

Topic :- The Living World

- 1 **(a)**
Biosystematics aims at morphological delimitation of taxa but incorporates evidences from Genetics, Cytology, Anatomy, Palynology, Chemistry, Physiology, etc.
- 2 **(a)**
Phenetics (Gr. *Phainein*= to appear; the term phenotypes is derived from this same root) dedicates taxonomic affinities entirely on the basis of measurable similarities and differences.
- 3 **(b)**
A **herbarium** (A) is a collection/place of pressed dried and preserved plants specimen **mounted on a paper sheets** (B) labelled and arranged systematically for further reference
- 4 **(d)**
Linnaeus classified all the living organisms into two large kingdoms, *i.e.*, Plantae and Animalia. The descending order of Linnaean hierarchy is Kingdom→Phylum→Class→Order→ Family → Genus → Species.
- 5 **(b)**
Luca Ghini a professor of Botany set-up the first herbarium at Pisa is Italy
- 6 **(d)**
Shark, snake, whale, reptile belong to phylum-Chordata.
Insect, spider and shrimp belong to phylum - Arthropoda. Fish, snail, squid and slug are molluscans, while earthworm is annelids, millipede is arthropods, *Hirudinaria* is common leech of phylum - Annelida
- 7 **(d)**
The term 'Systematic Botany' refers to the methodical study of plants, dealing with identification, naming and classification.
- 8 **(c)**
Hornbill (a bird) is the symbol of Bombay Natural History Society. It is privately owned wildlife conservation agency/organisation
- 9 **(c)**
Linnaeus produced sexual system of classification based upon the numerical relations of the floral parts. He grouped all the genera into 24 classes based on number and morphological arrangement of their stamens.

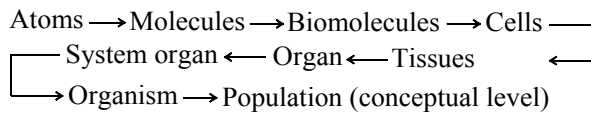
- 10 **(b)**
Species is the smallest rank of taxonomic classification modern concept of species is biological species concept (E Mayr; 1942). Mayr defined he species as the group of interbreeding natural populations that are reproductively isolated from other such groups.
- 11 **(d)**
When synthetic process or constructive process called anabolism exceeds destructive process of the body *i.e.*, catabolism, growth will takes place, which in turn proceeds development and body will function well
- 12 **(d)**
According to Mayr, species are group of interbreeding natural populations that are reproductively isolated from other such groups. Species is the lowest taxonomic rank. It contains most similar organisms.
- 13 **(b)**
In taxonomy, nomenclature of organisms is possible only when the correct place and correct name is known. *i.e.*, organism must be described correctly. This is identification and is the first step in taxonomy
- 14 **(c)**
The prime source of taxonomic studies is collection and identification of actual specimen. Nomenclature the present scientific method of naming the organism can be completed only when actual specimen is collected and identified
- 15 **(b)**
Flora is a book or taxonomic aid which have adequate information about habitat, distributions of climate and index of plants present in a particular region
- 16 **(c)**
Hierarchical classification is
Kingdom
↓
Division/Phylum
↓
Class
↓
Order
↓
Family
↓
Genus
↓
Species
Class occupy a position between division/phylum and order
- 17 **(c)**
Mule a result of outbreeding interspecific hybridization and worker bee lack primary sex organ. So, they are unable to do reproduction

18 (a)

Hierarchical system is used in classification by majority of the biologist because each higher taxonomic category contain its below group, *i.e.*, it reduce the volume of description in a catalogue of animal and plants and character at larger category need not to be repeated for smaller categories

19 (b)

Organization of living being starts with atomic, *i.e.*, sub-microscopic level and reaches to cells (microscopic level), then become visible or microscopic with tissue and organs and then reaches to conceptual level



20 (a)

The ascending hierarchy in similar characteristic is Class < Family < Genus < Species, *i.e.*, specificity is increasing

ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	A	A	B	D	B	D	D	C	C	B
Q.	11	12	13	14	15	16	17	18	19	20
A.	D	D	B	C	B	C	C	A	B	A