BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

PRINCIPLES OF ECOLOGY

Textual Questions Solved

1. Arrange the correct sequence of ecological hierarchy starting from lower to higher level.

A. Individual organism $\rightarrow$ opulation

Landscape $\rightarrow$ Ecosystem

B. Landscape $\rightarrow$ Ecosystem $\rightarrow$ Biome $\rightarrow$

Biosphere

C. community $\rightarrow$ Ecosystem $\rightarrow$

Landscape $\rightarrow$ Biome

D. Population $\rightarrow$ organism $\rightarrow$ Biome $\rightarrow$

Landscape

Answer: A

Watch Video Solution

2. Ecology is the study of an individual species is called

Community ecology

Autecology

Species ecology

Synecology

A. i only

B. ii only

C. i and iv only

D. ii and iii only

Answer: B

Watch Video Solution

3. A specific place in an ecosystem, where an organism lives and performs its functions is .....

A. habitat

B. niche

C. landscape

D. biome

Answer: B

4. Read the given statements and select the correct option.

(i) Hydrophytes possess aerenchyma to support themselves in water.

(ii) Seeds of Viscum are positively photoblastic as they germinate only in presence of light.

(iii) Hygroscopic water is the only soil water available to roots of plant growing in soil as it is

present inside the micropores.

(iv) High temperature reduces use of water and solute absorption by roots.

A. i, ii, and iii only

B. ii, iii and iv

C. ii and iii only

D. i and ii only

Answer: D

 Watch Video Solution

5. Which of the given plant produces cardiac glycosides?

A. Calotropis

B. Acacia

C. Nepenthes

D. Utricularia

Answer: A

 Watch Video Solution

6. Read the given statements and select the correct option.

(i) Loamy soil is best suited for plant growth as it contains a mixture of silt, sand and clay.

(ii) The process ofhumification is slow in case of organic remains containing a large amount of lignin and cellulose.

(iii) Capillary water is the only water available to plant roots as it is present inside the micropores.

(iv) Leaves of shade plant have more total

chlorophyll per reaction centre, low ratio of chl a and chl b are usually thinner leaves.

A. i, ii and iii only

B. ii, iii and iv only

C. i, ii and iv only

D. ii and iii only

Answer: D

 Watch Video Solution

7. Statement A: Cattle do not graze on weeds of Calotropis.

Statement B: Calotropis have thorns and spines, as defense against herbivores.

A. Both statements A and B are incorrect.

B. Statement A is correct but statement B is incorrect.

C. Both statements A and B are correct but statement B is not the correct explanation of statement A.

D. Both statements A and B are correct and statement B is the correct explanation of statement A.

Answer: B

8. In soil water available for plants is ..... .

A. gravitational water

B. chemically bound water

C. capillary water

D. hygroscopic water

Answer: C

9. Read the following statements and fill up the blanks with correct option.

(i) Total soil water content in soil is called _____

(ii) Soil water not available to plants is called.

_____

(iii) Soil water available to plants is called. _____

A. (i) Holard (ii) Echard (iii) Chresard

B. (i) Echard (ii) Holard (iii) Chresard

C. (i) Chresard (ii) Echard (iii) Holard

D. (i) Holard (ii) Chresard (iii) Echard

Answer: A

Watch Video Solution

10. Column I represent the size of the soil particles and Column II represents type of soil components. Which of the following is correct match for the Column I and Column II.

