

BIOLOGY

BOOKS - ARIHANT PUBLICATION

ECOSYSTEMS

Part I Ecosystem Structure And Function Questions For Practice Very Short Answer Type Questions Choose The Correct Option

1. Biotic components include

A. producers, consumers and decomposers

B. producers and consumers

- C. Both (a) and (b)
- D. None of the above

Answer: A



- **2.** The non-green plants are as important as green plants because they
 - A. cause human diseases
 - B. cause diseases of other plants
 - C. are useful in several industries

D. bring about decomposition of dead animal and plant remains

Answer: D



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- **3.** Primary consumers are always
 - A. producers
 - B. carnivores
 - C. herbivores
 - D. omnivores

Answer: C



- **4.** Man is
 - A. herbivorous
 - B. carnivorous
 - C. omnivorous
 - D. producers

Answer: C



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5. Secondary producers are :

A. herbivores
B. producers
C. carnivores
D. None of these
Answer: D
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6. Which of the following is an abiotic component of
ecosystem?
A. Bacteria
B. Humus

C. Pidiits
D. Fungi
Answer: B
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7. Decomposers are generally (green plants,
microorganisms, phytoplanktons, insects)
A. green plants
B. phytoplanktons
C. insects
D. microorganisms

Answer: D



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Part I Ecosystem Structure And Function Questions For Practice Very Short Answer Type Questions Fill In The Blanks

1. Plants are called as because they fix carbon dioxide.



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2. In an aquatic ecosystem, the limiting factor for the productivity is...........



3. Decomposers are generally (green plants, microorganisms, phytoplanktons, insects)



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Part I Ecosystem Structure And Function Questions For Practice Very Short Answer Type Questions Correct The Statement If Required By Changing The Underlined Word

1. The term ecosystem was proposed by $\underline{\mathrm{Odum}}$



2. The two components of an ecosystem are **Watch Video Solution** Part I Ecosystem Structure And Function Questions For Practice Very Short Answer Type Questions Express In One **Or Two Words 1.** What is the creating force of an ecosystem? **Watch Video Solution** 2. What type of ecosystem is represented by pond?

3. Name the common detritivores in an ecosystem.
Watch Video Solution
Part I Ecosystem Structure And Function Questions For Practice Short Answer Type Questions
1. Write a note on ecosystem.
Watch Video Solution
2. Is an aquarium a complete ecosystem?
Watch Video Solution

3. Is an aquarium a complete ecosystem?



Watch Video Solution

4. Apart from plants and animals, microbes form a permanent biotic component in an ecosystem.

While plants have been referred to as autotrophs and animals as heterotrophs, what are microbes referred to as?



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5. How do the microbes fulfil their energy requirements in an ecosystem ?



6. How are productivity, gross primary productivity, net primary productivity and secondary productivity interrelated?



7. Primary productivity varies from ecosystem to ecosystem. Explain.



8. What is primary productivity? Why does it vary in different types of ecosystems?



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9. State the relation between gross and net primary productivity.



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10. Which of the following ecosystems will be more productive in terms of primary productivity? Justify your answer.

A young forest, a natural old forest, a shallow polluted lake, alpine meadow.



11. Why is the rate of assimilation of energy at the herbivore level called secondary productivity?



12. Why are oceans least productive?



13. Write a note on decomposers.



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14. The rate of decomposition of detritus is affected by the abiotic factors like availability of oxygen, pH of the soil substratum, temperature, etc. Discuss,



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15. Justify the following statement in terms of ecosystem dynamics.

'Nature tends to increase the gross primary productivity,

while man tends to increase the net primary productivity'.



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Part I Ecosystem Structure And Function Questions For Assessment Very Short Answer Type Questions Choose The Correct Option

- 1. Abiotic components of an ecosystem include
 - A. producers, consumers and decomposers
 - B. producers and consumers
 - C. only producers
 - D. None of the above

Answer: D



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- 2. An ecosystem is not a /an
 - A. open system
 - B. closed system
 - C. variable system
 - D. None of the above

Answer: B



Part I Ecosystem Structure And Function Questions For Assessment Very Short Answer Type Questions Correct The Statements If Required By Changing The Underlined Word

1. The raw material for decomposition is called vermicompost.



2. Net primary productivity is $\underline{\mathrm{GPP}{+}\mathrm{R}}$



Part I Ecosystem Structure And Function Questions For Assessment Very Short Answer Type Questions Express In One Or Two Word S 1. The two components of an ecosystem are



