



BIOLOGY

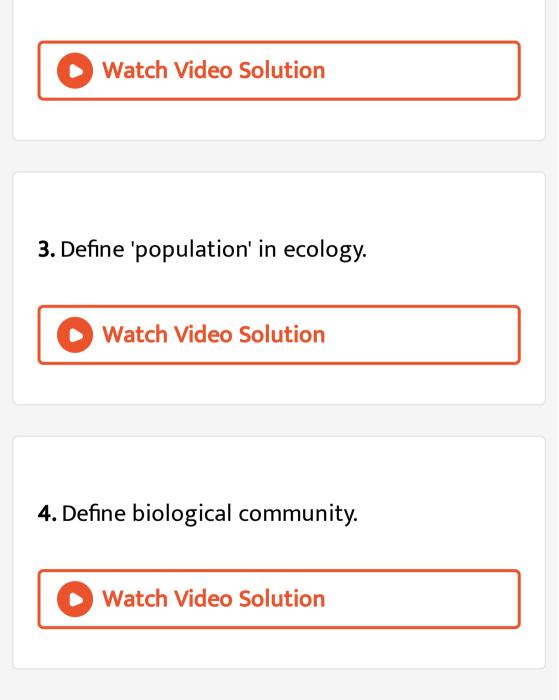
BOOKS - MBD

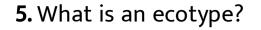
ORGANISMS AND ENVIRONMENT

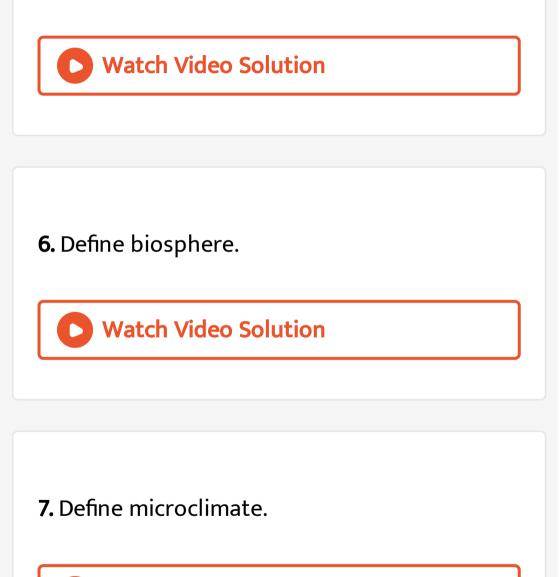


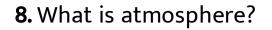
1. Define ecology.

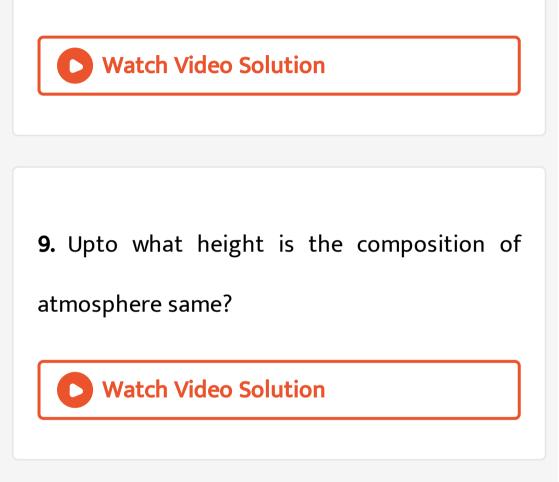
2. Who coined the term ecology?





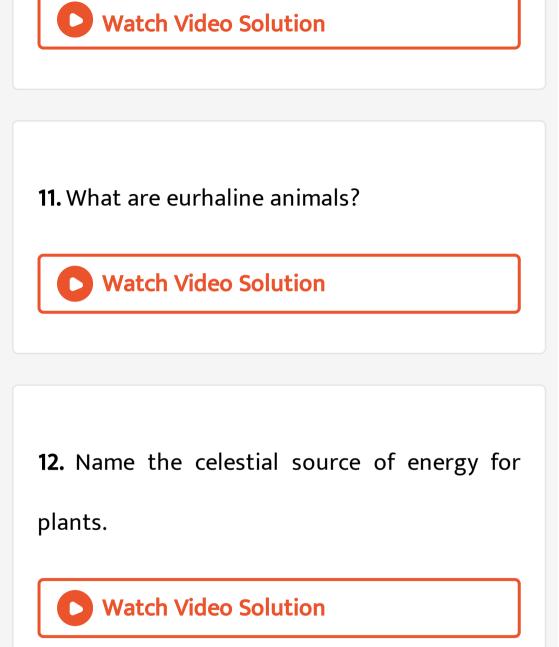






10. Name the major factor that determines the

geographical distribution of organisms.



13. Name the group of algae that inhabit deep

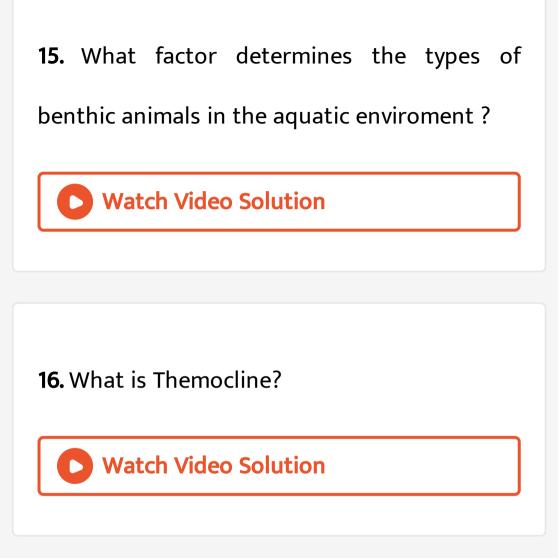
sea.



14. Mention any two factor that determine the

water holding capacity of soil.