A. $\begin{matrix} I & II & III & IV \\ ii & iii & iv & i \end{matrix}$

B. $\begin{matrix} I & II & III & IV \\ iv & i & iii & ii \end{matrix}$

C. $\begin{matrix} I & II & III & IV \\ iii & ii & i & iv \end{matrix}$

D. None of the above

Answer: C

View Text Solution

11. The plant of this group are adapted to live partly in water and partly above substratum and free from water

A. a) Xerophytes

B. b) Mesophytes

C. c) Hydrophytes

D. d) Halophytes

Answer: B

 Watch Video Solution

12. Identify the A, B, C and D in the given table:

Interaction	Effects on species X	Effects on species Y
Mutualism	A	(+)
B	(+)	(-)
Competition	(-)	C
D	(-)	0

A. A B C D
$(+)$ Parasitism $(-)$ Amensalism

B. A B C D
$(-)$ Mutalism $(+)$ Competition

C. A B C D
$(+)$ Competition (0) Mutalism

D. A B C D
(0) Amensalism $(+)$ Parasitism

Answer: A

Watch Video Solution

13. Ophrys an orchid resembling the female of an insect so as to able to get pollinated is due to phenomenon of

A. Mymecophily

B. Ecological equivalents

C. Mimicry

D. None of these

Answer: C

 Watch Video Solution

14. A free living nitrogen fixing cyanobacterium which can also form symbiotic association with the water fern Azolla ..... .

A. Nostoc

B. Anabaena

C. Chlorella

D. Rhizobium

Answer: B

 Watch Video Solution

15. Pedogenesis refers to

A. a) Fossils

B. b) Water

C. c) Population

D. d) Soil

Answer: D

Watch Video Solution

16. Mycorrhiza promotes plant growth by .....

A. Serving as a plant growth regulators

B. A bsorbing inorganic ions from soil

C. Helping the plant in utilizing atmospheric nitrogen

D. Protecting the plant from infection

Answer: D

Watch Video Solution

17. Which of the following plant has a non-succulent xerophytic and thick leathery leaves with waxy coating?

A. Bryophyllhum

B. Ruscus

C. Nerium

D. Calotropis

Answer: D

View Text Solution

18. In a fresh water environment like pond, rooted autotrophs are

A. Nymphaea and typha

B. Ceratophyllum and Utricularia

C. Wolfia and pistia

D. Azolla and lemna

Answer: A

Watch Video Solution

19. Match the following and choose the correct combination from the options given below:

Column I (Interaction)	Column II (Examples)
(*I*) Mutualism	(*i*) Trichoderma and Penicillium
(*II*) Commensalism	(*ii*) Balanophora, Orobanche
(*III*) Parasitism	(*iii*) Orchids and Ferns
(*IV*) Predation	(*iv*) Lichen and Mycorrhiza
(*V*) Amensalism	(*v*) Nepenthes and Diaonaea

A. $\begin{matrix} I & II & III & IV & V \\ i & ii & iii & iv & v \end{matrix}$

B. $\begin{matrix} I & II & III & IV & V \\ ii & iii & iv & v & i \end{matrix}$

C. $\begin{matrix} I & II & III & IV & V \\ iii & iv & v & i & ii \end{matrix}$

D. $\begin{matrix} I & II & III & IV & V \\ iv & iii & ii & v & i \end{matrix}$

Answer: D

Watch Video Solution

Watch Video Solution

20. Strong, sharp spines that get attached to animal's feet are found in the fruits of

A. Argemone

B. Ecballium

C. Heritier

D. Crossandra

Answer: A

View Text Solution

21. Sticky glands of Boerhaavia and Cleome support

A. Anemochory

B. Zoochory

C. Autochory

D. Hydrochory

Answer: B

Watch Video Solution

22. Name and explain the branches of ecology.

Watch Video Solution

23. What is ecological hierarchy?

Name the levels of ecological hierarchy.

Watch Video Solution

24. What are ecological equivalents? Give one example.

Watch Video Solution

25. Distinguish habitat and niche.

Watch Video Solution

26. Why are some organisms called as eurythermals and some others as stenohaline?

Watch Video Solution

27. Green algae are not likely to be found in the deepest strata of the ocean'. Give at least one reason.

Watch Video Solution

28. What is Phytoremediation?

Watch Video Solution

29. What is Albedo effect and write their effects?

Watch Video Solution

30. The organic horizon is generally absent from agricultural soils because tilling, e.g., plowing, buries organic matter. Why is an organic horizon generally absent in desert soils?