2. Name the largest decomposers of forest floor.



3. Name the term used for rate of storage of organic matter not used by heterotrophs.



Part I Ecosystem Structure And Function Questions For Assessment Very Short Answer Type Questions Fill In The Blanks

1 4	\ detritivore	ic	animal	feeding	on
I. /-	1 ucu iuvoi c	13	allillai	recuirig	UII



2. Productivity is expressed in terms of



Part I Ecosystem Structure And Function Questions For Assessment Short Answer Type Questions

1. Name the four functional aspects of an ecosystem.
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2. Explain Stratification .
Watch Video Solution
3. Explain Leaching .
Watch Video Solution
4. Give two examples of Terrestrial ecosystem



5. Give two examples of Aquatic ecosystem



6. Give two examples of Man-made ecosystem



- **7.** By taking an example of any ecosystem arrange the functions given below in correct sequence.
- (i) Heterotrophs die and accumulate as organic material.
- (ii) Heterotrophs consume autotrophs.

- (iii) Autotrophs convert inorganic material.
- (iv) Decomposers decompose organic material
- (v) Nutrients are released in the soil and reused by autotrophs.



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Part Ii Energy Flow Question For Practice Very Short Answer Type Questions Choose The Correct Option

- **1.** Trophic levels in a food chain are formed of :
 - A. only bacteria
 - B. only plants
 - C. only herbivores

D. organisms linked in food chain

Answer: D



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2. Detritus food chain starts from:

A. virus

B. bacteria

C. protozoan

D. algae

Answer: B



3. Which of the following has the largest population in a food chain ?

- A. Producers
- **B.** Primary consumers
- C. Secondary consumers
- D. Decomposers

Answer: D



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4. The second trophic level is a lake is:

- A. phytoplanktons B. zooplanktons C. benthos D fishes **Answer: B Watch Video Solution**
- Part Ii Energy Flow Question For Practice Very Short Answer
 Type Questions Express In One Or Two Words

1. Which one of the following type of organisms occupy more than one trophic level in a pond ecosystem?



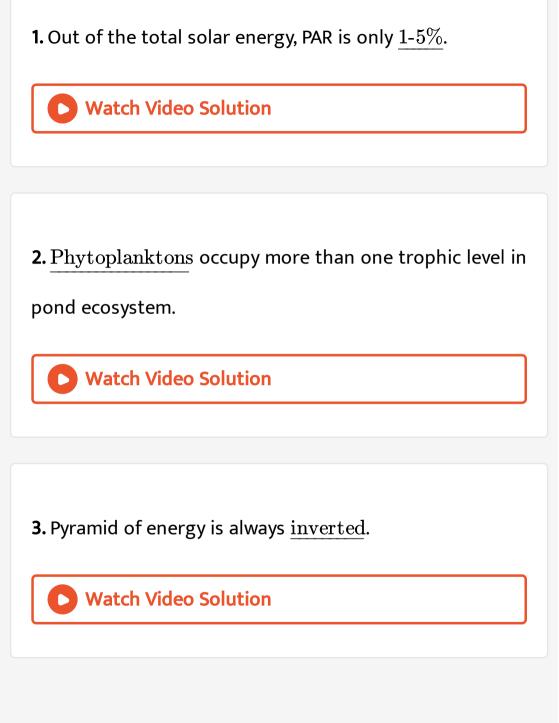
2. State, what does standing crop of a trophic level represent?



3. List any two ways of measuring the standing crop of a trophic level.



Part Ii Energy Flow Question For Practice Very Short Answer
Type Questions Correct The Statement If Required By
Changing The Underlined Word



Part Ii Energy Flow Question For Practice Very Short Answer Type Questions Fill In The Blanks

1. Energy transferred from one trophic level to another is



2. Tip of an ecological pyramid is occupied by :



3. In an ecosystern dominated by trees, the pyramid of number istype.

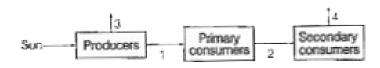


Part Ii Energy Flow Question For Practice Short Answer Type Questions

1. The energy flow in an ecosystem is unidirectional '. Justify the statement .



2. The diagram shows the flow of energy through an ecosystem.



Which arrows represent the smallest amount of energy

transferred between organisms and the largest amount of energy lost to the ecosystem?



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3. The energy flow in the ecosystem follows the second law of thermodynamics'. Explain.



4. Organisms at a higher trophic level have less energy available. Comment.



5. The number of trophic levels in an ecosystem are limited Comment



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6. Write a short note on food chain.