17. Define acclimatisation.

18. What is population ecology?



19. Define metapopulation.

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20. What is meant by sex ratio in a population?

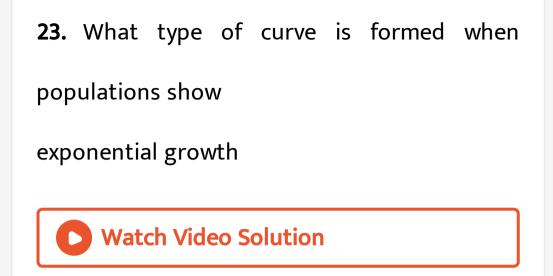


21. Name the factors that increase the population size.

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22. Name two factors which decrease the

size/density of a population.



24. What type of curve is formed when populations show logistic growth, respectively?

25. How do animals generally mark their

territories?

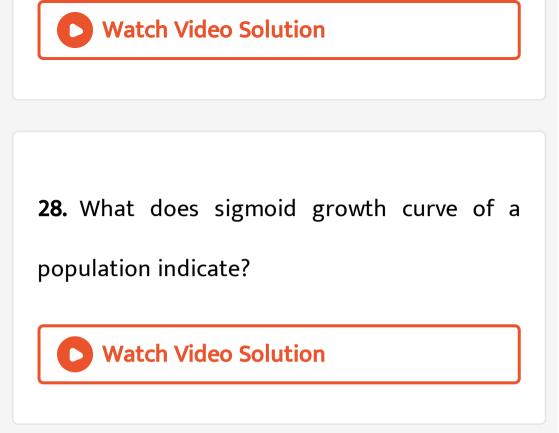


26. What is meant by species composition of a

community?

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27. What does J-shaped growth curve of a population indicate?



29. What is carrying capacity ?

30. When does a population growth curve become J- shaped?
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31. What name is given to the type of growth

that assumes a sigmoid curve?



32. List two beneficial interactions.



33. What is the other term for facultative mutualism?

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34. Give an example of commensal

relationship.

35. Give two examples

mimicry



36. Give two examples

predators

37. Give two examples

parasite angiosperms

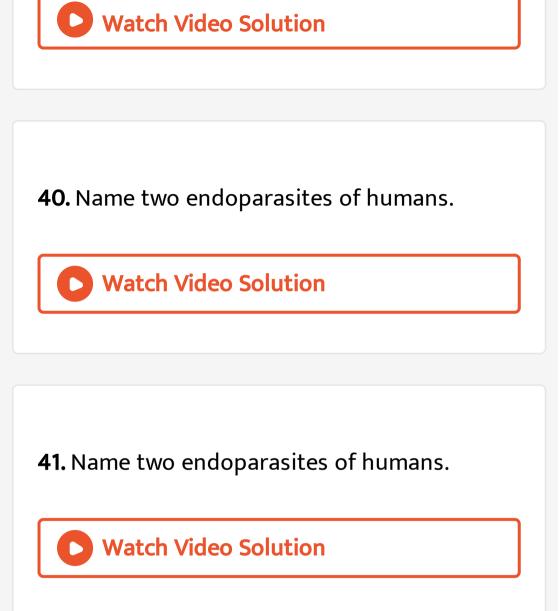
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38. Give two examples

mutualism



39. List the animal paraites.



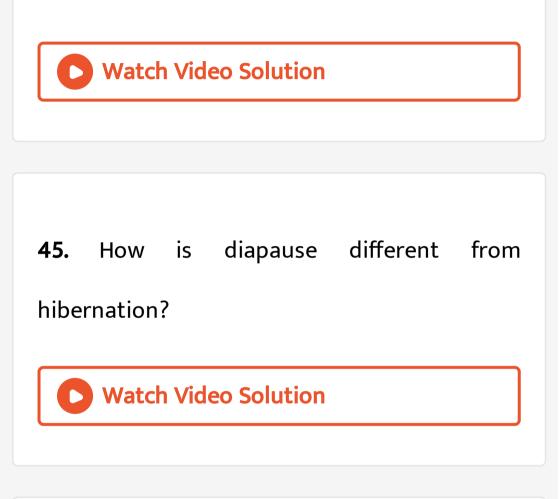
42. Give one word

When animals feed on ther dead animals which had died naturally or has been killed by another animal.

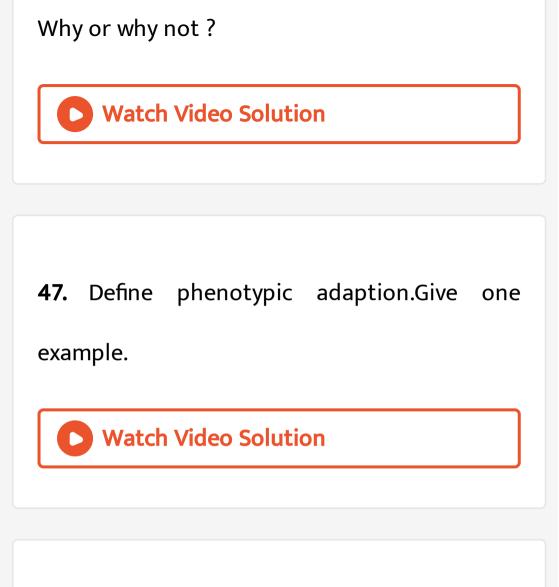
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43. What does symbiosis mean?

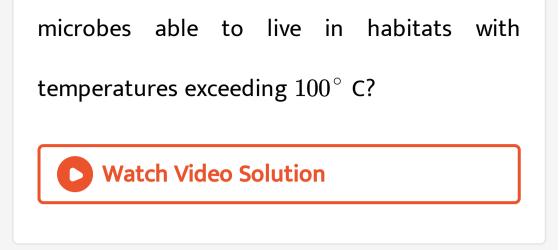
44. What are the types of symbiosis?