Watch Video Solution

31. Soil formation can be initiated by biological organisms. How?

Watch Video Solution

32. Sandy soil is not suitable for cultivation. Explain why?

Watch Video Solution

33. Describe the mutual relationship between the fig and wasp and comment on the

phenomenon that operates in this relationship.

Watch Video Solution

34. Lichen is considered as a good example of obligate mutualism. Explain.

Watch Video Solution

35. What is mutualism? Mention any two examples where the organisms involved are commercially exploited in modern agriculture.

Watch Video Solution

36. List any two adaptive features evolved in parasites enabling them to live successfully on their host?

Watch Video Solution

37. Mention any two significant roles of predation plays in nature.

Watch Video Solution

38. How does an orchid ophrys ensures its pollination by bees?

Watch Video Solution

39. Water is very essential for life. Write any three features for plants and animals which enable them to survive in water scarce environment.

Watch Video Solution

40. Why do submerged plants receive weak illumination than exposed floating plants in a lake?

Watch Video Solution

41. What is vivipary? Name a plant group which exhibits vivipary.

Watch Video Solution

42. What is thermal expansion?

Watch Video Solution

43. Rhytidome acts as a structural defence by plants against fire - Comment.

Watch Video Solution

44. What is mellitophily ?

Watch Video Solution

45. What is seed ball?

Watch Video Solution

46. How is anemochory differ from zoochory?

Watch Video Solution

47. What is co-evolution?

Watch Video Solution

48. Explain Raunkiaer classification in the world's vegetation based on the temperature.

Watch Video Solution

49. List out the effects of fire to plants.

Watch Video Solution

50. What is soil profile? Explain the characters of different soil horizons.

Watch Video Solution

51. Give an account of various types of parasitism with examples.

Watch Video Solution

52. Explain different types of hydrophytes with examples.

Watch Video Solution

53. Enumerate the anatomical adaptations of xerophytes.

Watch Video Solution

54. List out any five morphological adaptations of halophytes.

Watch Video Solution

55. What are the advantages of seed dispersal?

Watch Video Solution

56. Describe dispersal of fruit and seeds by animals.

Watch Video Solution

Additional Questions 1 Mark Questions

1. Who is called as the father of Modern Ecology?

Watch Video Solution

2. Autecology deals with the study of .....

A. Community

B. Population

C. Individual species

D. Niche of species

Answer: C

Watch Video Solution

3. Environment of any community is called .....

A. a) Paratope

B. b) Ecotype

C. c) Opitope

D. d) Biotope

Answer: D

Watch Video Solution

4. Match Column I with Column II

A.

Column I	Column II
Structural defense against fire	R - Horizon

B.

Column I	Column II
Parental bedrock	Oxylophytes

C.

Column I	Column II
Shade loving species of plants	Rhytidome

D.

Column I	Column II
Plants living in Acidic soil	Sciophytes

Answer: A

Watch Video Solution

5. The study of soil is called as .....

A. a) Lithotripsy

B. b) Lithosphere

C. c) Pedology

D. d) Pedigree analysis

Answer: C

Watch Video Solution

6. What are "indicators of fire"?

A. Pucinia

B. Pyricularia

C. Pyronema

D. Peziza

Answer: C

Watch Video Solution

7. The surface features of earth are called .....

Watch Video Solution

8. Amensalism is called as .....

Watch Video Solution

9. ..... is the transition zone between two ecosystems.

Watch Video Solution

10. Match the type of species interaction with correct combination.

A.

Interaction Type	Combination
Mutualism	+,-

B.

Interaction Type	Combination
Predation	-,0

C.

Interaction Type	Combination
Competition	+,+

D.

