

## AGE DISTRIBUTION

### Q1. What do you mean by age distribution? What are the major categories of age groups?

Age distribution is an important characteristic of population, influences both natality and mortality. It is the number or percentage of the individuals in a population in different age groups. The ratio of the various age groups in a population determines the current reproductive status of the population and indicates what may be expected in the future.

**Bodenheimer** (1958) proposed 3 major categories of age groups in a population, they are— *pre reproductive, reproductive and post reproductive.*

### Q2. What is age pyramid? Q3. What are the types of age pyramids? Give suitable example of each type

A special type of pyramid where the age distribution in a population is represented and the number of individuals in different age groups are shown by the relative width of successive horizontal bars.

Age pyramids are snapshots of the age structure of a population at some period in time, providing a picture of the relative sizes of different age groups in the population. The age structure of a population is a product of the age-specific patterns of mortality and reproduction.

Age pyramid is of 3 types—

#### (a) Expanding age pyramids:

- This type of age pyramid is characterized by a broad base of pre reproductive age.
- This type of pyramid is traced in a rapidly growing population, where birth rate is high and population growth may be exponential.
- Example—In housefly, yeast, algae, *Paramecium* each successive generation are more numerous than the preceding one, as a result a pyramid-shaped age structure results.

#### (b) Stable age pyramid:

- This type of age pyramids is characterized as a bell shaped structure.
- As the rate of growth shows and stabilizes (*where  $r$  approaches zero and the net reproductive rate approaches one*), the prereproductive and reproductive age groups become more or less equal in size. The post reproductive group remains as the smallest.
- Example—In human population such type of age pyramid is evident.

#### (c) Diminishing age pyramids:

- This type of age pyramids is characterized as an urn shaped structure.
- Such type of pyramid forms in a population if the birthrate is drastically cut or reduced, the reproductive and post-reproductive groups increase in proportion to the pre-reproductive age group (age pyramid of diminishing population).
- Example—Best example is elephant and whale where only one young per female is produced every few years. In such populations majority of animals would be adults.

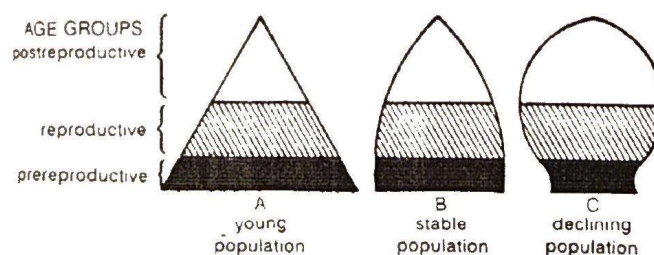


Figure: Hypothetical diagram showing different types of age pyramids.

### Q4. What do you mean by dominant age class?

A phenomenon known as dominant age class has been repeatedly observed in fish populations that have a very high potential natality rate. When a large year class occurs because of unusual survival of eggs and larval fish, reproduction is suppressed for the next several years.