46. If a marine fish is placed in a fresh water equarium, will the fish be able to surviver ?



48. Most living organisms cannot survive at temperature at about $45\,^\circ$ C . How are some



49. List the attributes that populations posses

but not the individuals.

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50. If a population growing exponentially double In size in 3 years, what is the intrinsic

rate of Increase fr) of the population?

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51. Mention how have plants developed mechanical and chemical defence against herbivores to protect themselves with the help of one example of each.



52. An orchid plant Is growing on the branch of mango tree. How do you describe this interaction between the orchid and the mango tree?

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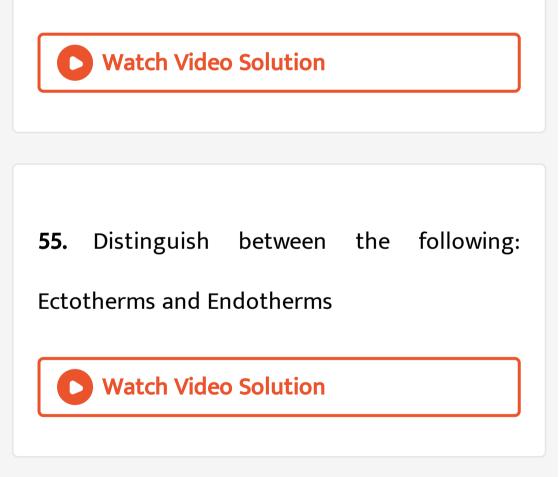
53. What is the ecological principle behind the

biological control method of managing with

pest Insects?



54. Differentiate between hibernation and aestivation.



56. Write a short note on: Adaptations of

desert plants and animals

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57. Write a short note on: Adaptations of

plants to water scarcity

58. Write a short note on: Importance of light

to plants

Watch Video Solution

59. Write a short note on: Effect of temperature or water scarcity and the adaptations of animals.

60. List the various abiotic environmental factors.

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61. Give an example

An endothermic animal .

62. Give an example

An ectothermic animal

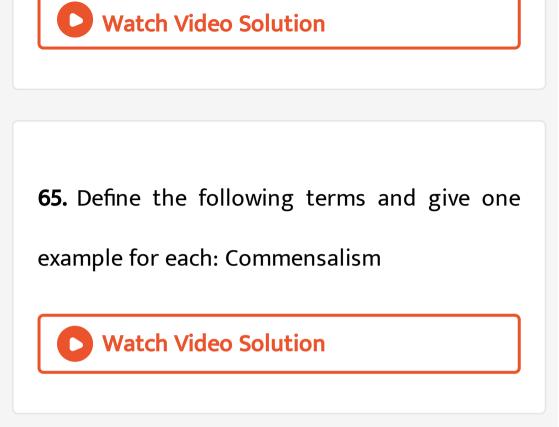
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63. Give an example for: An organism of

benthic /one

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64. Define population and community.



66. Define the following terms and give one example for each: Camouflage

A. Define terms and give examples

Parasitism

Β.

C.

D.

Answer:

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67. Give two examples

mutualism

68. Define the following terms and give one example for each: Interspecific competition

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69. Define term and give examples

Symbiosis

70. Give two examples

mimicry

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71. With the help of suitable diagram describe

the logistic population growth curve.

72. Select the statement which explains best

parasitism :

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73. Select the statement which explains best

parasitism :



74. Select the statement which explains best

parasitism :

Watch Video Solution

75. Select the statement which explains best

parasitism :



76. List any three important characteristics of

population and explain them.



77. Species that can tolerate narrow range of

temperature are called......



78. What are eurythermic species?



79. Fill in the blanks

organism which can tolerate wide range of

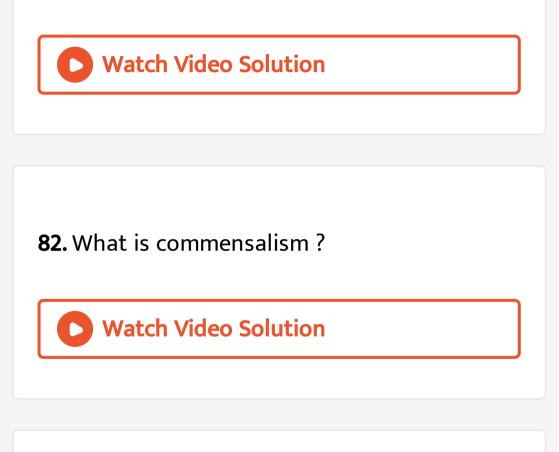
temperature are

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80. Define stenohaline species.

81. What is interaction between two species

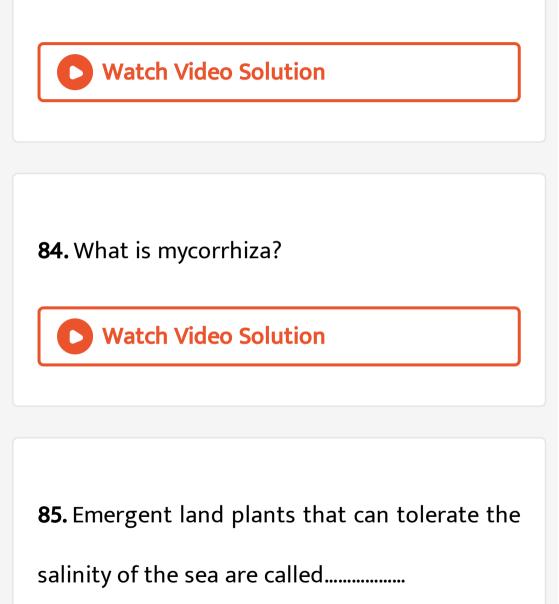
called?



83. Name the association in which one species produces poionous substance or a change in

environmental conditions that is harmful to

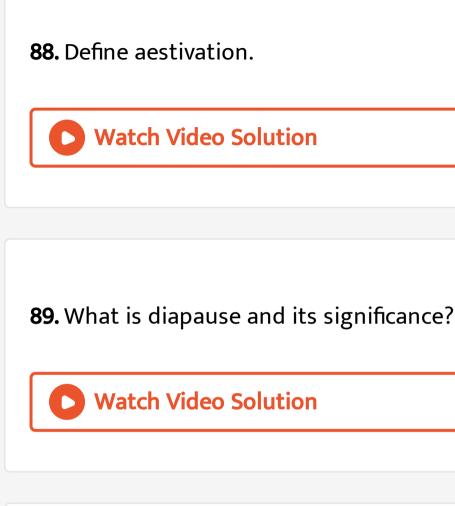
another species.



86. Why do high altitude areas have brighter sunlight and lower temperatures as compared to the plains.

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87. What is homeostasis?



90. What would be the growth rate pattern,

when the resources are unlimited.

91. What are the organisms that feed on the

plant sap and other plant parts called.



92. What is high altitude sickness? Write itssymptoms.



93. Give a suitable example for commensalism.



94. Define ectoparasite and endoparasite and

give suitable examples.

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95. What is brood parasitism? Explain with the

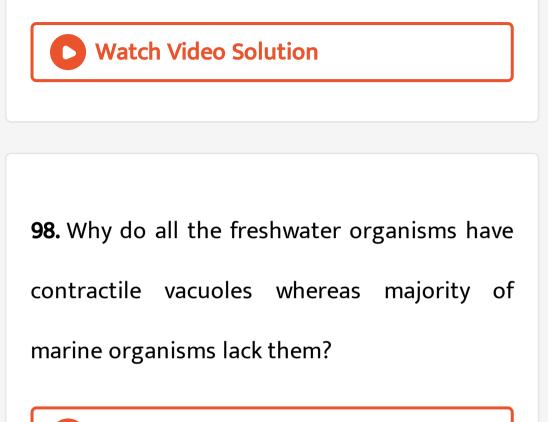
help of an example.

96. Why are coral reefs not found in the regions from West Bengal to Andhra Pradesh but are found in Tamil Nadu and the east coast of India?

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97. If a freshwater fish is placed in an aquarium containing sea water, will the fish be able to

survive? Explain giving reasons.



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99. Define heliophytes and sciophytes. Name plant from your locality that is either

heliophyte or sciophyte.

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100. Why do submerged plants recive weaker illuminations than exposed floating plants in lake?

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101. In a sea shore, the benthic animals live in sandy, muddy and rocky substrata and

accordingly developed the following adap-

tations.

Burrowing

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102. In a sea shore, the benthic animals live in sandy, muddy and rocky substrata and accordingly developed the following adaptations.

Building cubes

103. In a sea shore, the benthic animals live in sandy, muddy and rocky substrata and accordingly developed the following adaptations.

Holdfasts/ peduncle

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104. Categories the following plants into hydrophytes, halophytes, mesophytes and

xerophytes. Give reasons for your answer.

Salvinia



105. Categories the following plants intohydrophytes, halophytes, mesophytes andxerophytes. Give reasons for your answer.Opunita Salvinia Rhizophora

106. Categories the following plants into hydrophytes, halophytes, mesophytes and xerophytes. Give reasons for your answer.
Rhizophora
Watch Video Solution

107. Categories the following plants into hydrophytes, halophytes, mesophytes and xerophytes. Give reasons for your answer. Mangifera.

108. In a pond, we see plants which are free floating, rooted-submerged, rooted-emergent, rooted with floated leaves. Write the type of plant against the following examples: Hydrilla

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109. In a pond, we see plants which are free floating, rooted-submerged, rooted-emergent,

rooted with floated leaves. Write the type of

plant against the following examples:

Typha

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110. In a pond, we see plants which are free floating, rooted-submerged, rooted-emergent, rooted with floated leaves. Write the type of plant against the following examples:

Nympaea

111. In a rond, we see plants which are free floating, rooted-submerged, rooted-emergent, rooted with floated leaves. Write the type of plant against the following examples:

Lemna



112. In a rond, we see plants which are free floating, rooted-submerged, rooted-emergent, rooted with floated leaves. Write the type of

plant against the following examples:

Vallisnaria.



113. The density of a population in a habitat per unit area is measured in different units. Write the unit of measurement against the following:

Bacteria



114. The density of a population in a habitat per unit area is measured in different units. Write the unit of measurement against the following:

Grass

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115. The density of a population in a habitat per unit area is measured in different units. Write the unit of measurement against the

following:

Banyan



116. The density of a population in a habitat per unit area is measured in different units. Write the unit of measurement against the following:

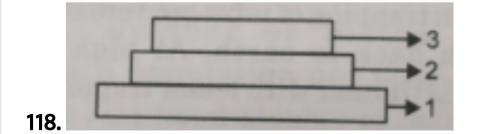
Deer



117. The density of a population in a habitat per unit area is measured in different units. Write the unit of measurement against the following:

Fish

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Label the three tiers 1. 2. and 3 in the above

age pyramid.				
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119.				
What type of population growth is				
represented by the above age pyramid.				
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120. In an association of two animal species, one is a termite which feeds on wood and the other is a pratozoan Trichonympha present in the gut of the termite. What type of association they establish?

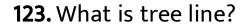
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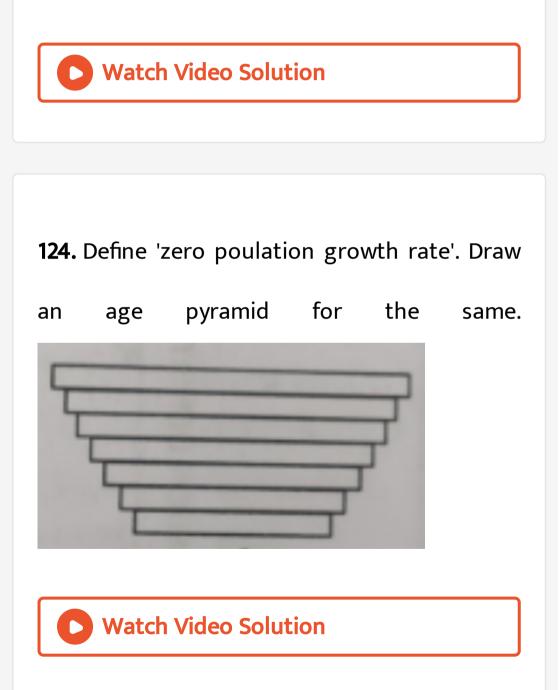
121. Lianas are vasular plants rooted in the ground and miantain erectness of their stem by making use of other trees for support. They

do not maintain direct relation with those trees. Discuss the type of association the lianas have with the trees.

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122. Give the scientific names of any two microorganisms inhabiting the human intestine.





125. List any four characters trhat are employed in human population census.
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126. Give one example

Migratory animal



camouflaged animal

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128. Give one example

Predator animal



biological control agent

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130. Give one example

Phytophagous animal

Chemical defense agent.

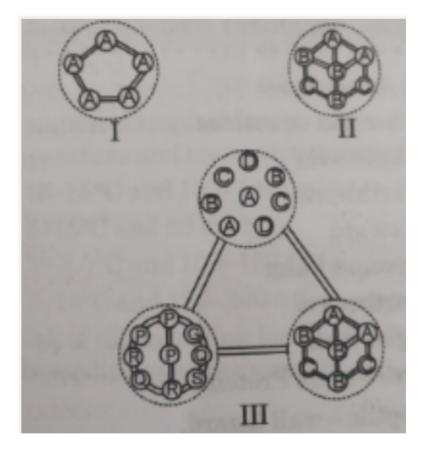


132. Fill in the blanks

Species A	Species B	Type of Interaction	Example
· · · · · · · · · · · · · · · · · · ·	1.1 1.1.1.1.1.1	(1)	(11)
+	+	(iii)	(iv)
+	(v)	Commensalism	(vi)

133. Comment on the following figure: I, II and

III, A,B,C, D,G, P,Q,R,S are species.

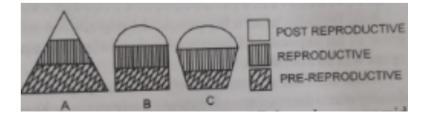


134. An individual and a population has certain characteristics. Name these attributes with definitions.

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135. The following diagrams are the age pyramids of different populations. Comment

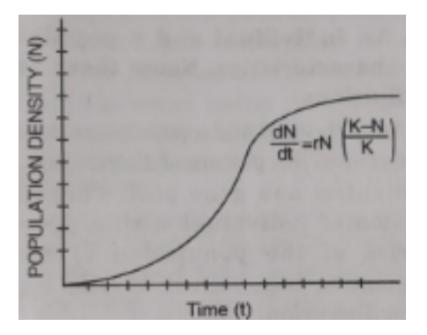
on the status of these populations.





136. Comment on the growth curve given

below:



137. A population of Paramecium cauatum was grown in a culture medium. After 5 days the culture medium became overcrowded with Paramecium and had depleted nutrients. What will happen to the population and what type of growth curve will the population attain? Draw the frowth curve.

138. Discuss the positive interaction between

species.

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139. Give one example

Eurthermal plant species.....

A hot water spring organism.....

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141. Give one example

A organism seen in deep ocean trenches......

An organism seen in compost pit

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143. Give one example

Soil organism......

A stenothermal plant species.....



145. Give one example

A benthic animal



146. Give one example

Antifreeze compound seen in antarctic fish



147. Give one example

An organism which can conform



148. Autecology is the:

A. relation	of	а	population	to	its
environment					
B. relation	of	an	individual	to	its
environm	ent				
C. relation	of	а	community	to	its
environm	ent				

D. relation of a biome to its environment

Answer:



149. Ecotone of:

- A. A polluted area
- B. The bottom of a lake
- C. A zone of trasition between two

communities

D. A zone of developing community

Answer:



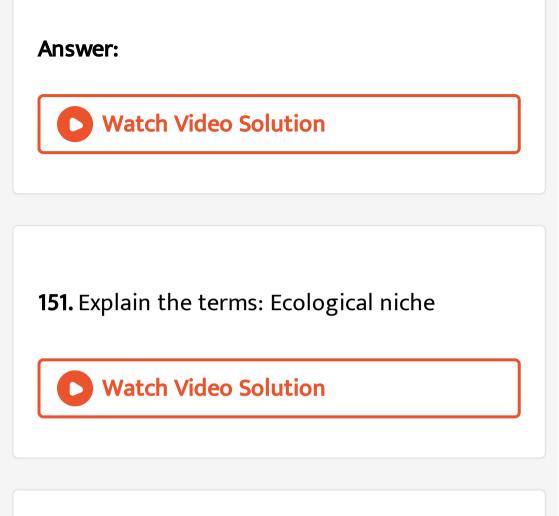


150. Biosphere is :

- A. a component in the ecosystem
- B. composed of the plants present in the soil
- C. life in the outer space
- D. composed of all living organisms

present on earth which interact with the

physical environment.



152. According to Allen's Rule, the mammals from colder climates have:

A. shorter ears and longer limbs

B. longer ears and shorter limbs

C. longer ears and longer limbs

D. shorter ears and shorter limbs.

Answer:

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153. Salt concertration (salinity) of the sea measured in parts per thousand is:

A. 10 - 15

B. 30-70

C. 0-5

D. 30-35

Answer:

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154. Formation of tropical forests needs mean

annual temperature and mean annual precipitation as:

A. $18 - 25^{\circ}C$ and 150 - 400cm

B. $5 - 15^{\circ}C$ and 50 - 100cm

C. `30-50^@ C and 100-150

D. $5 - 15^{\circ}C$ and 100 - 200cm

Answer:

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155. Which of the following forest plant control the light conditions at the ground?

