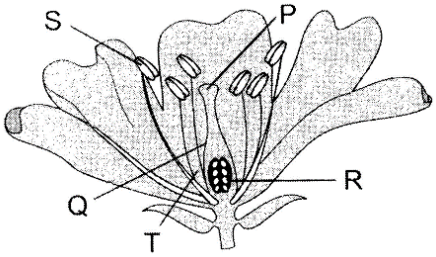
Reproduction and Growth In Plants

1. Which of the following plants reproduce in the same way as sugarcane?
(i) Bryophyllum
(ii) Rose
(iii) Hibiscus
(a) (i) and (ii) only
(b) (i) and (iii) only
(c) (ii) and (iii) only
(d) (i), (ii) and (iii)

2. Which of these labelled parts form the carpel?

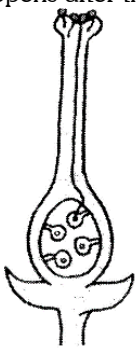


(a) P and Q only
(b) P, Q and R only
(c) S and T only
(d) S, T and R only

3. Why must seeds be dispersed far away from the parent plant?
(i) To ensure the survival of the species
(ii) To avoid competition for sunlight
(iii) Because plants can move by themselves
(iv) To ensure plants obtain sufficient space for growth

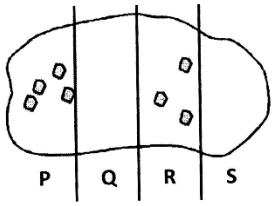
(a) (i) and (ii) only
(b) (iii) and (iv) only
(c) (i), (ii) and (iv) only
(d) (i), (ii), (iii) and (iv)

4. What happens after the given stage?



(a) The ovary splits open.
(b) Ovary develops into a fruit and ovules into seeds.
(c) The ovules are dispersed.
(d) Germination of seeds take place.

5. Abhi cut the potato into sections as shown below.

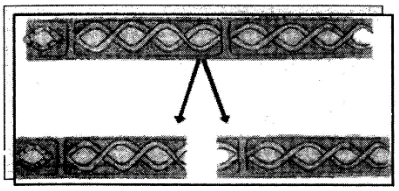


Which section(s) will NOT produce new plants?

(a) Ponly (b) Q and R on

(c) Q and S only (d) P and R only

6. Which type of reproduction is shown in the diagram given below?



(a) Binary fission (b) Fragmentation

(c) Sporulation (d) Bidding

7. The table given below shows the various ways in which plants reproduce.

Plants	Ways of Reproduction
Xanthium	Z
X	Spores
Potato	Y

Which of the following would you place in X, Y and Z?

	X	Y	Z
(a)	Seeds	Suckers	Spores
(b)	Maple	Eyes	Seeds
(c)	Mucor	Eyes	Seeds
(d)	Drumstick	Spores	Suckers

8. Which organism is described in the information given below?

(i) Respire anaerobically

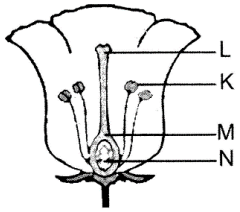
(ii) Used to make wine

(iii) Reproduces by budding

(a) Potato (b) Grapes

(c) Yeast (d) Mucor

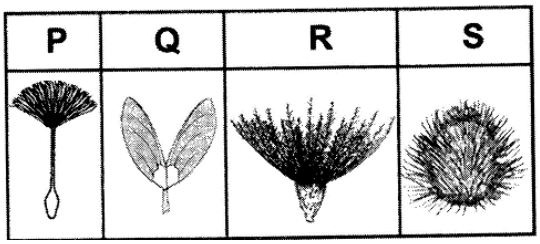
9. Which of the following parts of the flower shown below are the anther and stigma respectively?



