

HEAD OFFICE

208, CD, LOCAL SHOPPING CENTER AGGARWAL SHOPPING PLAZA, PITAMPURA,

BRANCH-1

AYODHYA CHOWK SEC – 3 , ROHINI **BRANCH-2**

DC CHOWK SEC – 9, ROHINI

 9^{TH} & 10^{TH} MATHS / SCIENCE 11^{TH} & 12^{TH} – PHYSICS / CHEMISTRY / MATHS / BIOLOGY EXCLUSIVE BATCH FOR NEET / JEE ASPIRANTS Ph. no. 9696 500 500 / 9696 400 400

CHAPTER-1

THE LIVING WORLD

(1 MARK)

Q1. Linnaeus is considered as father of taxonomy. Name two other botanists known for their contribution to the field of plant taxonomy?
Q2. What does ICZN stand for?
Q3.Expand ICBN
Q4.Name the person who proposed the system of binomial nomenclature.
Q5. Rearrange the following taxonomic categories in a proper sequence from smaller taxon to higher one: Class, Genus, Phylum, Order, Species, Kingdom, Family
Q6. Fill in the blanks (A) and (B): Species \Rightarrow (A) \Rightarrow Family \Rightarrow Order \Rightarrow (B) \Rightarrow Phylum.

Q7. Name the highest category in the hierarchical system of classification.
Q8. Given below is the scientific name of Mango.Identify the correctly written name. (i) Mangifera Indica (ii) Mangifera indica
Q9. Brinjal and potato belong to the same genus. Salanum, but to two different species. What defines them as separate species?
(2 Mark) Q10.Do non-living things exhibit growth? Justify your answer.
Q11. Why are living organisms classified?
Q12. Why are the classification systems changing every now and then?
Q13. In a given habitat we have 20 plant species and 20 animal species. Should we call this as 'diversity' or 'biodiversity'? Justify your answer.
Q14. What are the rules of binomial nomenclature?

Q23. A ball of snow when rolled over snow increases in mass, volume and size. Is this comparable to growth as seen in living organisms? Why?
Q24. Properties of cell organelles are not always found in the molecular constituents of cell organelles. Justify.
Q25. International Code of Botanical Nomenclature (ICBN) has provided a code for classification of plants. Give hierarchy of units of classification botanists follow while classifying plants and mention different 'Suffixes' used for the units.
Q26. What is the difference between flora, fauna and vegetation? Eichhornia crassipes is called as an exotic species while Rauwolfia serpentina is an endemic species in India. What do these terms exotic and endemic refer to?
Q27. A student of taxonomy was puzzled when told by his professor to look for a key to identify a plant. He went to his friend to clarify what 'key' the professor was referring to? What would the friend explain to him?
Q28. Brassica campestris Linn.
(a) Give the common name of the plant.
(b) What do the first two parts of the name denote?
(c) Why are they written in italics?
(d) What is the meaning of Linn. Written at the end of the name?

Q29.Define a taxon	.Give some examples of taxa	at different hierarchical levels	5.
Q30.What different	criteria would you choose to	classify people that you meet	often?
(5 Mark)			
Q31.Some of the prostatement.	operties tissues are not the c	constituents of its cells. Give th	ree examples to support the
Q32.Define and und	erstand the following terms.		
(a) Phylum	(b) Class	(c) Family	(d) Order
(e) Genus			
Q33. What are the n	najor divisions of classificatio	on? Classify Man.	

Q34. A scientist has come across a plant which he feels is a new species. How will he go about its identification, classification and nomenclature?

Q35. How do you prepare your own herbarium sheets? What are the different tools you carry with you while collecting plants for the preparation of a herbarium? What information should a preserved plant material on the herbarium sheet provide for taxonomical studies?
Q36. Illustrate the taxonomial hierarchy with suitable examples of a plant and an animal.
Q37. Amit went on a trip to zoological park with his mother. During his visit, he saw that different animals are kept in different ways. Out of curiosity he asked his mother the reason behind this. His mother, told him that this is because of different habits exhibited by different animals.
(a) How bats and owls are kept in a zoo?
(b) Are there any animals that are kept in open? Why?
(c) Do zoological parks exhibit insects?
(d) What values are shown by Amit?
Q38. There are millions of plants and animals in the world and they have local names which vary from place to place and country to country, in different languages. In a need to standardise the naming of living organisms such that a particular organism is known by the same name all over the world, the scientists have established procedures and principles to assign scientific names.
(a) What is nomenclature?
(b) Expand ICBN and ICZN.
(c) Indicate the value learnt from this concept.

Q39. If you look around, you will see a large variety of living organisms-plants and animals with your naked eyes and the microbes with the help of microscopes. Classification of all these, is not a single step process, but involves a hierarchy of steps where each step represents a rank/category.
(a) What is a taxonomic hierarchy?
(b) Name the lowest category and the highest category in the hierarchy.
(c) What is the value shown by arranging the organisms into these categories?
Q40. Taxonomists have developed a variety of taxonomic aids to facilitate identification, naming and classification of organisms. These studies are carried out from the actual specimens collected from the field or those preserved as referrals.
(a) Name any four forms of taxonomicaids. Of these, where can you find live specimens?
(b) What are taxonomic keys?
(c) Indicate the value learnt from such aids.
Q41. When we try to define 'living' we look for certain distinctive characters exhibited by living organisms; they include growth, reproduction, ability to sense the environment and respond, interact, metabolism, etc.
(a) Certain properties like growth and reproduction can not be taken as overall defining characters of living organisms. Give reasons.
(b) Mention two characters that can be the defining properties of life forms.
(c) What value do you attach to "living'?

Q42. Taxonomy is not something new, human beings are interested in knowing more and more about the various kinds of organisms, especially with reference to their own use; hence the earliest classifications were based on the uses of various organisms.
(a) What is systematics?
(b) What is the scope of systematics as of today?
(c) What forms the basis of modern taxonomy?
(d) Indicate the value shown by this branch of biology.