- A. Lianas and climbers
- B. Shrubs
- C. Tall trees
- D. Herbs



156. What will happen to a well growing herbaceous plant in the forest if it is transplanted outside the forests in a park?

A. It will grow normally

B. It will grow well because it is planted in

the same locality

C. It may not survive because of change in

its microlimate

D. It grows very well because the plant gets

more sunlight.

Answer:

157. If a population of 50 Paramecium present in a pool increases to 150 after an hour, what would be the growth rate of population?

A. 50 per hour

B. 200 per hour

C. 5 per hour

D. 100 per hour

Answer:

158. What would be the percent growth or birth rate per individual per hour for the same population mentioned in the population after some years?

A. 100

B. 200

C. 50

D. 150

Answer:



159. A population has more young individuals compared to the older individuals. What would be the status of the population after some years?

A. It will decline

B. it will stabilise

C. It will increase

D. It will first decline and then stabilise



160. What parametres are used for tiger census in our country's national parks and sanctuaries?

A. Oug marks only

B. Pug marks and faecal pellets

C. faecal pellets only

D. Actual head counts



161. Which of the following would necessarily decrease the density of a population in a given habitat?

- A. Natality and mortality
- B. Immigration and emigration
- C. Mortality and emigration
- D. natality and immigration



162. A protozoan reproduces by bimary fission. What will be the number of protozoans in its population after six generations?

A. 128

B. 24

C. 64

D. 32



163. In 2005, for each of the 14 million people present in a country, 0.028 were born and 0.008 died during the year. Using exponential equation, the number of people present in 2015 is predicted as:

A. 25 millions

B. 17 millions

C. 20 millions

D. 18 millions

Answer:



164. Amensalism is an association between two species where:

A. One species is harmed and other is

benefited

B. One species is harmed and other is

unaffected

C. One species is benefited and other is

unaffected

D. Both the species are harmed.

Answer:

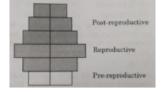
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165. Lichens are the associations of:

- A. bacteria and fungs
- B. algae and bacterium
- C. fungus and algae
- D. fungus and virus

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166. What type of human population is represented by the following age pyramid?



- A. Vanishing population
- B. stable population
- C. Declining population
- D. Expanding population

167. List key elements that lead to variations in the physical and chemical conditions of different habitats.



168. Define Habitat and Ecological niche.



169. List any two unique habitats.



170. What is osmoregulation? Name the osmoregulatory apparatus of human environment.

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171. How thermoregulation is achieved in the

polar bears?



172. What are osmoconformers? Give one example.



173. Why do plants die in the water logged soil?



174. Write what do phytophagous insects feed

on?



175. When and why do some animals like snails

go into dormancy?



176. How is 'stratification' represented in a

forest ecosystem?

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177. Give an example of an organism that

enters 'diapause' and why?

178. Show how do organisms interact with the

physical environment with a simple sketch.



179. What is difference between a species and

a population?

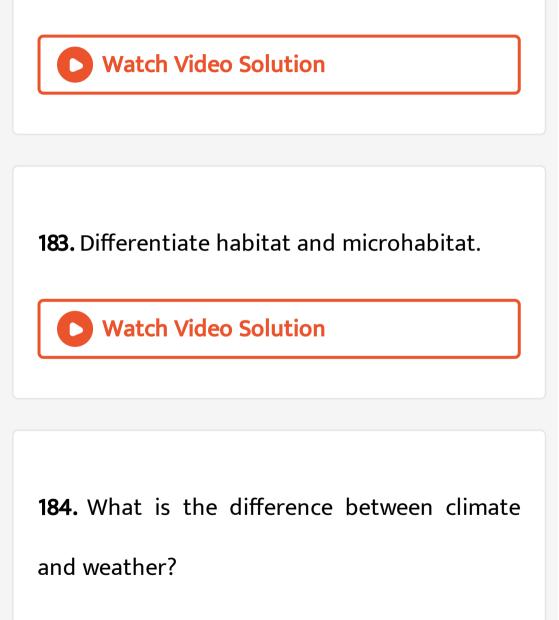
180. How do you differentiate habitat from

environment?

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181. List key elements that lead to variations in the physical and chemical conditions of different habitats.

182. List the biological factors of environment.



185. Write a short note on microlimate.

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186. Show the zones in lake water as determined by gradients of light, oxygen and temperature.

187. What are the different verticial zones of

ocean on the basis of light for photosythesis?

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188. Depict the temperature based thermal stratification in lakes.



189. Differentiate eurythermal, stenothermal

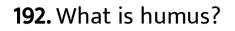
and euryhaline animals.

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190. What is top soil?

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191. Write a brief note on soil importance.



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193. Mention two adaptations the mammals of colder regions have, to minimise the loss of body heat.

194. How do desert lizards maintain a fairly

constant body temperature?

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195. How do Kangaroo rats live in the absence

of water in the North American deserts?

196. How do human beings maintain a constant body temperature despite changes in the surrounding?



197. How do organisms manage with stressful condition existing in their habitat for short duration? Explain with the help of one example each.

198. How do seals adpt to their natural habitat? Explain.

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199. How do organisms which cannot migrate tend to overcome adverse environmental conditions?

200. Bear hibernates whereas some species of zooplanktons enter diapause to aviod stressfull external conditions. How are these two ways different from each other ?



201. Explain how buoyant conditions are

obtained by aquatic plants.

202. Why has camel survived and bred in deserts but not frog? Watch Video Solution 203, what is mutualism Watch Video Solution

204. What is ephemerals

205. What are succulents

Give an example of each.