(a) K, L (b) L, M

(c) M, N (d) N, K

10. Which of the following seeds is NOT dispersed by wind?



(a) P
(b) Q
(c) R
(d) S

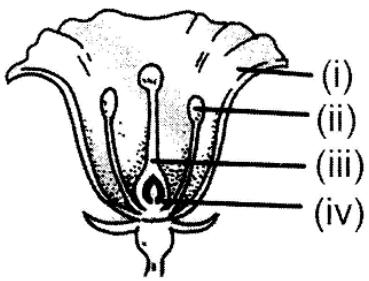
11. Arrange the sentences given below in order to describe the process of fertilisation.

W: The pollen tube grows down through the style reaches the ovary.
X: The pollen grain germinates on reaching the stigma.
Y: The male gamete moves into the ovule to fuse with the ovum.
Z: The pollen tube grows out from the pollen.
Which of these options are in the correct order?
(a) WXYZ
(b) XZWY
(c) YWZX
(d) WZXY

12. Which of these plants undergo vegetative reproduction?
(a) Tomato, lady's-finger, onion, cauliflower.
(b) Potato, ginger, onion, sugarcane.
(c) Cauliflower, onion, potato, tomato.
(d) Lady's-finger, onion, ginger, sugarcane.

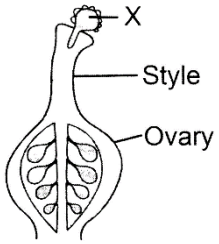
13. Which of the following is not a characteristic feature of wind pollinated flower?
(a) Flowers produce huge quantities of pollens.
(b) Petals are brightly coloured and showy.
(c) Pollen grains are light and non sticky.
(d) Stamens are well exposed.

14. Which of these coloured labelled part of the flower attracts bees and butterflies to help it to pollinate?



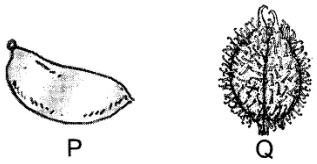
(a) (i)
(b) (ii)
(c) (iii)
(d) (iv)

15. The given figure illustrates a stage during reproduction in flowering plants.



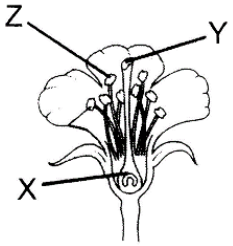
What is structure X?
(a) An ovule before pollination, but after fertilisation.
(b) An ovule before fertilisation, but after pollination.
(c) A pollen grain before pollination, but after fertilisation.
(d) A pollen grain before fertilisation, but after pollination.

16. Look at the diagram of fruits P and Q. Fruit P has thick and juicy flesh, fruit Q is covered with stiff hairs.



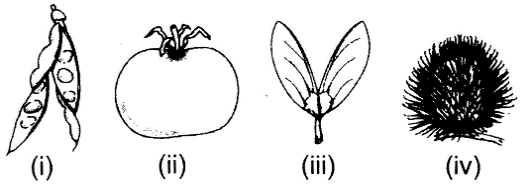
The fruits P and Q are likely to be dispersed by which of the following dispersal agents?
(a) Wind (b) Water
(c) Animals (d) Splitting

17. The diagram shows the structure of a flower.



Where do pollination and fertilization take place?
(a) Pollination - X; Fertilisation - Y
(b) Pollination - Y; Fertilisation - X
(c) Pollination - Y; Fertilisation - Z
(d) Pollination - Z; Fertilisation - Y

18. The box given below shows four different fruits.



Which two fruits are dispersed by animals?
(a) (i) and (ii)
(b) (i) and (iii)
(c) (ii) and (iv)
(d) (iii) and (iv)

19. Which of the following grow into a new plant in mushroom and mucor?
(a) Spores
(b) Roots
(c) Seeds
(d) Cuttings

20. Which of the following options define the term vegetative reproduction?
(a) Fertilization of stamens and stigma through pollen grains.
(b) Development of new plant from spores when favourable conditions are provided.
(c) Reproduction of new plants from any part of a plant other than the reproductive organs.
(d) Reproduction of a plant from reproductive organs.

