



BIOLOGY

BOOKS - ICSE

POLLINATION AND FERTILIZATION

Topic 1 1 Mark Questions

1. In Vallisneria, pollination takes place by the agency of :

A. Water

B. Wind

C. Birds

D. Insects

Answer: A



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2. Name the two kinds of pollination.



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3. Name the following:

Pollen of flower cannot reach the stigma of the same flower.



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4. Give scientific terms for the following:

Process of transfer of pollen from the anther to the stigma of the same flower or a different flower of the same species.



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5. Give an example for Dichogamy



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6. Give an example for Herkogamy



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7. Define geitonogamy.



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8. In which type of pollination new varieties are not produced?



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9. Give one example of ornithophilous flowers. Mention its two characters.



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Topic 1 2 Marks Questions

1. Choose the ODD one out from the following terms given and name the CATEGORY to which the others belong :

Heterostyly, Autogamy, Geitonogamy,
Xenogamy



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2. Mention two advantages of cross-pollination.



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3. State two advantage of self-pollination.



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4. State two disadvantages of cross pollination.



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5. Give two examples each of wind, water and insect pollinated flowers.



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6. Differentiate between protandry and protogyny conditions.



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Topic 13 Marks Questions

1. State the name of the chief pollinating agent of the following flowers:

Dahlia



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2. State the agents of pollination for the following .

Maize



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3. State the name of the chief pollinating agent of the following flowers:

Vallisneria



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4. Differentiate between the following pairs on the basis of what is given in the brackets :

Wind-pollinated flower and Insect-pollinated flower (Flower character).



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5. Mention any three contrivances in flowers which favour cross-pollination.



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6. Explain the Ornithophily



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7. Explain the Elephophily



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8. Explain the Anemophily



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9. The diagram given below represents a process occurring in a flower.

Answer the question that follow:



(i) Name the process and explain it.

(ii) Mention the agent involved in the above process.



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Topic 1 5 Marks Questions

1. Give appropriate biological/technical terms for the following:

Different timings of maturation of androecium and gynoecium.



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2. Give appropriate biological/technical terms for the following:

Pollination of a flower from the transfer of pollen of a flower to another plant of the same species.



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3. Give appropriate biological/technical terms for the following:

When stigma and anther of the flower grow at

different height and do not favour self pollination.



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4. Give appropriate biological/technical terms for the following:

Pollen of the same flower fail to germinate on the stigma of the same flower.



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5. Give appropriate biological/technical terms for the following:

The flower may be either male or female and they may be borne on separate plants.



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6. Complete the following paragraph by filling in the blanks (i) to (x) with appropriate words :

(i)___ is the process of transfer of (ii)___ from the anther to the stigma. The anthers of the

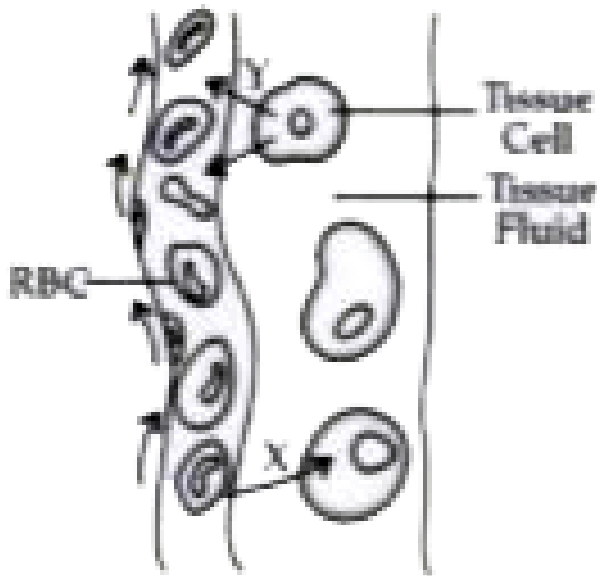
(iii)___ produce powdery particles called (iv)____. Each pollen grain contains (v)___ that participates in reproduction. To initiate the process of formation of (vi)____ and (vi)____ the pollen grain must first reach the (viii)____ . When pollen of the same flower falls on its own stigma, it is called (ix)____, whereas when pollen of another flower of the same plant falls on the stigma, it is called (x)_____.



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7. Given below is a diagram depicting a physiological process in man.

Study the same and answer the following questions :



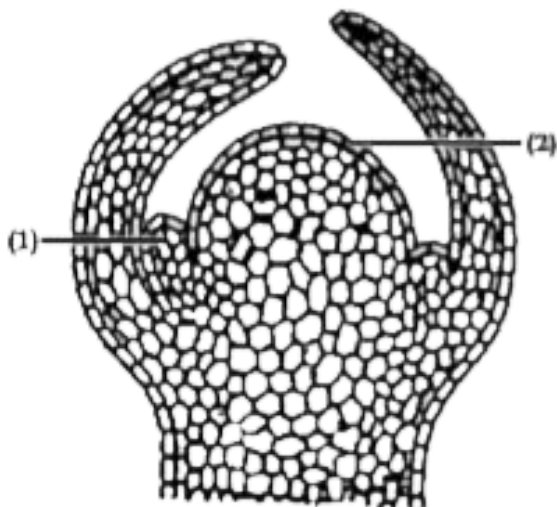
Name the process occurring in the diagram.