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7. Three food chains are shown below

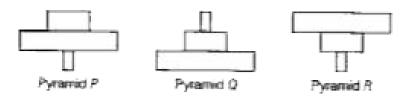
(i) Grass $\,
ightarrow\,$ Deer $\,
ightarrow\,$ Tiger

(ii) Tree $\,
ightarrow \,$ Beetle $\,
ightarrow \,$ Bacteria

(iii) Flowering plant ightarrow Butterfly ightarrow Bird

They can be represented by the three pyramids of

numbers P, Q and R below



Write the correct combination that correctly matches food chains and pyramids.



8. Define ecological pyramids and describe with examples, pyramids of number and biomass.



9. Write a short note on ecological pyramids.



10. Write a note on pyramid of energy.



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Part Ii Energy Flow Question For Assessment Very Short Answer Type Questions Choose The Correct Option

1. A food chain can have trophic levels

A. one

B. two

C. three

D. multiple

Answer: D



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- 2. Who proposed the concept of ecological pyramid?
 - A. Odum
 - B. Elton
 - C. Tansley
 - D. Clements

Answer: B



Part Ii Energy Flow Question For Assessment Very Short Answer Type Questions Correct The Statement If Required By Changing The Underlined Word

1. Pyramid of energy is always inverted.



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2. Flow of energy declines as it passes from lower to higher trophic level. This is explained by first law of thermodynamics.



Part Ii Energy Flow Question For Assessment Very Short Answer Type Questions Express In One Or Two Words

1. Expand PAR.



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2. What is the starting point of a grazing food chain and of a detritus food chain?



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Part Ii Energy Flow Question For Assessment Very Short **Answer Type Questions Fill In The Blank**

1. Green plant constitute:



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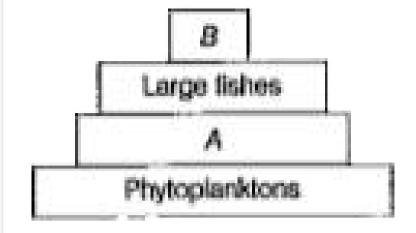
Part Ii Energy Flow Question For Assessment Short Answer Type Questions

1. In terrestrial ecosystems, DFC and GFC are interconnected at certain levels. Justify the statement.



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2. Write the probable primary consumer and top consumer of the following ecological pyramid.





3. Fill in the blanks (A, B and C) in following chart.

$$\begin{array}{c} \text{Autotrophs} \rightarrow \text{Herbivores} \rightarrow \text{Carnivores} \rightarrow \text{Decomposers} \\ \text{\tiny (10000) GPP} & \text{\tiny (A) GPP} & \text{\tiny (B) GPP} & \text{\tiny (C) GPP} \end{array}$$

The values filled by you represent which 'law'? Explain.



4. What are the shortcomings of ecological pyramids in the study of ecosystem?



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5. Describe the different classes of consumers.



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6. Food chain is divided into three basic categories. Name them according to the description given below

(i) Goes from smaller to larger animals.

(ii) Goes from larger to smaller animals.

(iii) Goes from dead organisms to microorganisms.

Part Iii Nutrient Cycling And Ecological Succession Question For Practice Very Short Answer Type Questions Choose The Correct Option

- 1. Primary succession is development of communities on
 - A. cleared forest area
 - B. newly exposed habitat
 - C. pond filled after a dry season
 - D. freshly harvested crop field

Answer: B



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2. Lichen is pioneer in which succession?

A. Hydrosere

B. Lithosere

C. Psammosere

D. Halosere

Answer: B



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3. Plant succession in a saline habitat is called

A. hydrosere
B. halosere
C. psammosere
D. xerosere
Answer: B
Watch Video Solution
4. The first species that establishes itself in a barren
habitat due to succession is called
A alima and
A. climax
B. migrant

- C. colony
- D. pioneer

Answer: D



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Part Iii Nutrient Cycling And Ecological Succession Question For Practice Very Short Answer Type Questions Correct The Statement If Required By Changing The Underlined Word

1. Plant succession in a sandy area is $\underline{\text{lithosere}}$.



2. The pioneer community in hydrosere is submerged plants.



3. $\underline{\operatorname{Climate\ control}}$ comes under supporting ecosystem services .



Part Iii Nutrient Cycling And Ecological Succession Question For Practice Very Short Answer Type Questions Fill In The Blanks

1. represents sedimentary type of nutrient cycle. **Watch Video Solution** 2. The successful germination of propagules on bare area is called **Watch Video Solution** Part Iii Nutrient Cycling And Ecological Succession Question For Practice Very Short Answer Type Questions Express In One Or Two Words

1. Which is the major reservoir of carbon on earth?



2. Under what conditions would a particular stage in the process of succession revert back to an earlier stage?



3. Give one examples of xerarch succession.



Part Iii Nutrient Cycling And Ecological Succession Question For Practice Short Answer Type Questions **1.** Fill in the missing stages in the given primary hydrarch succession.

Phytoplankton o A o B o C o Sedge meadow stage o D o Forest plant stage



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2. Mention the role of pioneer species in primary succession on rocks .



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3. Write the note on the following .

Define pioneer species.



4. Write the note on the following .

Among bryophytes, lichens and fern, which one is a pioneer species in a xeric succession and why?



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5. State the function of a reservoir in a nutrient cycle.

Explain the simplified model of carbon cycle in nature.



6. Why are nutrient cycles in nature called biogeochemical cycles?



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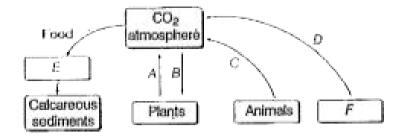
7. Outline salient features of carbon cycling in an ecosystem.



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8. Complete the following model of carbon cycle by filling

A, B, C, D, E and F





9. Write important features of a sedimentary cycle in an ecosystem.



10. Describe the advantages for keeping the ecosystems healthy.



11. Write a short note on ecosystem services.



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Part Iii Nutrient Cycling And Ecological Succession Question For Assessment Very Short Answer Type Questions Choose The Correct Option

1. The rate of release of nutrients into atmosphere is regulated by

A. temperature

B. soil nature

C.	рΗ
Ь	٨Ⅱ

D. All of the above

Answer: D



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2. Weathering of rocks makes phosphorus available first to

A. producers

B. decomposers

C. consumers

D. None of the above

Answer: A



Part Iii Nutrient Cycling And Ecological Succession Question For Assessment Very Short Answer Type Questions Correct The Statement If Required By Changing The Underlined Word

1. The first species that establishes itself in a barren habitat due to succession is called $\underline{\mathrm{migrant}}$.



2. Lichens and mosses are the part of <u>halosere</u>.

Part Iii Nutrient Cycling And Ecological Succession Question For Assessment Very Short Answer Type Questions Express In One Or Two Words

1. How much of carbon is dissolved in the oceans?



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2. Name the two forms of reservoir of carbon, that regulate the ecosystem carbon cycle.



3. How much carbon is fixed in the biosphere through
photosynthesis annually?

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4. What do you understand by the term seral stage?



Part Iii Nutrient Cycling And Ecological Succession Question For Assessment Very Short Answer Type Questions Fill In The Blanks

1. In succession, dominant organisms are autotrophs.



2. The individual transitional communities are called



Part Iii Nutrient Cycling And Ecological Succession Question For Assessment Short Answer Type Questions

1. Mention some ways by which carbon dioxide returns back to the atmosphere.



2. What are biogeochemical cycles? Mention their two kinds, giving instances of each.



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3. List the features that make a stable biological community.



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4. Who attempted to put a price tag on ecosystem services? What is its estimated value? Discuss.



Part Iii Nutrient Cycling And Ecological Succession Question For Assessment Differentiate Between The Following

1. Differentiate between Standing crop and Standing state.



2. Differentiate between Primary productivity and Secondary Productivity .



 $\textbf{3.} \ \mathsf{Differentiate} \ \mathsf{between} \ \mathsf{Detritivores} \ \mathsf{and} \ \mathsf{Decomposers} \ .$



4. Differentiate between Production and Decomposition.



5. Differentiate between

Food Chain and Food Web



6. Differentiate between Grazing and Detritus food chains



7. Differentiate between Gaseous and Sedimentary nutrient cycling



8. Differentiate between Carbon cycle and Phosphorus cycle.



9. Differentiate between Nutrient cycle and Flow of energy



10. Differentiate between Upright and Inverted pyramids .
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11. Seral community and Climax community
Watch Video Solution
12. Differentiate between Pioneer community and Climax
community
Watch Video Solution

13. Differentiate between

Hydrosere and Xeresere



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14. Differentiate between Succession on land and Succession in water.



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15. Differentiate between Wet and Dry deposition



Odisha Bureau S Textbook Solutions Very Short Answer Type Questions Multiple Choice Questions

1 Forests	ronrocont	0000	ıctam
I. LOI G212	represent	ecos	steili.

A. aquatic

B. terrestrial

C.

D. grassland

Answer: B



2.	Decomposers	are	generally	•••••	(green	plants,
mi	croorganisms, p	hytop	olanktons, ir	sects)	

- A. green plants
- B. microorganisms
- C. phytoplanktons
- D. insects

Answer: B



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3. Man is

A. herbivore
B. carnivore
C. omnivore
D. producer
Answer: C
Watch Video Solution
4. Ecological efficiency is equal to per cent.
4. Ecological efficiency is equal to per cent. A. 1
A. 1

\Box	\cap	_
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Answer: D



Watch Video Solution

5. The efficiency for energy transfer from one trophic level to another is nearly per cent.

A. 1

B. 10

C. 5

D. 20

Answer: B

6.	P	yramid	of	•••••	cannot	be	inverted.
----	---	--------	----	-------	--------	----	-----------

A. energy

B. biomass

C. number

D. ecosystems

Answer: A



7.	Succession	that	starts	at	•••••	habitat	is	called
hy	drosere.							
	A. sandy							
	B. rocky							
	C. aquatic							
	D. xeric							
An	swer: C							
	Watch V	ideo S	olution					
8.	Succession tl	hat sta	arts at s	and	y habi	tat is call	ed .	•••••

A. halosere B. lithosere C. psammosere D. hydrosere **Answer: C Watch Video Solution** Odisha Bureau S Textbook Solutions Very Short Answer Type **Questions Express In One Or Two Words**

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1. What can be called primary consumers?

2. What are decomposers? **Watch Video Solution** 3. Through which process is energy lost from living organisms? **Watch Video Solution 4.** Which type of ecological pyramid is never inverted?

5. What is called to the process of creation of bare area?
Watch Video Solution
6. What is the form of climax forest called?
Watch Video Solution
Odisha Bureau S Textbook Solutions Very Short Answer Type Questions Correct The Statement In Each Bit Without Changing The Underlined Words
1. Pond represents a forest ecosystem.
Watch Video Solution

2. correct the sentence if required, $\underline{Ecosystem}$ has structural and energy aspects.



3. <u>Biogeochemical</u> cycle may be otherwise called energy cycle.



4. All heterotrophs are capable of photosynthesis.



5. Animals are responsible for utilising <u>dead</u>, <u>decaying</u> substances, thereby cycling of materials becomes feasible.



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6. Flow of nutrients is unidirectional.



Watch Video Solution

7. Net primary productivity is calculated by taking into consideration gross primary productivity and photosynthesis. Comment.



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8. Food-chain shows a complicated net-like inter-relationship in trophic levels



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9. Pyramid of biomass takes into consideration the number of organisms in each trophic level.



Watch Video Solution

10. Pyramid of energy is always inverted.

11. A	stable	community	shows	high	species	dominand	:e
11./	Stable	Community	3110443	mgn	species	aominanc	٠.

A. true

B. false

C.

D.

Answer:



12. Primary succession starts where there was living matter previously.



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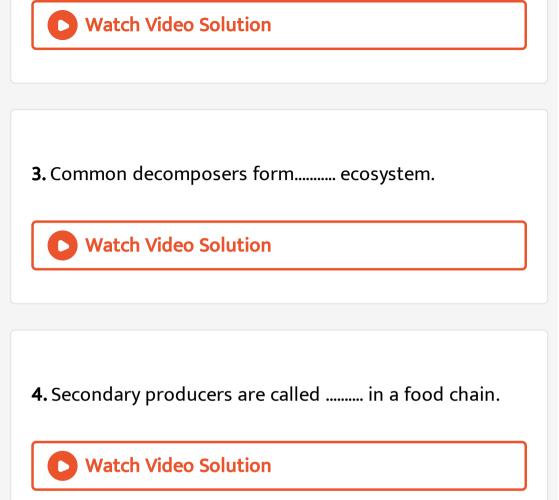
Odisha Bureau S Textbook Solutions Very Short Answer Type Questions Fill In The Blanks

1. Plants are called as because they fix carbon dioxide.



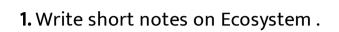
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2. In forest ecosystem, pyramid of number is type.



