



Topic covered:

- The Living World (Session 1) - NEET

Worksheet

1. Today we are left with only _____ of species compared to those that were available in the past.
 - a. 1/10th
 - b. 1/20th
 - c. 10 times
 - d. 500 times
2. Without any exception, which of the following sets of characters can be considered as the most defining property of living organisms?
 - a. Reproduction, growth and movement
 - b. Metabolism, cellular organization and consciousness
 - c. Response to stimulus, locomotion and sexual reproduction
 - d. Genetic material, growth and self-replication
3. Which among the following are exceptions to the characteristic "all living things reproduce"?
 - a. Mules
 - b. Worker bees
 - c. Slime molds
 - d. Both a and b
4. Reproduction is synonymous with growth in:
 - a. *Hydra*
 - b. Human
 - c. Bacteria
 - d. *Planaria*
5. The scientific name of mango is written as *Mangifera indica* L. What does the L mean?
 - a. The letter L means that Linnaeus gave this scientific name to the plant
 - b. The letter L means that this name is a Latinized name
 - c. The letter L means that the plant is a native of Latin America
 - d. The letter L means that the tree is large in size
6. *Systema Naturae*, a famous book, was written by
 - a. Lamarck
 - b. Cuvier
 - c. Aristotle
 - d. Linnaeus
7. Which among the following can regenerate?
 - a. *Hydra*, Starfish
 - b. *Plasmodium*
 - c. Earthworm
 - d. Spongilla



8. In which type of reproduction single parent is essential and spore formation is seen for reproduction?
- a. Asexual
 - b. Sexual
 - c. Vegetative
 - d. Fragmentation
9. In *Rattus rattus* the generic and the specific names are the same. It is an example of
- a. autonym
 - b. tautonym
 - c. phylum
 - d. species
10. Which among the following is an exclusive trait of living things making it a defining characteristic?
- a. Isolated metabolic reactions occur in vitro
 - b. Increase in mass from inside the body
 - c. Perception of events happening in the environment and their memory
 - d. Increase in mass by accumulation of materials both internally and externally
11. Given below are assertion and reason. Point out if both are true with reason being correct explanation (A), both true but reason not correct explanation (B), assertion true but reason is wrong (C), and both are wrong (D).
- Assertion: Scientific name *Naja naja* is an example of a tautonym.
Reason: Tautonyms are accepted only in zoological nomenclature.
- a. A
 - b. B
 - c. C
 - d. D
12. Which among the following is according to the rules of binomial nomenclature?
- a. *Cocos*
 - b. *cocos nucifera*
 - c. *Cocos nucifera*
 - d. *Cocos Nucifera*
13. Growth in living organisms occurs due to the synthesis of
- a. protoplasmic substance
 - b. apoplasmic substances
 - c. both a and b
 - d. none of the above
14. First book in which binomial nomenclature of plants was used and that was written by Linnaeus is:
- a. *Systema Naturae*
 - b. *Species Plantarum*
 - c. *Genera Plantarum*
 - d. *Origin of species*
15. We know that living organisms are characterised by
- a. catabolism
 - b. anabolism
 - c. consciousness
 - d. all of these



16. All living organisms can be definitely separated from the non-living things on the basis of their ability for
- responsiveness to touch
 - interaction with the environment and progressive evolution
 - reproduction
 - growth and movement

BYJU'S



ANSWER KEY

Question Number	1	2	3	4	5	6	7
Correct Answer	(a)	(b)	(d)	(c)	(a)	(d)	(a)

Question Number	8	9	10	11	12	13	14
Correct Answer	(a)	(b)	(c)	(b)	(c)	(c)	(b)

Question Number	15	16
Correct Answer	(d)	(b)



Solutions

1. (a)

Among the total species estimated to exist on this earth, only 13% i.e. 1.75 million are scientifically described. Many have become extinct and disappeared due to several reasons. Of all species that have existed on Earth, 99.9% are now extinct. Many of them perished in through time in five major mass extinctions. Some biologists think we are currently in the throes of a sixth mass extinction. Some say it could wipe out as many as 90% of all species living today. This literally translates to the fact that we have only 1/10th of the species and it is still disappearing.
2. (b)