Interaction Type	Combination
Amensalism	-,-

Answer: A

Watch Video Solution

11. Wasps and fruits of fig is an example for ..... type of species interaction.

Watch Video Solution

12. Statement 1: Latitudes represent distance from the equator.

Statement 2: Height above the seal lével from longitude.

A. Statement 1 is correct. Statement 2 is incorrect.

B. Statement 1 is incorrect. Statement 2 is correct.

C. Both the statements are correct.

D. Both the statements are incorrect.

Answer: A

Watch Video Solution

13. Statement 1: Holoparsites depend totally on other organisms for nutrition.

Statement 2: Durnta is holoparasite.

A. Statement 1 is correct. Statement 2 is incorrect.

B. Statement 1 is incorrect. Statement 2 is correct.

C. Both the statements are correct.

D. Both the statements are incorrect.

Answer: C

Watch Video Solution

14. Statement 1: Ephemerals are drought evaders.

Statement 2: They are not true xerophytes.

A. Statement 1 is correct. Statement 2 is incorrect.

B. Statement 1 is incorrect. Statement 2 is correct.

C. Both the statements are correct.

D. Both the statements are incorrect.

Answer: C

Watch Video Solution

15. Assertion (A): Plains and valleys are rich in vegetation

Reason (R): Slow drain of surface water and better water retention is noticed.

A. A is true R is false

B. R explains A

C. A and R are false

D. A and R are true. But R doesnot explains A

Answer: B

Watch Video Solution

16. Utricularia is also known as_____

A. Rooted floating hydrophyte

B. Submerged floating hydrophyte

C. Rooted submerged hydrophyte

D. Amphibious hydrophyte

Answer: B

Watch Video Solution

17. Earth day is observed on

A. April 22^{nd}

B. March 21^{th}

C. July 07^{th}

D. September $16^{t}h$

Answer: A

Watch Video Solution

18. Plants in sandy soils are commonly called as .....

Watch Video Solution

Additional Questions 2 Mark Questions

1. How Earnest Haeckel defined ecology?

Watch Video Solution

2. What is ecological niche.

Watch Video Solution

3. Sequentially arrange the different units of ecological hierarchy.

Watch Video Solution

4. Define (a) Autecology (b) Synecology.

Watch Video Solution

5. What is ecological niche.

6. Name the types of ecological factors.

7. Name the climatic factors that affect plant life.

8. Name any four physiological processes in plants, where the light plays a crucial role.

Watch Video Solution

9. Heliophytes differ from Sciophytes. How?

Watch Video Solution

10. Explain Raunkiaer classification in the world's vegetation based on the temperature.

Watch Video Solution

11. Distinguish between evergreen forests and sclerophyllous forests.

Watch Video Solution

12. What does the term "Timber line' refers to?

Watch Video Solution

13. Give an examples for stenohaline and euryhaline.

Watch Video Solution

14. Write the composition of gases in atmosphere.

Watch Video Solution

15. What is Albedo effect and write their effects?

Watch Video Solution

16. List any four adverse effect of noise.

Watch Video Solution

17. What are "indicators of fire"?

Watch Video Solution

18. Explain various edaphic factors that affect vegetation.

Watch Video Solution

19. Name the study that deals with soil factors. Also mention the optimal soil pH for crop cultivation.

Watch Video Solution

20. What is soil profile? Explain the characters of different soil horizons.

Watch Video Solution

21. Given below are few types of plants. Mention their habitats.

(a) Halophytes (b) Chasmophytes (c) Cryophytes (d) Psammophytes.

