Identify A, B, C, D and E given in sketch of carbon cycle



### Section D

: Answer the following : (ANY 1)

4

- Q.11 : What are the most important ecological services whose value cannot be determined?
- Q.12 : Describe the pathway followed by phosphorus in an ecosystem.

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