

Topic :- Organisms & Populations

- 1 **(a)**
Sympatry is the condition when selection may produce ecotypes living in adjacent habitats in the same geographic area and gives rise to sympatric speciation, i.e., formation of species within a single population by reproductive isolation or without geographical isolation.
- 2 **(b)**
A-Maintaining; B-Reducing
- 3 **(a)**
Humus it is a dark brown amorphous gummy substances formed by partial decomposition of plant and animal matter that constitute organic component of soil
- 4 **(b)**
An indirect competition for shared resources such as particular nutrient is called exploitation
- 5 **(d)**
A-Population density; B-Pyramid
- 6 **(a)**
Ecotype Genetically distinct adapted population to a particular habitat of species in different geographical area
Ecophene Phenotypic variants of a single genotypes in a particular area or habitat
Phenotypic Plasticity Shift in an organism body physiology behavior. When shifted to different environment condition
e.g., When a man living an plane are a went to hill area or mountain. Three extra R.B.C cells are produced seems to help transport available oxygen around the body is called phenotypic plasticity
- 7 **(a)**

Developing countries show expanding population pyramid with maximum age distribution in pre-reproductive phase, i.e., a very young age distribution, high fertility and low mortality rate.

8 **(d)**

Mortality is the death rate per thousand individuals per year. Mortality rate decreases population size and population density.

9 **(d)**

An introduced, alien, exotic, non-indigenous or non-native species. Is a species living outside its native distributional range, which has arrived there by human activity, either deliberate or accidental.

Some introduced species are damaging to the ecosystem they are introduced into, others have no negative effect and can, in fact, be beneficial as an alternative to pesticides in agriculture. In some instances the potential for being beneficial or detrimental in the long run remains unknown

10 **(d)**

Keystone species deserve protection because these have a significant and disproportionately large impact on the other species living in community. The number of keystone species is often low as compared to other species but they limit the population of other species. Removal or decreases in number of these species in a community causes serious disruption in structure and function of that community.

11 **(b)**

Since, same animals of a niche have the similar requirements of food, light, water, space, shelter and mate, etc, so intraspecific competition (between animals of same species) is more acute than interspecific, when different animals have different requirements and adaptations (i.e., different niche).In same niche, there will always a competition but it is more severe, when similar animal species are present and less, when different animals are there with a few similar needs.

12 **(b)**

Plasmodium is odd one as it is a digenetic endoparasite with man as the primary host and female *Anopheles* mosquito as the vector, while lice, bedbug and mites all are blood sucking ectoparasites.

- 13 **(d)**
The vegetation of cold deserts includes lichens, mosses, herbaceous plants and small shrubs, e.g., Gobi desert and Tibet desert.
- 14 **(d)**
Ecology is the study of reciprocal relationship between organisms and their environment.
- 15 **(b)**
Light is essential for photosynthesis. The amount of photosynthesis depends upon the quality, intensity and duration of light. Photosynthetic yield is maximum on equator and tropical areas
- 16 **(d)**
Size of population keeps on changing due to various factors or phenomena like birth rate, death rate, emigration or immigration. So, it is a dynamic phenomena rather than stable
- 17 **(b)**
Stenothermal organisms are those organism, which can't tolerate wide range of temperature. They live within narrow range of temperature because of their requirement of nearly constant temperature throughout the year. *e.g.*, amphibians, reptiles
- 18 **(b)**
Ectoparasite show simple life cycle as compared to the endoparasite
- 19 **(d)**
Autecology deals with the interaction of species with environment.
- 20 **(b)**
Diapause occurs during the unfavourable conditions. Mostly it takes place in winter when temperature is too low to survive

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

PE