

QB365 Question Bank Software Study Materials

Botany - Principles of Ecology 50 Important 1 Marks Questions With Answers (Book Back and Creative)

12th Standard

Biology

Total Marks : 50

Multiple Choice Question

50 x 1 = 50

- 1) Arrange the correct sequence of ecological hierarchy starting from lower to higher level.
(a) Individual organism → Population Landscape → Ecosystem (b) Landscape → Ecosystem → Biome → Biosphere
(c) community → Ecosystem → Landscape → Biome (d) Population → organism → Biome → Landscape
- 2) Ecology is the study of an individual species is called
i) Community ecology
ii) Autecology
iii) Species ecology
iv) Synecology
(a) i only (b) ii only (c) i and iv only **(d) ii and iii only**
- 3) A specific place in an ecosystem, where an organism lives and performs its functions is _____.
(a) habitat **(b) niche** (c) landscape (d) biome
- 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**
- 5) Which of the given plant produces cardiac glycosides?
(a) Calotropis (b) *Acacia* (c) *Nepenthes* (d) *Utricularia*
- 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 of humification 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
- 7) Read the given statements and select the correct option.
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.
- 8) In soil water available for plants is _____.
(a) gravitational water (b) chemically bound water **(c) capillary water** (d) hygroscopic water
- 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)			(b)			(c)			(d)		
(i)	(ii)	(iii)	i	ii	iii	i	ii	iii	i	ii	iii
Holard	Echard	Chresard	Echard	Holard	Chresard	Chresard	Echard	Holard	Holard	Chresard	Echard

- 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

Column - I	Column - II
I) 0.2 to 2.00 mm	i) Slit Soil
II) Less than 0.002 mm	ii) Clayey Soil
III) 0.002 to 0.02 mm	iii) Sandy Soil
IV) 0.002 to 0.2 mm	iv) Loamy Soil

- (a) (b) **(c)** (d) None of the above

I II III IV	I III III IV	I III III IV
iiii iii i	ivi iii ii	iiii iii iv

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

- (a) Xerophytes (b) Mesophytes **(c) Hydrophytes** (d) Halophytes

- 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	(-)	o

(a)		(b)		(c)		(d)	
A B	C D	A B	C D	A B	C D	A B	C D
(+)Parasitism(-)Amensalism		(-)Mutualism(+)	Competition	(+)Competition(0)	Mutualism	(0)Amensalism(+)	Parasitism

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

- (a) Myrmecophily (b) Ecological equivalents **(c) Mimicry** (d) None of these

- 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

- 15) Pedogenesis refers to _____.

- (a) Fossils (b) Water (c) Population **(d) Soil**

- 16) Mycorrhiza promotes plant growth by _____.

- (a) Serving as a plant growth regulators **(b) Absorbing inorganic ions from soil**
 (c) Helping the plant in utilizing atmospheric nitrogen (d) Protecting the plant from infection

- 17) In a fresh water environment like pond, rooted autotrophs are _____.

- (a) Nymphaea and typha** (b) Ceratophyllum and Utricularia (c) Wolffia and pistia (d) Azolla and lemna

- 18) 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)	(b)	(c)	(d)
I III III IV V i i i i i i v	I II III IV V i i i i v i	I II III IV V i i i v i ii	I II III IV V i v i i i i v i

- 19) Sticky glands of Boerhaavia and Cleome support _____.
- (a) Anemochory (b) **Zoochory** (c) Autochory (d) Hydrochory
- 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
- 21) The study of soil is called as _____
- (a) Lithotripsy (b) Lithosphere (c) **Pedology** (d) Pedigree analysis
- 22) Identify the indicators of fire.
- (a) Puccinia (b) Pyricularia (c) **Pyronema** (d) Peziza
- 23) Statement 1: Holoparasites depend totally on other organisms for nutrition.
Statement 2: Duranta 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
- 24) 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
- 25) Utricularia is a _____.
- (a) Rooted floating hydrophyte (b) **Submerged floating hydrophyte** (c) Rooted submerged hydrophyte
(d) Amphibious hydrophyte
- 26) Earth day is observed on
- (a) **April 22nd** (b) March 21st (c) July 07th (d) September 16th
- 27) The acceptable definition of ecology was by
- (a) Odum (b) Reiter (c) **Ernst Haeckel** (d) R. Misra
- 28) The term niche was coined by and the term was used by
- (a) Odum & Roswell Hill Johnson (b) **Roswell Hill Johnson & Grinell** (c) Grinell & Odum (d) Odum & Grinell
- 29) Match the following
- | | | | |
|-----|------------|-----|--------|
| (A) | 400-500nm | (1) | red |
| (B) | 600-700 nm | (2) | blue |
| (C) | 500-600 nm | (3) | violet |
| (D) | 400 nm | (4) | green |
- (a) (A) 1, (B) 2, (C) 3,(D) 4 (b) (A) 3, (B) 4, (C) 2,(D) 1 (c) (A) 4, (B) 3, (C) 1,(D) 2 (d) **(A) 2, (B) 1, (C) 4,(D) 3**
- 30) An example for eurythermal
- (a) **Zostera** (b) Mango (c) Angiosperm (d) Palm
- 31) Find out the incorrect pair
- (a) Epilimnion-Upper layer (b) metalimnion-Middle layer (c) Hlpolimnion-Bottom layer (d) **Latitude-0°-190°**
- 32) _____ is an imaginary line in a mountain that marks the level above which thus do not grow.
- (a) Timber line (b) Tree line (c) **Both a & b** (d) None of the above

