

**Topic :- The Living World**

- 1 **(a)**  
Species, phylum and class are all taxonomic categories, while Asteraceae/Fabaceae are families
- 2 **(a)**  
Prophage is the phage (viral genome) inserted into the circular bacterial genome or existing as extra chromosomal plasmid
- 3 **(d)**  
Flower is a specialized, modified shoot. Which has evolved due to progressive specialization of sporophyll. Sexual reproduction in angiosperm is performed by these conservative part of flowers. Hence, flower feature are commonly used for identification
- 4 **(a)**  
Herbarium/Herbaria (Plu) are place/collection of dried pressed and preserved (FAA solution) specimen of plants
- 5 **(a)**  
The most important function of botanical garden and its importance is that *ex situ* conservation of plant is allowed there. These garden serve site of recreation among nature conscious person especially during flowering
- 6 **(c)**  
*Genera Plantarum* was written by Bentham and Hooker, highest taxonomic category is kingdom in hierarchy. Term 'Systematic' was first time used by Linnaeus
- 7 **(a)**  
RH Whittaker, an American taxonomist proposed live kingdom classification. His five kingdom are Monera, Protista, Fungi, Plantae and Animalia
- 8 **(c)**  
Kingdom-Monera of five kingdom classification consists of blue-green algae, nitrogen fixing bacteria and methanogens
- 9 **(c)**  
Growth is exhibited by living as well as non-living organism. When increase in body mass is considered as a criterion for growth this may be as the result of accumulation of material on non-living surface or weight increase in livings, e.g., mountains and sand dunes increase due to accumulation of material on their surface
- 10 **(d)**  
Shark, snake, whale, reptile belong to phylum-Chordata.  
Insect, spider and shrimp belong to phylum - Arthropoda. Fish, snail, squid and slug are molluscs, while earthworm is annelids, millipede is arthropods, *Hirudinaria* is common leech

of phylum - Annelida

- 11 **(a)**  
Increase in size with rest 3, the living organisms undergo self-replication, also and this feature makes them unique among all other forms
- 12 **(c)**  
**Hooker** proposed the concept of genus.
- 13 **(c)**  
Taxonomic or systematic hierarchy may be defined as a series of different ranks placed in descending order. In other words, it is a system by which various taxonomic categories are arranged in a proper descending order. Kingdom is the highest rank and species is the lowest or basic rank, i.e., Kingdom > phylum/division > class > order > family > genus > species.
- 14 **(c)**  
Generally size of a herbarium sheet is 30 × 45 cm. Which is slightly small than the size of American herbarium (29 × 41 cm) and label size is 7 × 12
- 15 **(c)**  
Out of four given categories, class is the largest category. Therefore, can categorise rest three categories; order, family and genus  
Kingdom → Division/Phylum → Class → Order → Family → Genus → Species
- 16 **(b)**  
'Species Plantarum' includes names and description of 6000 species of 1000 genera of plants. The binomial nomenclature given by Linnaeus was first used in **Species Plantarum**.
- 17 **(b)**  
Reproduction by fragmentation can be best observed in protonema of mosses, filamentous algae and in the fungi
- 18 **(a)**  
Presence of visceral slits is exhibited by both Chordata and adult Tunicata members
- 19 **(a)**  
R.H. Whittaker, an American taxonomist proposed five kingdom classification. His five kingdoms are Monera, Protista, Fungi, Plantae and Animalia
- 20 **(c)**  
The first phylogenetic system was proposed by **Eichler**, who is famous for his work entitled 'Bluthen Diagramme' published in two volumes.

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

**PE**