21. Onions and gladiola grow from which of the following parts?
(a) Bulbs
(b) Roots
(d) Buds on the leaf margin
(d) Spores

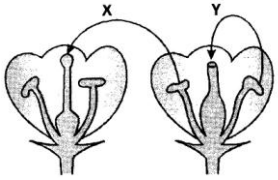
22. In potatoes, new plants grow from which of the following parts of the stems?
(a) Bulbs of the modified stems.
(b) Buds on the leaflets.
(c) Modified roots.
(d) Eyes of the modified stems.

23. Which of the following takes place during fertilisation in angiosperms?
(a) Fusion of two dissimilar flowers.
(b) Union of stamens of unequal length.
(c) Fusion of two dissimilar gametes.
(d) Fusion of two similar pores.

24. Bryophyllum grows from which of the following parts of a plant?
(a) Bulbs of the modified stems.
(b) Eyes on the tuberous roots.
(c) Outgrowths from the modified roots.
(d) Leaf buds on the modified leaves.

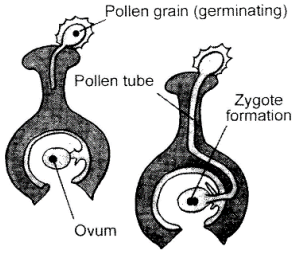
25. Which of the following constitute a pistil?
(a) Stigma, anther and ovary.
(b) Stigma, stamen and ovary.
(c) Pollen sac, style and ovule.
(d) Stigma, style and ovary.

26. Identify the process X and 'Y' the figure given below.



(a) X-cross pollination Y-self pollination
(b) X-self-pollination Y-cross pollination
(c) X-Dispersal Y-Fertilisation
(d) X-Germination, Y-Dispersion

27. The figure given below represents which of the following processes?



(a) Growth (b) Germination
(c) Fertilisation (d) Dispersion

28. Which of the following statements is true about sticky stigma?
(a) To produce scents to attract birds and insects.
(b) To hold pollen grain strongly.
(c) There is no known function.
(d) To attract bees.

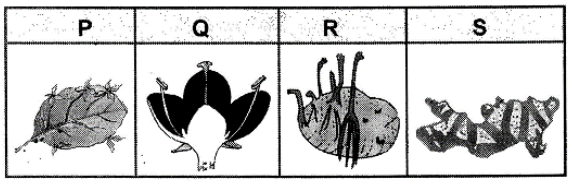
29. Which organism multiplication makes the dough to rise?
(a) Yeast (b) Mucor
(c) Moss (d) Mould

30. In which of the following modes of reproduction an individual produces offspring without the help of another individual?
(a) Sexual reproduction
(b) Hybridisation
(c) Fertilisation
(d) Asexual reproduction

31. A Moringa (drum stick) seeds are dispersed by wind due to the presence of which of the following features?
(a) Wings (b) Pappus
(c) Hairy tuft (d) All the above

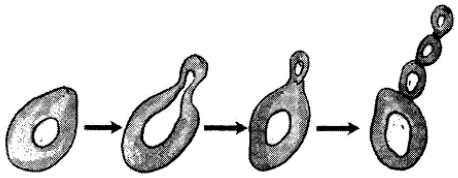
32. Which of the following dispersal mechanisms disperse xanthium seeds?
(a) Wind
(b) Animals
(c) Water
(d) Explosion mechanism

33. Which of the following labelled figure is/ are NOT an example of vegetative propagation?



(a) Ponly
(b) Q only
(c) R and S only
(d) P, Q and R only

34. Which of the following processes is represented by the figure given below?



(a) Fission in yeast
(b) Fragmentation in yeast
(c) Budding in yeast
(d) Spore formation in yeast

35. Which of the following are the characteristic feature of fruits dispersed by animals?
(a) Hooked and spiny (b) Dry and light
(c) Light and powdery (d) Unattractive

36. The female organ of a flower is called the pistil. Which of the following is not a part of the pistil?
(a) Stigma (b) Style
(c) Pollen grains (d) Ovary with ovules

