Visit QB365-SLMS - https://www.qb365.in/slms/ Complete Questions and Answers

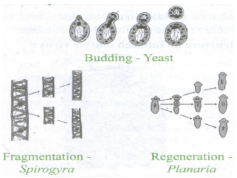
Answers Key:

IV. Answer the following:

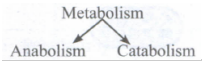
1. (i) The symbiotic association between algae and fungi is called lichens.
(ii) The algal partner is called Phycobiont or Photobiont and the fungal partner is called Mycobiont.
(iii) Algae provide nutrition for fungal partner in turn fungi provide protection and also help to fix the thallus to the substratum through rhizinae.
(iv) Asexual reproduction takes place through fragmentation, Soredia and Isidia. Phycobionts reproduce by akinetes, hormogonia, aplanospore, etc., Mycobionts undergo sexual reproduction and produce ascocarps.
Classification:
(i) Based on the habitat lichens are classified into following types: Corticolous (on Bark) Lignicolous (on Wood) Saxicolous (on rocks) Terricolous (on ground) Marine (on siliceous rocks of sea) Fresh water(on siliceous rock of fresh water).
(ii) On the basis of morphology of the thallus they are divided into Leprose (a distinct fungal layer is absent) Crustose-crust like; Foliose-leaf like; Fruticose-branched pendulous shrub like.
(iii) The distribution of algal cells distinguishes lichens into two forms namely Homoiomerous (Algal cells evenly distributed in the thallus) and Heteromerous (a distinct layer of algae and fungi present)
(iv) If the fungal partner of lichen belongs to ascomycetes, it is called Ascolichen and if it is basidiomycetes it is called Basidiolichen.
2. **Attributes of living organisms:**
1. Growth: It is an intrinsic property of all living organisms through which they can increase cells both in number and mass.
(i) Addition of new protoplasm within the cells occur. Unicellular and multicellular organisms grow by cell division.
(ii) Plants show indefinite growth life throughout and animals show definite growth.
(iii) Growth in non-living objects is extrinsic. In bacteria growth occurs by cell division. Hence, growth and reproduction are mutually inclusive events.
2. Cellular Structure: Cells of living organisms may be prokaryotic or Eukaryotic.

S.No	Prokaryotic Cells	Eukaryotic Cells
1.	Nuclear membrane is absent	Membrane bound nucleus is present.
2.	Membrane bound organelles like Mitochondria are absent **Eg :**Amoeba	Membrane bound organelles like Mitochondria are present. **Eg :** Ooedogonium

3. Reproduction:
It is a tendency of a living organism to perpetuate its own species.
(i) Asexual reproduction: Production of progeny with features more or less similar to parents.
Eg : **Conidia (Aspergillus), Budding (Hydra).**



(ii) Sexual Reproduction: Variation is seen in progeny through recombination.
4. Response to Stimuli :
(i) All living organisms are capable of sensing their environment and respond to various physical, chemical and biological stimuli.
(ii) Animals sense their surroundings by use of sense organs and is called Consciousness. In plants examples are bending of plants towards light. Closure of leaves in venus fly trap etc. This type of response is called Irritability.
5. Homeostasis:
(i) Property of self-regulation and tendency to maintain a steady state within an external environment which is liable to change is called Homeostasis.
(ii) Living organism must maintain internal condition to survive in this environment.
(iii) Movement, Nutrition, Respiration and excretion are also considered as the property of living things.
6. Metabolism:
The sum total of all the chemical reactions taking place in a cell of living organism is called metabolism.



S.No.	Anabolism	Catabolism
1.	Building up Process.	Breaking down process
2.	Energy is consumed.	Energy is released.
3.	Eg: Synthesis of proteins from amino acids.	Eg: Breaking down of glucose to CO_2 and water.

III. Answer the following:

3.

S.No	Criteria	Monera
1.	Cell type	Prokaryotic
2.	Level of organization	Mostly unicellular, rarely Multicellular
3.	Cell wall	Present (made up of peptidoglycan and mucopeptides)
4.	Nutrition	Autotrophic (Phototrophic, Chemoautotrophic) Heterotrophic (Parasitic and Saprophytic)
5.	Motility	Motile or non-motile
6.	Organisms	Archaebacteria, Eubacteria, Cyanobacteria, Actinomycetes and Mycoplasma

4. **Human Diseases:**
   1. Common cold.
   2. Hepatitis B.
   3. Cancer.
   4. SARS(Severe Acute Respiratory Syndrome).
   5. AIDS(Acquired Immuno Deficiency Syndrome).
   6. Rabies.
   7. Mumps.
   8. Polio.
   9. Chikungunya.
   10. Small Pox.
   11. Chicken pox.
   12. Measles.
5. Phage mediated DNA transfer is called transduction. It is of two types.
   1. Generalised transduction.
   2. Specialized or Restricted transduction.
6. .

QB 365™ Study Material
QUESTION BANK 365

II. Answer the following:

7. HIV is an animal virus which has RNA Cauliflower, Mosaic Virus is a plant virus but has DNA.
8. In the lysogenic cycle of a phage, the integrated phage DNA is called prophage.
9. 1. Prions are proteinaceous infectious particles.
   2. They are the causative agents for several disorders of central nervous system of humans and animals.
   Eg : Mad cow disease.
10. AIDS, Polio.

I. Multiple Choice Question:

11. (d) Methanobacterium
12. (a) lack of motile structures
13. (c) Bacteria - Crown gall
14. (b) Gibberellin
15. (c) Mycorrhizae
16. (a) Living world
17. (c) Organism
18. (d) Cells
19. (b) Catabolism
20. (b) cell division