

3. Pictorial Feature of Plant Kingdom

Evaluation

2 A. Question

Pteridophytes are vascular cryptogams. Reason out in short.

Answer

Cryptogams are non-seeded, non-flowering plants that reproduce by spores. Pteridophytes do not produce seeds. They are the first vascular plants because they bear xylem and phloem (vascular system) for food and water conduction.

2 B. Question

Antibiotics are extracted from bacteria and fungi. They stop the growth of microorganisms and cure diseases.

Give any two antibiotics obtained from fungi.

Answer

An antibiotic is a type of antimicrobial drug used in the treatment and prevention of microbial infections. They either kill or inhibit the growth of microorganisms. Antibiotics are secondary metabolites produced by most bacteria and fungi as a defensive response. They inhibit the growth of microorganisms by hindering certain events such as DNA replication, synthesis of the cell wall and protein formation.

Antibiotic penicillin is obtained from *Penicillium notatum*.

Antibiotic griseofulvin is obtained from *Penicillium griseofulvum*.

3 A. Question

How are the following organisms called?

Algae that prepare their own food.

Answer

Autotrophic Algae

An autotroph is an organism that can produce its own food using *light*, water, carbon dioxide, or other chemicals through photosynthesis. Autotrophs are sometimes called producers. They do not depend on any organism for their food.

3 B. Question

How are the following organisms called?

Fungi that either depends on living organisms or non-living things for their food.

Answer

Heterotrophic

A heterotroph is an organism that cannot produce its own food and depend on the intake of nutrition from other sources, such as plants and animals. They are usually non-green and lack chlorophyll.

3 C. Question

How are the following organisms called?

An organism having both algal and fungal characters

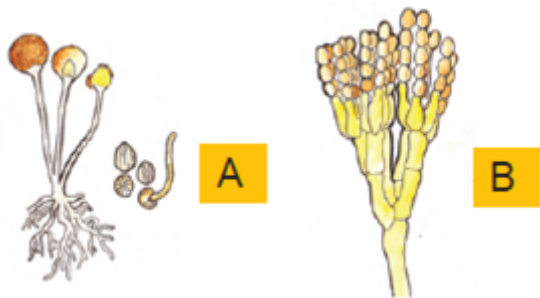
Answer

Lichen

Lichen is a symbiotic association of algae and fungi, in which both partners are benefited. Algae synthesize food and fungal partner shelter and mineral nutrients for photosynthesis.

4. Question

Name the Fungi –



Answer

a) *Rhizopus* – reproduce by stolon

b) *Penicillium* – conidia formation

5. Question

Match the following -

(i) Algae – Nephrolepis

(ii) Bryophyta – Chlamydomonas

(iii) Pteridophyta – Riccia

Answer

(i) Algae – Chlamydomonas

(ii) Bryophyta – Riccia

(iii) Pteridophyta – Nephrolepis

6. Question

I am a true terrestrial plant. I have root, stem, leaf. I reproduce through spores but I don't have flowers. Who am I? Explain.

Answer

Gymnosperms

- Gymnosperms live on land, they are true terrestrial plants. They do not need water for reproduction.
- The plant body is differentiated into true root, stem and leaf.
- These plants do not produce flowers, rather produce cones. They reproduce by spore formation.
- They are vascular plants, bearing xylem and phloem for food and water conduction.
- Their seeds are naked, not covered by pericarp.

The following diagram shows different types of gymnosperms:

Gymnosperms

- Vascular plants that produce seeds – no flowers and fruits
- Seeds in cones or hard berries
- Four groups
 - Conifers
 - Cycads
 - Ginkgos
 - Gnetophytes
- Most are evergreens



Cycad



Conifer



Ginkgo



Gnetophyte