5. The second trophic level in pond is.....................

Odisha Bureau S Textbook Solutions Short Answer Type Questions





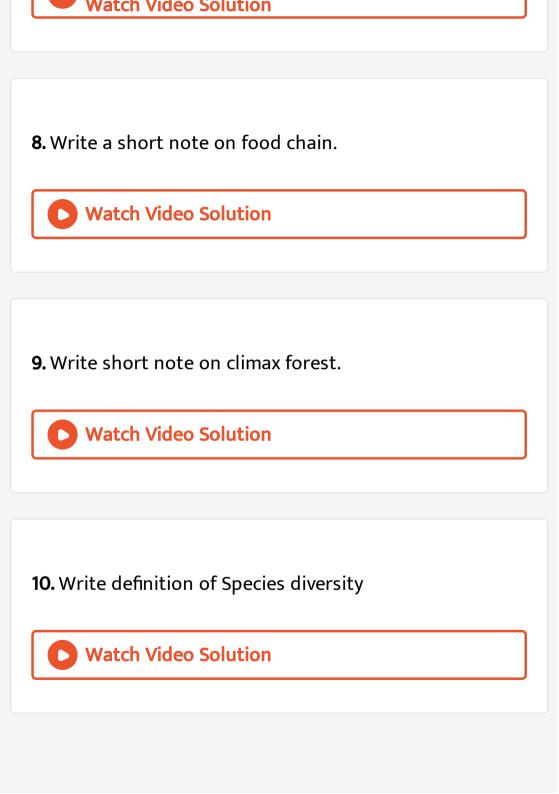
2. Write short notes on Ecesis .



3. Write a short note on ecological pyramids.



4. Write short notes on Food web .						
Watch Video Solution						
5. Write short notes on Plant succession .						
Watch Video Solution						
6. Write short notes on Phytoplankton						
Watch Video Solution						
7. Write short notes on Nudation .						



Odisha Bureau S Textbook Solutions Differentiate The Following With At Least 3 Valid Points

1. Differentiate between

Parasite and Saprophyte



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2. Differentiate between Producers and Consumers



View Text Solution

3. Differentiate between

Food Chain and Food Web



4. Differentiate between Herbivores and Predators



5. Differentiate between Primary succession and Secondary succession



6. Differentiate between Gross primary productivity and Net primary productivity



7. Differentiate between Pyramid of biomass and Pyramid of numbers



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8. Differentiate between Abiotic components and Biotic components.



Watch Video Solution

9. Differentiate between Species diversity and Ecosystem diversity



ward value calcuium



1. What is ecosystem? Describe the different components of ecosystem.



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2. Give an account of energy flow in an ecosystem.





Chapter Practice Very Short Answer Type Questions Choose The Correct Option

1. Each step in a food chain represents a ____ level.

A. food web

B. sere

C. trophic level

D. consumers

Answer: C



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- **2.** During soil decompostion, the processes involved is/are
 - A. humification
 - B. mineralisation
 - C. Both (a) and (b)
 - D. None of these

Answer: C



3. Ecotone is formed due to



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Chapter Practice Very Short Answer Type Questions Correct
The Statements If Required By Changing The Underlined
Words

1. Aquarium are the examples of a man-made terrestrial ecosystem.



2. Dermatocarpon may be found in a seral stage of hydrarch succession.



Chapter Practice Very Short Answer Type Questions Express In One Or Two Words

1. Define ecotone.



2. What is the unit of pyramid of energy?



3. What is humification?

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4. Name any two aquatic macrophytes.

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Chapter Practice Very Short Answer Type Questions Fill In The Blanks

1. gave the 'Ten per cent law'.



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2. The term ecosystem was proposed by $\underline{\mathrm{Odum}}$
Watch Video Solution
3. The individual transitional communities are called
Watch Video Solution
4. In a hydrarch succession are grown in form of a climax community.
Watch Video Solution

5. Crop pollination is ecosystem service.



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Chapter Practice Short Answer Type Questions

1. What is an incomplete ecosystem? Explain with the help of suitable example.



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2. What two abiotic factors might affect an animal living at bottom of the sea?



3. What two abiotic factors might affect a plant growing on a mountain side?



4. Solar energy trapped by green plants finally returns to the environment. Comment.



5. The flow of energy in the ecosystem is :



.....



6. Write important features of a sedimentary cycle in an ecosystem.



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7. Which pioneer species are found on bare rock? How do they help in establishing the next vegetation type?



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Chapter Practice Short Answer Type Ii Questions

1. Defferentiate between the following Regulating services and supporting service of ecosystem



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2. Defferentiate between the following Crustose lichen stage and foliose lichen stage of xerosere.