Explain the process mentioned in part (i).



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8. Study the diagram given below and answer the questions that follow :



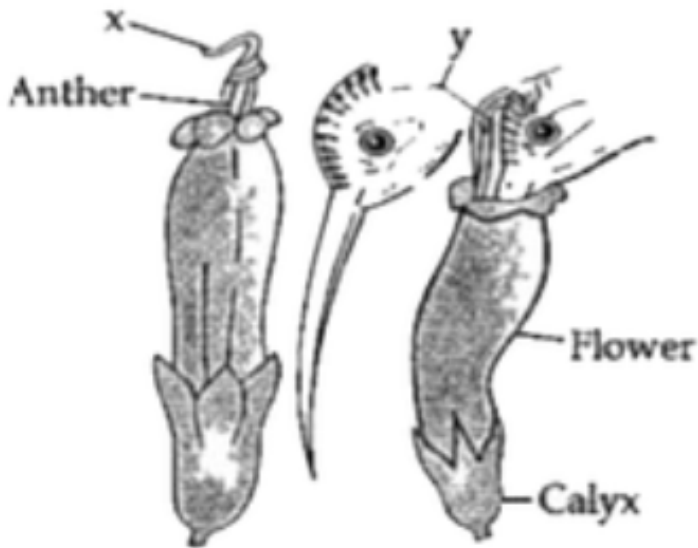
Label the parts numbered 1 and 2.



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9. Given below is a diagram depicting a physiological process in plants.

Study the same and answer the following questions :



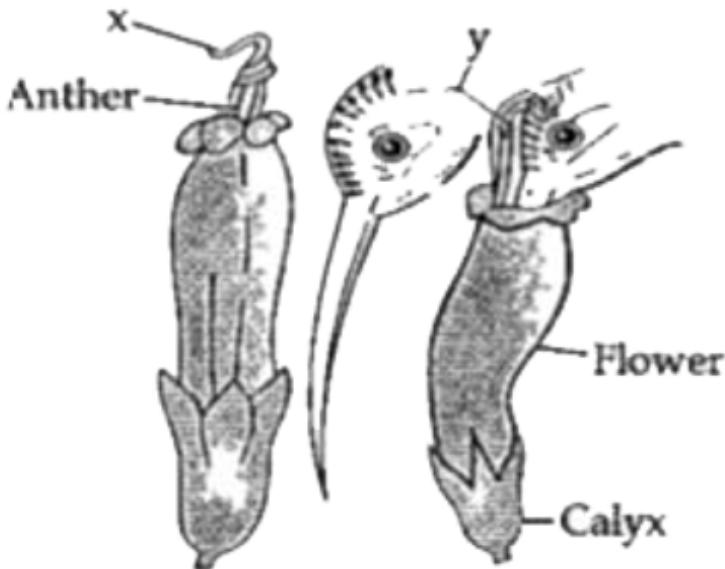
Write two adaptations of flowers showing this process.



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10. Given below is a diagram depicting a physiological process in plants.

Study the same and answer the following questions :



How does stigma trap the pollen?



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11. What are the advantages of the following in the flower to the plant concerned?

Fragrant nectar



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12. What are the advantages of the following in the flower to the plant concerned?

Long and feathery stigma



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13. What are the advantages of the following
in the flower to the plant concerned?

Protruding and easily movable anthers



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14. What are the advantages of the following
in the flower to the plant concerned?

Brightly coloured petals



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15. What are the advantages of the following in the flower to the plant concerned?

Smooth and light pollen.



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16. cross pollination and self pollination.



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Topic 2 1 Mark Questions

1. Exine and intine are the parts of

A. Embryo sac

B. Pollen grain

C. Stigma

D. Seed

Answer: b



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2. Give appropriate biological / technical terms for the following: A fruit that develops without fertilization.



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3. State the function of micropyle.



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4. How many cells are there in an embryo sac?



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5. What are the three cells at opposite end of micropylar end of embryo sac is called?



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6. Name the nucleus formed after the triple fusion.



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7. What is syngamy?



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8. Embryo sac is located in



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Topic 2 2 Marks Questions

1. Given below are sets of five terms each. Rewrite the terms in correct order in a logical sequence beginning with the term that is underlined.

Intine, Exine, Germ pore, Generative nucleus, Tube nucleus.



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2. Given below are sets of five terms each. Rewrite the terms in correct order in a logical

sequence beginning with the term that is underlined.