37. The landing of pollen grains on the stigma marks the end of which of the following processes?
(a) Fertilisation (b) Pollination
(c) Ovulation (d) Germination

38. Which of the following is not a vegetatively propagated plant?
(a) Bryophyllum (b) Hibiscus
(c) Sugar cane (d) Cotton plant

39. Which of the following have fruits that have a parachute of hair called pappus?
(a) Maple and xanthium
(b) Madar and sunflower
(c) Balsam and beans
(d) Mango and coconut

40. Where does fertilisation occur in flowers?
(a) Stigma
(b) Style
(c) Ovary
(d) Pollen grain

Answers With Solution

1. (c) The given plant sugarcane reproduces by stem. Rose and hibiscus also reproduces by stem grafting.

2. (b) In the given figure P, Q and R forms Gynoecium or carpel.

3. (c) Seed dispersal help the plants to prevent overcrowding avoid competition for sunlight, water and minerals and to ensure the survival of the species.

4. (b) The given figure shows fertilization of male nucleus with egg cell. Fertilised egg is called zygote. Zygote develops into an embryo.

5. (c) Potato reproduces from eyes. In the given figure parts labelled Q and S do not have any scars or eyes. Hence these sections will not produce new plants.

6. (b) The figure given below represents fragmentation type of reproduction in Spirogyra.

7. (c) In the given table X - Mucor, Y – eyes and Z - seeds. Seeds, Mucor by spores and potato by eyes.

8. (c) Yeast reproduces by budding. It respires anaerobically and helps in fermentation.

9. In the given figure K-anther and L- stigma.

10. (d) In the given figures P, Q are R are pollinated by wind due to the presence of wings and hair. Whereas seed'S' consists of a hook like structure. It belongs to xanthium and is dispersed by means of animals

11. (b) After pollination, pollen grains germinate on stigmas and develops the pollen tube. The pollen tube grows and reaches the ovary and fuses with the egg by a process called fertilisation.

12. (b) Potato, ginger, onion and sugar cane reproduce by vegetative reproduction

13. Brightly coloured petals are useful for insect pollination

14. (a) Bright coloured petals attracts butterflies to help it to pollinate.

15. (d) In the given figure X represents the pollen grain after pollination and before fertilisation.

16. (c) The given fruits are fleshy and sticky. The fruits are dispersed by animals.

17. (b) In the given figure pollination takes place at stigma represented by Y and fertilisation in ovary represented by the letter X.

18. (c) In the given figures, figure labelled (ii) is juicy and figure labelled (iv) is with hooks. Both the fruits are dispersed by animals.

19. (a) Fungi reproduces by spores.

20. (c) Reproduction through the vegetative parts of the plant is called vegetative reproduction.

21. (a) Onion and gladiola grow from bulbs.

22. (d) In potatoes new plants grow from eyes of the modified stems.

23. (c) Fertilisation in angiosperms is the fusion of two dissimilar gametes.

24. (d) Buds on the leaf margins of bryophyllum grows into a new plant.

25. (d) Stigma, style and ovary constitute pistil.

26. (a) In the given figures X represents cross pollination and Y represents self-pollination.

27. (c) The given figure represents fertilisation.

28. (b) Stigma is sticky to hold pollen grain strongly.

29. (a) The rapidly producing yeast cells respire anaerobically and make the dough rise.

30. (d) Producing an offspring without the help of another individual is called sexual reproduction.

31. (a) Moringa or drumstick seeds have wings and their seeds are dispersed by means of wind.

32. (b) The seeds of xanthium are dispersed by animals

33. (b) Option represents or exhibits sexual representation

34. The given figure shows budding, a type of reproduction in yeast.

35. Fruits dispersed by animals are hooked and spiny.

36. (c) Pollen grains are male gametes.

37. (b) Landing of pollen grains on stigma is called pollination.

38. (d) Cotton plant undergoes sexual reproduction.

39. (b) Madar and sunflower fruits have a parachute of hair.

40. (c) Fertilisation occurs in ovary.