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Solution 1

Reproduction.

Solution 2

(a) Sexual reproduction.

(b) Asexual reproduction.

Solution 3

False.

Solution 4

Ferns and mosses.

Solution 5

(a) Sexual reproduction.

(b) Asexual reproduction.

Solution 6

Sexual method.

Solution 7

(a) Dogs and cows.

(b) Amoeba and Hydra.

Solution 8

Bread mould (Rhizopus fungus).

Solution 9

Binary fission; Asexual method.

Solution 10

(a) Bryophyllum and money plant.

(b) Bryophyllum and Begonia

Solution 11

Budding.

Solution 12

(a) Budding and regeneration. (b) Multiple fission.

Solution 13

(i) Fragmentation.

(ii) Binary fission.

Solution 14

(a) Cutting.

(b) Grafting.

Solution 15

Layering.

Solution 16

Layering.

Solution 17

Hibiscus and Bougainvillea.

Solution 18

Rose and grapes.

Solution 19

The different methods of asexual reproduction are:

(i) Fission

(ii) Budding.

(iii) Spore formation.

(iv) Regeneration.

(v) Fragmentation.

(vi) Vegetative propagation.

Solution 20

Because all these methods involves a single parent for the production of a new organism, without the involvement of gametes.

Solution 21

- (a) Reproduction.
- (b) Multiple; Binary.
- (c) Cutting.
- (d) Tubers.
- (e) Layering.

Solution 22

(a) Asexual Reproduction

(i) The offspring arises from a single parent.

(ii) The production of new organism does not involve gametes

Example:- Amoeba, Yeast.

Sexual Reproduction

(i) The offspring arises from two parents of different sexes.

(ii) The production of new organisms involves the use of gametes.

Example:- Fish, Frogs, etc.

(b) (i) Sexual Method: Cats, Humans, birds.

(ii) Asexual method: Amoeba, Hydra.

Solution 23

(a) The process of getting back a full organism from its body parts is called regeneration. The two animals which can regenerate fully from the cut body parts are Planaria and Hydra.

(b) In complex multicellular organisms, specialized cells make up tissues; tissues make up organs; organs make up organ systems and finally organ systems make up organisms. Since complex multicellular organisms have a high degree of organisation in their body, they cannot be reproduced from their cut body parts by the process of regeneration.

Solution 24

In vegetative propagation, new plants are obtained from the parts of old plants (stems, roots and leaves), without the help of reproductive organs. Example: Bryophyllum plant reproduces from its leaves and money plant grows from its stem.

Advantages of vegetative propagation:

(i) Plants grow faster by the process of vegetative propagation.

(ii) They need less care.

Solution 25

(a) The process of growing many plants from one plant by man-made methods is called artificial propagation of plants.

(b) The methods used for artificial propagation of plants are:

(i) Cutting

(ii) Layering and

(iii) Grafting

(c) (i) Rose grows by means of cutting.

(ii) Jasmine grows by layering.

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