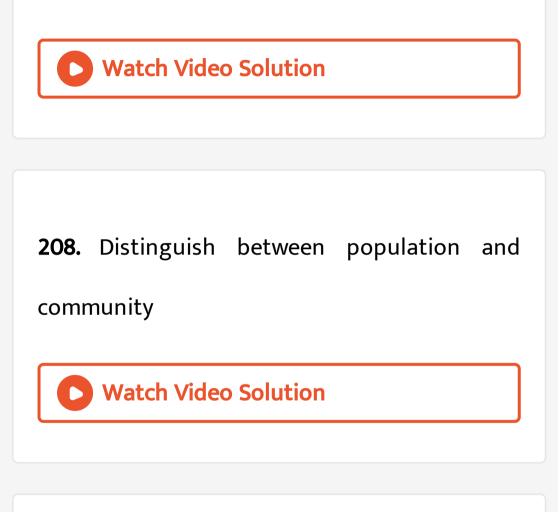


206. What is parasitism? Define parasite, host.

What are kinds of parasite?



207. Give example of two isolating mechanism.



209. Explain J-Shaped pattern of population growth.



210. Compare J-Shaped pattern with S-shaped

pattern of population growth.

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211. Explain population density.

212. What is demography?



213. Differentiate natality rate and mortality

rate.

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214. How does age distribution help in study

of population.

215. How does an age pyramid, for human population at a given point of time helps in the policy makers in planning the future?

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216. How does population size increase or

decrease?



217. What is predator-pray relationship?



218. Discuss role of predators in an ecosystem,



219. Many prey organisms have developed different defense mechanism. Give a few

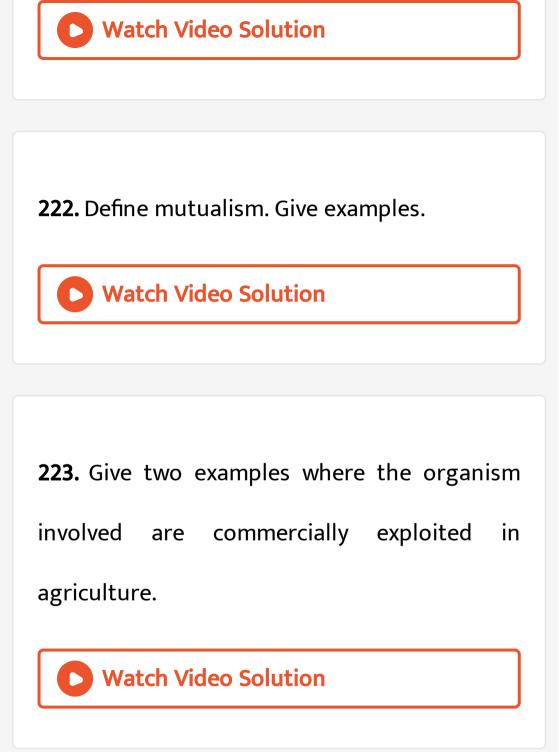


220. "Herbivores are the predators of plants". Discuss a few defence mechanisms of plants against herbivory.

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221. What is parasitism? Define parasite, host.

What are kinds of parasite?



224. Define Commensalism. Give examples.



225. How do organisms manage with stressful condition existing in their habitat for short duration? Explain with the help of one example each.

226. Certain species of wasps are seen to frequently visit flowering fig trees. What type of interaction is seen between them and why?



227. Differentiate the following:

Mutualism and Commensalism



228. Differentiate the following:

Commensalism and amensalism

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229. Differentiate the following:

predators and Parasites.

230. Why do sclown fish and sea anemone pair

up? What is this relationship called?

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231. Some organisms suspend their metabolic activities to survive in unfavourable conditions. Explain with the help of any four examples.



232. A moss plant is unable to complete its life

cycle in a dry environmnt. State reason.



233. Explain parasitisim and co-evolution with

the help of one example of each .

234. Plants that inhabit a rain- forest are not

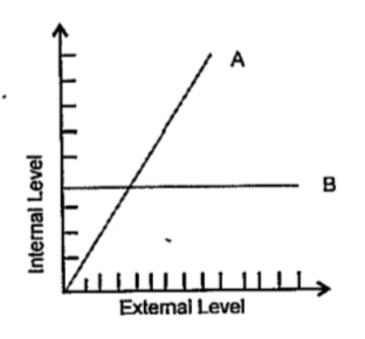
found in wetlands explain.

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235. In certain seasons we sweat profusely

while in some other season we shiver. Explain.

236. Given below is a graph depicting organismic response to changing external condition. According to their response the organisms are grouped into two types. Name the type which show (i) Pattern A and (ii) Pattern B.





237. Study the 3 representative figure of age

pyramid relating to human population given

below and answer the following question:



Mention the names given to the 3 kinds of age

profiles

238. Study the 3 representative figure of age pyramid relating to human population given below and answer the following question:

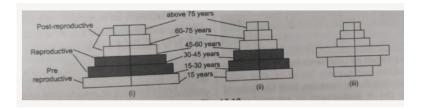


Which one of them is ideal for a population and why?

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239. Study the 3 representative figure of age pyramid relating to human population given

below and answer the following question:

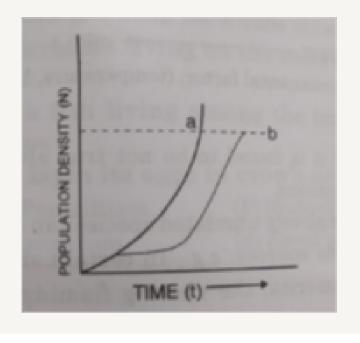


How do such age-profile studies help policy makers get concerned about our growing population and prepare for future planning .



240. Study the graph given below and answer

the questions that follow

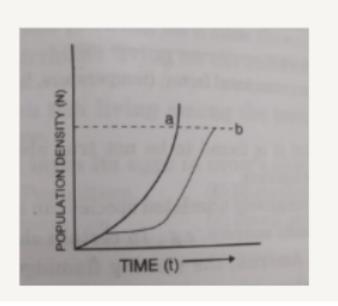


Write the status of food and space in the curves (a) and (b).