Defining characteristics are those that are found only in living organism and do not apply to non-living things at all. All living organisms show metabolic activities, cellular organization and consciousness which is not found among nonliving things.
3. (d)

Although reproduction is a characteristic of living organisms, not all are fertile and comply to that trait. Sterility (inability of reproduction) is seen among many living things and hence does not comply with that characteristic. Both mules and the worker bees are sterile by nature and hence do not comply with the characteristic that all living things reproduce.
4. (c)

Bacteria are prokaryotes. They grow and reproduce by binary fission. In unicellular organisms, there is no elaborate mechanism for reproduction. The cell just undergoes simple binary fission. And growth as such in unicellular forms is just the formation of the new cell after binary fission. Reproduction is synonymous with growth in them. Whereas in multicellular organisms, growth is by mitosis and during sexual reproduction, the gametes are formed by meiosis.
5. (a)

According to the rules of binomial nomenclature, if the name of the author who has proposed the scientific name has to be written, it can be written in an abbreviated manner like 'Linn' or the first alphabet of the name can be written at the end of the specific epithet like 'L'.



6. (d)

Systema Naturae, a famous book was written by Carolus Linnaeus. It lists about 10,000 species of organisms, of which about 7,700 are plants and 4,400 are animals. The book was published in Latin.

7. (a)

Regeneration is a method by which some organisms replace or restore lost or amputated body parts. The star fish and hydra are one of the best examples of organisms capable of regenerating.

8. (a)

Asexual reproduction is uniparental while sexual reproduction is generally biparental. In asexual reproduction there is no gamete formation but spore formation may be seen by a simple process like mitosis.

Vegetative reproduction involves the formation of a new plant from some part of its body.

Fragmentation is a type of asexual reproduction but spores are not formed.

9. (b)

When the genus and species of an organism have the same name it is called as a tautonym. Tautonyms are only allowed in zoological nomenclature. Eg: *Gorilla gorilla* (Gorilla), *Naja naja* (Cobra).

10. (c)

All organisms from prokaryote to the most complex eukaryotes can sense and respond to environmental events.

Cellular metabolism is a defining characteristic of living things. Isolated metabolic reactions in vitro are not living things but are living reactions. Hence, option a is incorrect. Although some nonliving things like mountains, sand mounds, crystals also grow, their growth is due to the addition of matter from outside.

Hence, options B and D are incorrect.

11. (b)

A tautonym is one where both the genus and species have the same name. It is accepted only in zoological nomenclature and is not accepted in botanical nomenclature. *Naja naja* is the scientific name of cobra.



12. (c)
All scientific names have to have two names, the first is the generic name and the second is the specific name. The genus begins with a capital letter and the species begins with a small letter. When the scientific name is typed or printed, it should be in italics and when handwritten, it should be underlined.
13. (c)
Growth includes the addition of both the non-living components (apoplasmic substances) like cellulose, lignin, pectin, etc. as well as the living components (protoplasmic substances) like nucleic acids, organelles, etc. When cells are getting added, we see both these in different cells, tissues and organs.
14. (b)
Species Plantarum by Carl Linnaeus, lists every species of plant known at the time. It is the first work to consistently apply binomial names.
15. (d)
Catabolism is the breakdown of complex substances into simple particles releasing energy.
Anabolism is the process of building up complex organic compounds from simple inorganic compounds using energy.
Consciousness is the awareness of the organism to its surroundings.
16. (b)
Living organisms have evolved through time based on several factors which also includes environmental factors.
Reproduction is not shown by worker honey bees which are living organisms. All living organisms do not respond to touch.
Growth in non-living things can happen as an increase in size or mass. Eg:
Crystallization of salts in chemical reactions or the formation of mountains.
Movement is seen in the flow of a water in a river.