Reproduction in Living Things

Solution 1:

Living things produce other organisms like themselves by a process called reproduction. In this way, the species of living things are perpetuated. They ensure the continuity of species through the process of reproduction.

Solution 2:

Reproduction is a natural process by which living things produce organisms like themselves and ensure continuity of species.
The different modes of reproduction are

1. **Asexual reproduction:** It takes place without the union of gametes.
2. **Sexual reproduction:** It takes place through the union of male and female gametes.

Solution 3:

The natural methods of reproduction in plants are asexual reproduction and sexual reproduction.
Asexual reproduction in plants occurs by the following methods:

1. Vegetative reproduction from plant parts such as the stem, roots and leaves. Examples: Potato, sweet potato, Bryophyllum
2. Cell division. Examples: Bacteria, algae, Chlorella
3. Budding. Example: Yeast
4. Sporogenesis. Examples: Bacteria, fungi, some algae
5. Segmentation. Example: Spirogyra

Sexual reproduction in plants occurs by pollination and fertilisation.

Solution 4:

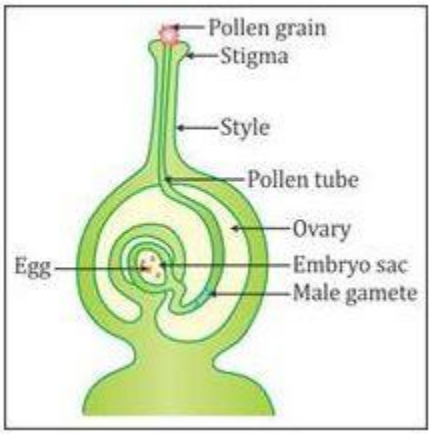
1. **Oviparous:** Animals which hatch from an egg are called oviparous.
2. **Viviparous:** Animals which are born from the womb of the mother are called viviparous.
3. **Pollination:** The transfer of pollen grains from the male part of the flower (androecium) to the female part of the flower (gynoecium) is called pollination.
4. **Fertilisation:** Fertilisation is the process of fusion of the male gamete with the female gamete to form a single cell called the zygote.

5. **Budding:** Asexual reproduction through small outgrowths or buds is known as budding.

Solution 5:

Sexual reproduction in flowering plants:

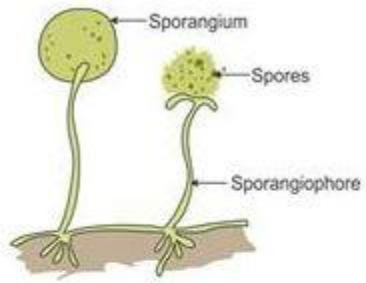
1.
    1. In flowering plants, the flower is the reproductory organ which bears male and female parts.
    2. The androecium is the male part of the flower. It consists of anther lobes in which pollen grains are produced.
    3. The gynoecium is the female part of the flower which consists of the stigma and ovary.
    4. When the pollen grains from the anther fall on the stigma of a flower, they begin to grow there. This process is called pollination. A pollen tube grows from a pollen grain.



5. Male gametes are formed inside the pollen. They unite with the female gametes present in the ovary. This union of male and female gametes is called fertilisation.
6. After fertilisation, zygote is formed which later on develops seeds and fruit.
7. The seeds develop into new plants after they are sown in the soil.

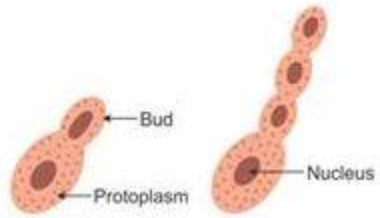
Solution 6:

(a) Fungus



Fungus

(b) Budding



Budding

Solution 7.a:

Differences between asexual and sexual reproduction:

	Asexual reproduction	**Sexual reproduction**
1.	Only a single organism or one parent is involved.	One or two organisms or parents are involved.
2.	No production or fusion of gametes.	Male and female gametes are produced.
3.	The young ones produced are identical to the parents.	The young ones produced are different from the parents.
4.	Rapid process during favourable conditions.	Slower process.
5.	Asexual reproduction is shown by unicellular organisms and organisms of lower order.	Sexual reproduction is shown by animals and plants of higher order.

Solution 7.b:

Differences between androecium and gynoecium:

	Androecium	**Gynoecium**
1.	The male part of a flower is called androecium.	The female part of a flower is called gynoecium.
2.	It consists of anther lobes.	It consists of ovary and stigma.
3.	Androecium has pollen grains in the anthers.	Gynoecium has ovules in the ovary.

Solution 8:

- Reproduction by means of buds is called **budding**.
- The falling of pollen grains on the stigma is called **pollination**.
- The **androecium** and **gynoecium** are the parts of the flower that take part in sexual reproduction.
- Animals that are born from an egg are said to be **oviparous**.

Solution 9:

Group 'A'	**Group 'B'**
(a) viviparous	3. cat
(b) androecium	2. male part
(c) gynoecium	1. female part

Solution 10: