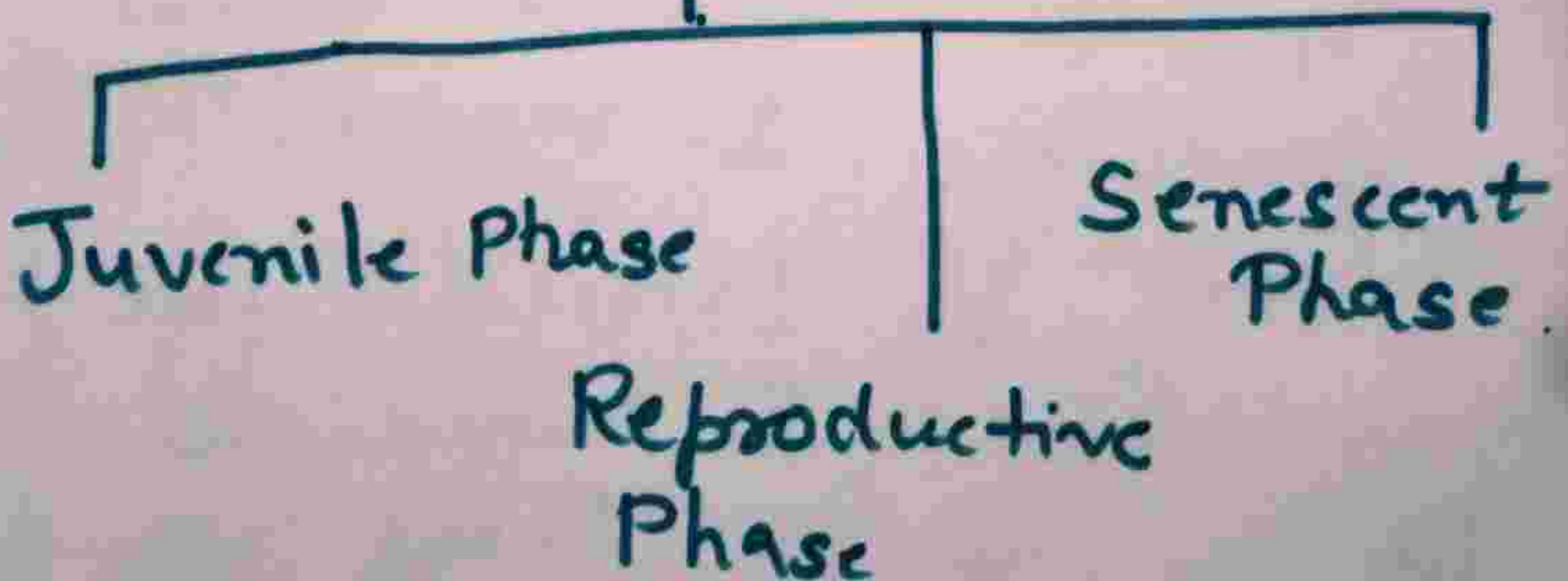


Sexual Reproduction ①

- $n \times n$ Gamete fusion [Syngamy]
- Zygote formation ($2n$)
- Meiosis at any stage of Life cycle.
- Also called syngeneses or Amphimixis.
- Gametes produced in Gonads.

Phases in Life cycle.



②

Juvenile Phase

or

Pre reproductive Phase

→ In Plants vegetative Phase

→ Plants three types

Annual



In
One season
vegetative
+ Phase

Reproductive
Phase.

→ completes
life in one
Season
e.g. wheat, Rice

Biennial



completes
life two
Seasons

I - vegetative
Phase

[vegetative part
develops]

II Reproductive
Phase

[Flowering]

→ Spinach
Radish Flowering
Seasonal

Perennial

Mango
Neem

Long Life
Span

→ vegetative
Phase
Perma-



→ In Humans From Birth up to Puberty is Juvenile phase and after Puberty. Reproductive Phase

→ Juvenile Phase is of variable duration in different organisms.

Reproductive Phase.

→ Maturation of Reproductive organs.

→ organism produce progeny during this Phase.

→ In Human's Reproductive Phase starts from Puberty

① → Appearance of Flowers indicate Sexual Maturity in Plants.

→ Reproductive phase is variable in different organisms.

→ Type of Plants on the basis of Flowering.

Monocarpic

Plants

e.g wheat, Rice, Banana

→ Flowers only once in life

→ Plants either Annual or Biennial

→ Plants die after Flowering and Fruiting

Polycarpic Plants.

Mango, Neem

→ Flowers several time in particular Season

→ Plants are Perennial.

→ plant do not die after flowering

Unusual Flowering (5)

→ Bamboo [*Bambusa tulda*]
→ Flowers once in life, but
flowering occurs after
50 - 100 years.

→ Dies after Flowering.

Q - Bamboo is Annual or
Perennial.

→ Neelakuranji [*Strobilanthes
kuntiana*]

→ Flowering occurs every 12 years.

→ Found on hills of Kerala
and Karnataka.

→ Nilgiri's name is given
because of Blue flowers
of these plants.

→ Last Flowering occurred
during September - October
2006.

→ ^⑥ On the In Animals basis of Breeding
two types of Animals

Seasonal
Breeder

→ Breeding
occurs in
particular
Season.

→ Frog,
Lizards ^{most} Birds,
non primate
mammals.
e.g cows, sheep,
deer, rat, dogs
etc.

→ In Non primates
cyclic changes occur
in form of oestrous
cycle.

Continuous
Breeder

→ These animals
breed continuously
during their
reproductive
Phase, no bar of
Season for Breeding
e.g Honey bees,
Poultry birds,
Primates e.g
Monkey, Apes,
Humans.

→ In Primates
cyclic changes
occur in
form of
Menstrual
cycle.

⑦

Senescent Phase

→ End of Reproductive Phase.

→ Stage of Ageing also called Senescence.

→ Last phase of Lifespan.

→ Senescence ultimately leads to death.

→ Catabolic activity Increase.

Q What is responsible for the change over one phase to another.

Hormones and environmental factors regulate the reproductive process and behaviour of the organism.

Note— Study of behaviour of organism is called Ethology.