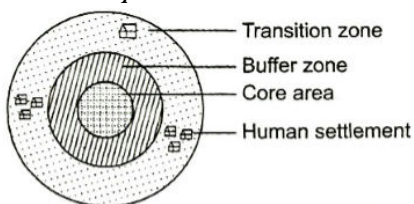


### Topic :- Biodiversity & Conservation

1

(a)

Each biosphere reserve has



Zonation in terrestrial biosphere

(i) **Core or Natural Zone** No human activity is allowed. The area is undisturbed and legally protected ecosystem

(ii) **Buffer Zone** It surrounds the core area. Limited human activity is allowed like resource use strategies, research and education

(iii) **Transition Zone (Manipulation Zone)** It is the outermost or peripheral part of biosphere reserve where an active cooperation is present between reserve management and local people for activities like settlements, cropping, recreation, forestry and other economic uses without disturbing ecology.

Transition zone has different parts like forestry, agriculture, tourism and restoration regions. Restoration region is the degraded area which is selected for restoration to near natural form

2

(d)

India now, has 14 biosphere reserves, 90 national parks and 448 wildlife sanctuaries

3

(a)

*ex situ* conservation means conservation outside the natural habitats by perpetuating sample population in genetic resource centres or in the form of gene pool. This form of conservation includes -zoos, botanical gardens, seed banks, pollen storage, tissue culture, genetic engineering.

4

(b)

The Irrawady dolphin (*Orcaella brevirostris*) is the flagship species of Chilka lake. Chilka is home to the only known population of Irrawady dolphins of India and one of only two lagoons in the world that are home to this species.

5

(b)

Ecologists believe that the communities with more species tend to more stable than those

- with less species. This was confirmed by **David Tilman**
- 6 **(d)**  
In sedimentary cycle of matter, materials involved in circulation between biotic and abiotic components of biosphere are non-gaseous and the reservoir pool is lithosphere, *e.g.*, P, Ca, S and Mg.
- 7 **(c)**  
The term 'wildlife' refers to any living organisms in its natural habitat. It includes all plants, animals and microorganisms except the cultivated plants and domesticated animals.
- 8 **(c)**  
**Gir National Park** (Gujarat) is not concerned with tiger. The animals found in Gir national park are Asiatic lion, panther, striped hyaena, sambar, nilgai, cheetal, four-horned antelope and chinkara.  
**Ranthambhor National Park, Sunderbans and Jim Corbett National Park** (Uttarakhand) are tiger reserves.
- 9 **(b)**  
The number of species of birds in Columbia, located near the equator is 1400
- 10 **(d)**  
In recent years, *ex situ* conservation has advanced beyond keeping threatened species in enclosures. Now, gametes of the threatened species can be preserved in viable and fertile condition for long periods using cryopreservation techniques. Eggs can be fertilized *in vitro* and plants can be propagated using tissue culture methods
- 11 **(d)**  
Biosphere reserves are a special category of protected areas of land and/or coastal environments wherein people are an integral component of the ecosystem. It represents a specified area zoned for particular activity and consists of core zone without any human activity, buffer zone with limited human activities and manipulation zone with several manipulating human activities.
- 12 **(a)**  
Silent valley is located in Kerala (South India). The area under this was historically explored in 1847 by the botanist **Robert Weight**.
- 13 **(c)**  
A species of organism that is not native to a locality and having been moved there from its natural range by humans or other agents is called exotic species, *e.g.*, water hyacinth, *Prosopis cineraria*, etc.
- 14 **(b)**  
Energy obtained from sunlight is known as solar energy. It can be exploited as an inexhaustible, non-conventional source of energy.

- 15 **(c)**  
India's first National Park (IUCN category-II protected area) was **Hailey National Park**, now called **Jim Corbett National Park**, established in 1935. By 1970, India had only 5 national parks, while today has 92 (as of May 2004).
- 16 **(a)**  
The following species of plants are now widely used for social forestry: *Acacia*, *Leucaena* (subabul), *Prosopis* (jand), *Sesbania* (agastha), *Casuarina*, *Tectona* (teak), *Dalbergia* (sisham), *Moringa* (sahjan) and *Azadirachta indica* (neem).
- 17 **(a)**  
The approximate percentage of the earth covered by the terrestrial hot spots is 1.5% (less than 2%)
- 18 **(a)**  
Destruction of habitats due to any reason (including cutting down of forests) exposes wild life to a variety of risk factors including predation and hunting.
- 19 **(d)**  
There are various hypothesis for higher diversity in tropical areas  
(i) Speciation is a function of time. Temperate areas have undergone frequent glaciation in the past. It killed most of the species. No such disturbance occurred in tropics where species continued to flourish and evolved undisturbed for millions of years  
(ii) There are no unfavourable seasons in tropics. Continued favourable environment has helped tropical organisms to gain more niche specialisation and increased diversity  
(iii) More solar energy is available in tropics. This promotes higher productivity and increased biodiversity  
(iv) Resource availability is higher in tropics  
(v) There is reduced competition in tropics due to favourable environment  
(vi) Rate of extinction is low in tropics
- 20 **(d)**  
Kaziranga is famous for Rhinoceros. Little Rann of Kutchh is famous for wild ass.

ANSWER-KEY										
<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>D</b>	<b>A</b>	<b>B</b>	<b>B</b>	<b>D</b>	<b>C</b>	<b>C</b>	<b>B</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>D</b>	<b>A</b>	<b>C</b>	<b>B</b>	<b>C</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>D</b>	<b>D</b>