241. Study the graph given below and answer

the questions that follow



In the absence of predators, which one of the

two curves would depict the prey population?

242. Following are the responses of different animals to various abiotic factors. Decribe each one with the help of an example.

Regulate

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243. Following are the responses of different animals to various abiotic factors. Decribe each one with the help of an example.



244. Following are the responses of different animals to various abiotic factors. Decribe each one with the help of an example.

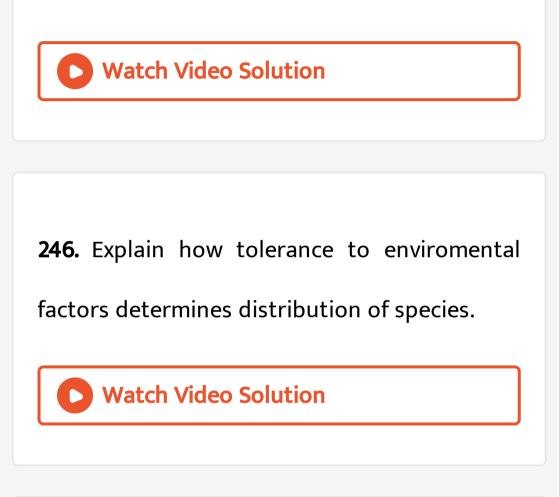
Migrate

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245. Following are the responses of different animals to various abiotic factors. Decribe

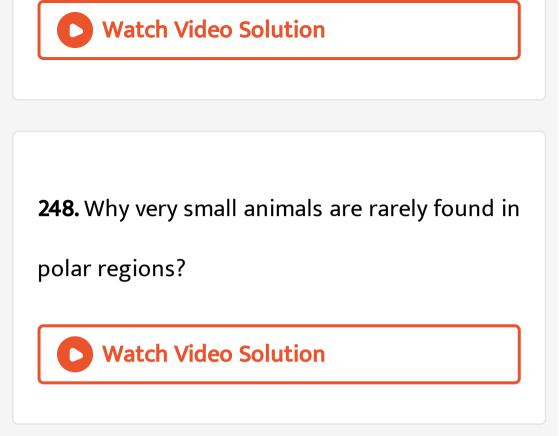
each one with the help of an example.

Suspend



247. What is competition? Why is it not true

always?



249. Name the interaction in each of the following

Cuckoo lays her eggs in the crow,'s nest.

250. Name the interaction in each of the

following

Orchid grows on a mango tree.

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251. Name the interaction in each of the

following

Ticks live on the skin of dogs.

252. Name the interaction in each of the following

Sea anemone is often found on the shell of

hermit crab.

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253. Name the interaction in each of the

following

Cuscuta growing on a shoe flower plant.

254. Name the type of interaction seen in each of the following examples :

(i) Ascaris worms living in the intestine of human

(ii) Wasp pollinating fig inflorescence

(iii) Clown fish living among the tentacles of sea-anemone

(iv) Mycorrhizae living on the roots of higher plants

(v) Orchid growing on a branch of a mango

tree

(vi) Disappearance of smaller barnacles when

Balanus dominated in the coast of Scotland.



255. Name the interaction in each of the following
Clown fish living among the tentacles of sea

anemone.

256. Name the interaction in each of the following

Cuckoo lays her eggs in the crow,'s nest.



257. Name the type of interaction seen in each

of the following examples :

(i) Ascaris worms living in the intestine of human

(ii) Wasp pollinating fig inflorescence

(iii) Clown fish living among the tentacles of

sea-anemone

(iv) Mycorrhizae living on the roots of higher plants

(v) Orchid growing on a branch of a mangotree

(vi) Disappearance of smaller barnacles when

Balanus dominated in the coast of Scotland.

258. Name the interaction in each of the following

Sucker fish attached to the shark.



259. Name the interaction in each of the following

Smaller barnacless disappeared when Balanus

dominated in the coast of Scotland.



260. Name the type of interaction seen in each of the following examples :

(i) Ascaris worms living in the intestine of human

(ii) Wasp pollinating fig inflorescence

(iii) Clown fish living among the tentacles of sea-anemone

(iv) Mycorrhizae living on the roots of higher plants

(v) Orchid growing on a branch of a mango

tree

(vi) Disappearance of smaller barnacles when

Balanus dominated in the coast of Scotland.



261. What causes annual variation in the

intensity and duration of temperature?

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262. In a pond there were 30 Hydrilla plants . Through reproduction 10 new Hydrilla plants were added in a year . Calculate the birth rate

of population.





1. Whih of the following is a partial root parasite?

A. sandal wood

B. mistletoe

C. Orobanche

D. Ganoderma

Answer:



2. Which one of the following organisms

reproduces sexually only in its time?

A. Banana plant

B. Mango

C. tomato

D. Eucalyptus

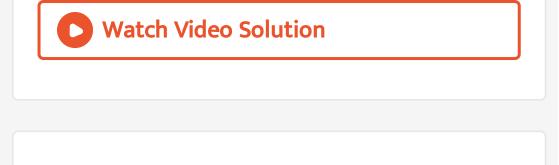
Answer:

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3. What is homeostasis?

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4. Define Commensalism.Give examples.



5. Define heliophytes and sciophytes. Name plant from your locality that is either heliophyte or sciophyte.



6. How does a desert plant adapt to dry, warmer environmental condition?

7. List any three important characteristics of population and explain them.



8. Define the following terms and give one

example for each: Mutualism

9. Define the following terms and give one

example for each: Camouflage

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10. What is the ecological principle behind the biological control method of managing with

pest Insects?

11. Give a diagrammatic representation of organismic response. Explain any one.

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12. Many fresh water animals cannot survive in

is marine environment? Explain .



13. With the help of suitable diagram describe

the logistic population growth curve.