33) The best pH range of the soil for cultivation of crop plants is _____ to _____

- (a) **5.5-6.8** (b) 6.5-6.8 (c) 5.0-7.5 (d) 6.0-7.5

34) Find out the incorrect statement about loamy soil

- (a) It is ideal soil for cultivation (b) It ensures good retention & proper drainage of water
(c) The porosity of soil provides adequate aeration **(d) It consists of 70 % clay & 30% sand or silt**

35) Match the following

(A) Mutualism	(1) Staphylococcus
(B) Commensalism	(2) Drosera
(C) Predation	(3) Mycorrhiza
(D) Amensalism	(4) Orchid

- (a) (A) 4, (B) 1, (C) 3, (D) 2 (b) (A) 2, (B) 3, (C) 4, (D) 1 (c) (A) 1, (B) 2, (C) 4, (D) 3 **(d) (A) 3, (B) 4, (C) 2, (D) 1**

36) Find out the correct Pair

- (a) **Holoparasites - Cuscuta** (b) Hemiparasites - Orobanche (c) Intraspecific competition - Different species
(d) Interspecific competition - Same species

37) Match the following

(A) Phylloclades	(1) Aregemone
(B) Eladode	(2) Opuntia
(C) Phyllode	(3) Asparagus
(D) Ephemerals	(4) Acacia

- (a) (A) 4, (B) 2, (C) 3, (D) 2 (b) (A) 3, (B) 1, (C) 2, (D) 4 (c) (A) 1, (B) 4, (C) 1, (D) 3 **(d) (A) 2, (B) 3, (C) 4, (D) 1**

38) Plants which behave as xerophytes at summer & behave as mesophytes is

- (a) Hydrophytes (b) Epiphytes **(c) Tropophytes** (d) Mimicry

39) Find out the incorrect statement

- (a) Seed dispersal is a regeneration process of plant Populations.
(b) Fruit maturation & seed dispersal is influenced by ecologically favourable conditions.
(c) As seeds contain miniature but dormant future plants.
(d) The seed consist of an embryo, stored food material & fruit coat.

40) Find out the incorrect Pair

- (a) Hydrochory - Nymphaea (b) Zoochory - Cleome **(c) Autochory-Cordia** (d) Human aided - Seed ball

41) Match the following and find the correct answer.

i) Free floating hydrophyte	A) Utricularia
ii) Rooted floating hydrophyte	B) Pistia
iii) submerged floating hydrophyte	C) Hydrilla
iv) Rooted - submerged hydrophyte	D) Nymphaea

- (a) (i)-B, (ii)-D, (iii)-A, (iv)-C** (b) (i)-B, (ii)-C, (iii)-D, (iv)-A (c) (i)-C, (ii)-D, (iii)-A, (iv)-B (d) (i)-D, (ii)-C, (iii)-B, (iv)-A

42) Match the following

1) Stenobathic	i) Salinity
2) Stenoecious	ii) Depth of water/ habitat

3) Stenohaline	iii) Food
4) Stenophagic	iv) Habitat selection

(a) (1) - (iv), (2) - (i), (3) - (iii), (4) - (ii) (b) (1) - (iii), (2) - (i), (3) - (ii), (a) - (iv) (c) (1) - (ii), (2) - (i), (3) - (iv), (4) - (iii)

(d) (1) - (ii), (2) - (iv), (3) - (i), (4) - (iii)

- 43) Mycorrhizae are the example of
 (a) amensalism (b) antibiosis **(c) mutualism** (d) fungistasis
- 44) If '+' sign is assigned to beneficial interaction '-' sign to detrimental and '0' sign to neutral interaction, then the population interaction, represented by '+' '-' refers to
 (a) mutualism (b) amensalism (c) commensalism **(d) parasitism**
- 45) Which of the following is correctly matched?
 (a) Aerenchyma - Opuntia (b) Age pyramid - Biome **(c) Parthenium hysterophorus- Threat to biodiversity**
 (d) Stratification - population
- 46) Excessive aerenchyma is characteristic of
 (a) Heliophytes. (b) Mesophytes. (c) Xerophytes **(d) Hydrophytes.**
- 47) Biotic factors are
 (a) Chemical factors of soil which affect life. (b) Physical factors of soil which affect life.
(c) All living organisms which influence other organisms. (d) Factors of atmosphere which affect life.
- 48) A mutually beneficial association necessary for survival of both partners are
 (a) Commensalism. **(b) Mutualism / symbiosis.** (c) Amensalism. (d) Both 1 & 2.
- 49) Homeostasis is
 (a) Tendency of biological system to change in environment. **(b) Tendency of biological system to resist change.**
 (c) Disturbance of self-regulatory system and natural controls. (d) Biotic materials used in homeopathic medicines.
- 50) Orobanche is a:
 (a) Saprophyte (b) Autotroph (c) Partial parasite **(d) Total parasite**