Watch Video Solution

22. Mention any four topographic factors that affect vegetation.

Watch Video Solution

23. How the steepness of mountain affects the vegetation?

Watch Video Solution

24. Name any two positive interactions with an example for each.

Watch Video Solution

25. Define mutualism with an example.

Watch Video Solution

26. What is the principle of commensalism?

Watch Video Solution

27. Specify the type of interactions between the given pair of species.

(a) Spanish moss and Oak tree

(b) Cuscuta and Acacia

(c) Nepenthes and Ants

(d) Alga and fungus

Watch Video Solution

28. Explain the concept of proto co-operation.

Watch Video Solution

29. What are Holoparasites? Give example.

Watch Video Solution

30. What are Hemiparasites?

Watch Video Solution

31. Cite an example for partial stem parasite and partial root parasite.

Watch Video Solution

32. ___ is an example for Amensalism

Watch Video Solution

33. Point out any two morphological adaptations noticed in the roots of hydrophytes.

Watch Video Solution

34. What are hygrophytes? Give example.

Watch Video Solution

35. What are trichophyllous plants? Give example.

Watch Video Solution

36. Give an example for following type of adaptations.

(a) Phyllode (b) Cladode

Watch Video Solution

37. Write a brief note on pneumatophores. Give an example.

Watch Video Solution

Additional Questions 3 Mark Questions

1. Differentiate habitat from niche.

Watch Video Solution

2. What is thermal stratification? Explain its types.

 Watch Video Solution

3. What are the adverse effects of temperature on plant?

 Watch Video Solution

4. Explain breifly about the three types of fire.

Watch Video Solution

5. Classify soil based on its formation.

Watch Video Solution

6. Loamy soil is ideal for crop cultivation - Justify.

Watch Video Solution

7. Direction of mountain determines the richness of vegetation - Justify.

Watch Video Solution

8. What are epiphytes? Explain their characteristic features.

Watch Video Solution

9. Discuss on predator - prey interaction with example.

Watch Video Solution

10. Give an account of Mimicry.

Watch Video Solution

11. Mention any two species that exhibits protective mimicry.

Watch Video Solution

12. What is co-evolution? Explain with example,

Watch Video Solution

13. How physical dryness differ from physiological dryness?

Watch Video Solution

14. Point out the Anatomical adaptations exhibited by the Halophytes.

Watch Video Solution

Additional Questions 5 Mark Questions

1. Explain various edaphic factors that affect vegetation.

Watch Video Solution

2. What does competition refers to ? Classify and describe them .

Watch Video Solution

3. List out any five morphological adaptations of halophytes.

Watch Video Solution

Additional Questions Higher Order Thining Skills Hots Questions

1. Being a tropical country, India is the largest producer of delicious mangoes. These mango tree don't grow in temperate countries. Give reason.

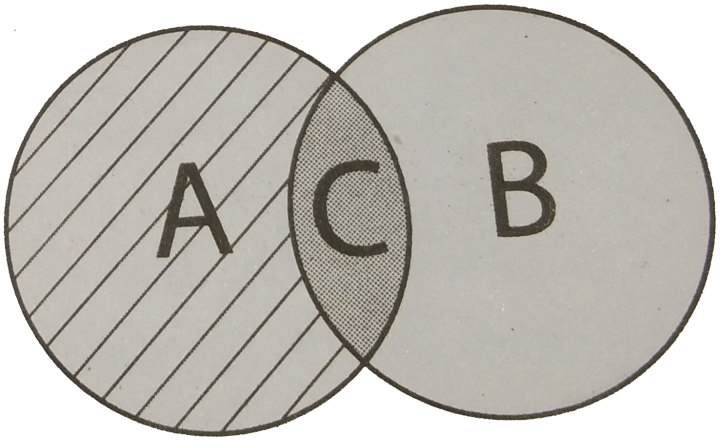
Watch Video Solution

2. What is cause of flag forms in trees?

Watch Video Solution

3. In the picture given below, A and B represents the two different biomes. What does the letter C denotes? What will be its impact on the

organisms in C. Explain with example.



Watch Video Solution

4. Observe the tabular column and complete it using proper terms.

	Species 1	Species 2	Type of interaction
i	+	A	Mutalism
ii	+	O	B
iii	C	O	Amensalism
iv	+	–	D
v	–	E	Competition

Watch Video Solution