

Topic :- Ecosystem

- 1 **(d)**
The exchange pool in the carbon cycle is the atmosphere in the gaseous cycle (carbon cycle)
the reservoir is the atmosphere
- 2 **(c)**
The amount of biomass or organic matter produced per unit area over a time period in plants during photosynthesis is called primary production. It is expressed in the terms of weight (g^{-2}) or energy (kcal m^{-2})
- 3 **(b)**
The energy level in a trophic level is not determined by considering individuals of a species in that trophic level.
- 4 **(d)**
Primary consumers are herbivorous animals, which obtain their food from green photosynthetic plants (*i.e.*, producers). Insects and cattle are primary consumers.
- 5 **(c)**
The amount of living matter in an ecosystem is known as biomass. It is measured both as fresh and dry weight
- 6 **(c)**
The amount of biomass or organic matter produced per unit area over a time period in plants during photosynthesis is called primary production. Primary productivity depends upon photosynthetic capacity of plants and nutrient availability
- 7 **(a)**
Producer are also called as tranducer because they are able to change radiant energy into

chemical form. Consumers are animals which feed on other organisms or their parts. Consumer ingest their food. Decomposers are saprophytes which feed on dead bodies of organisms. The decomposer organisms secrete digestive enzymes to digest the organic matter externally

8 **(d)**

Only 10% of the herbivore productivity is utilized for raising productivity of primary carnivores. The rest is consumed in ingestion, respiration, maintenance of body heat and other activities

9 **(a)**

A-Amorphous, B-Humus, C-Humification

10 **(d)**

Autogenic succession (auto-self, genic-generate) is the modification and development of new environment made by the community itself such that the community makes its own replacement by new communities. The changed environment is now favourable for new community.

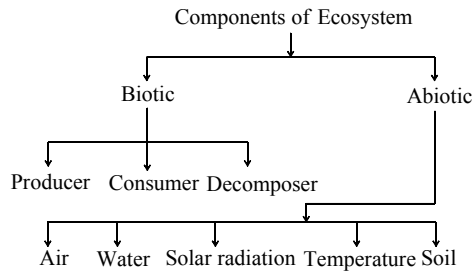
12 **(c)**

The percentage of energy converted into biomass by a higher trophic level over the energy of food resources available at the lower trophic level is called ecological efficiency. It is also called Lindemann's trophic efficiency rule.

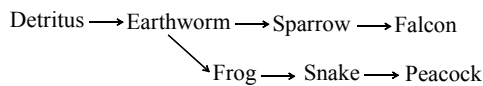
$$EE = \frac{\text{Energy converted into biomass at trophic level}}{\text{Energy present in biomass at lower trophic level}} \times 100$$

13 **(d)**

The components of an ecosystem may be divided into two main types, *i.e.*, **Biotic component** comprising the various kinds of living organisms and **Abiotic component** consisting of environmental factors



- 14 **(a)**
 Detritus Food Chain (DFC) begins with detritus or dead organic matter. Detrivores and decomposers feed over it



- 15 **(b)**
 The rate of formation of new organic matter by consumers is called secondary productivity
- 16 **(a)**
 The sequence of communities showing a gradual change in composition called **continuum** (Curtis; 1959).
- 17 **(a)**
 Small phytoplanktons → Free floating angiosperms → Rooted hydrophytes → Sedges → Grasses → Trees
- 18 **(b)**
 Zooplanktons are the microscopic animals that feed on the phytoplanktons in an aquatic ecosystem. These are truly herbivorous and form the second trophic level (primary consumers) equivalent to cows in grasslands.
- 19 **(a)**
 Organic remain.
 A much larger fraction of energy flows in aquatic ecosystem through the grazing food chain than through the grazing food chain. Energy for the food chain comes from organic remain or detritus
- 20 **(d)**
 The decomposition rate is slow if detritus is rich in cellulose, lignin and chitin

ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	D	C	B	D	C	C	A	D	A	D
Q.	11	12	13	14	15	16	17	18	19	20
A.	B	C	D	A	B	A	A	B	A	D

PE