Pollen grain, Stigma, Embryo sac, Pollen tube,
Ovary



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3. Name the following :

Fusion of male gamete with two polar nuclei.



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4. Name the following :

Cell formed by the fusion of a male gamete with the egg cell.



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5. Double fertilization is



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6. Mention the exact location of Ovule



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7. Mention the exact location of Pollen grains



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8. What is the difference between a fruit and a seed?



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1. Which part of a flower gives rise to the seeds?



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2. The part of the flower that gives rise to the fruit is



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3. Name the parts of the ovary which give rise to Fruit wall.



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4. State differences between seed and ovule.



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5. Pollen tube enters the embryo sac usually



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6. What is the main function of pollen tube?

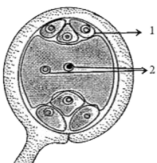
Expalin it with the help of a diagram.



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Topic 2 5 Marks Questions

1. Study the diagram given below and answer the questions that follows :

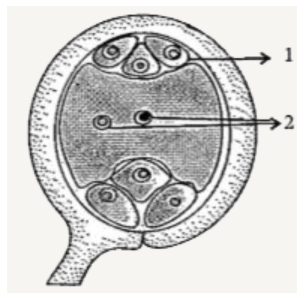


Identify the above structure and mention its location in a flower .



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2. Study the diagram given below and answer the questions that follows :



Label the parts numbered 1 and 2.



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3. Study the diagram given below and answer the questions that follows :

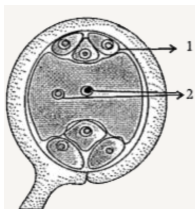


Explain the term .Double fertilisation..



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4. Study the diagram given below and answer the questions that follows :



What is the fate of the calyx and corolla after fertilizations?



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5. Study the diagram given below and answer the questions that follows :



Draw a neat, labelled diagram of a pollen grain.



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6. Study the diagram given below and answer the questions that follows :



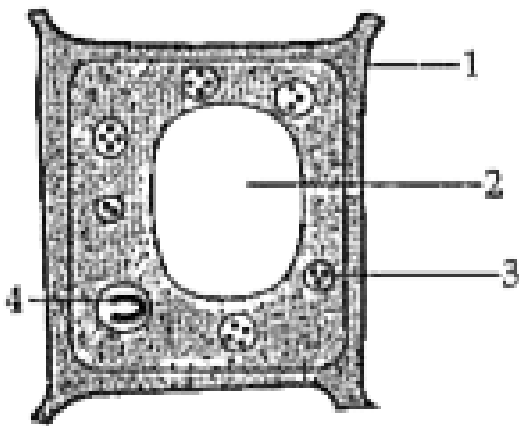
Name the structure shown and label its parts

.1., .2. and .4..



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7. Study the diagram given below and answer the questions that follow :



State the purpose of part labelled as 4.

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8. Study the diagram given below and answer the questions that follows :



Name the cells of the embryo sac.



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9. Study the diagram given below and answer the questions that follows :



Describe the function of micropyle.



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10. Study the diagram given below and answer the questions that follows :



What is the fate of ovule and ovary after fertilization?



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11. Study the diagram given below and answer the questions that follows :



Name the parts labelled 1,2,3,4 and 5



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12. Study the diagram given below and answer the questions that follows :

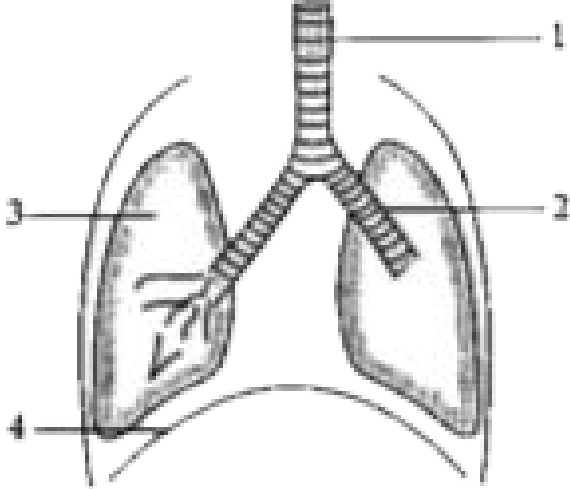


Where does the germination of the pollen grain takes place and how?



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13. Study the diagram given below and answer the questions that follow:



State the function of parts labelled as 3 & 4.



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14. Study the diagram given below and answer the questions that follows :



What happens to the part labelled .5. during the process?



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15. Given below is a diagrammatic representation of the process of fertilization. Study the same and then answer the questions that follow:

Name the parts labelled 1, 2, 3, 4, 5 and 6.



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16. Given below is a diagrammatic representation of the process of fertilization. Study the same and then answer the questions that follow:

What happens to (i) Ovary (ii) Ovule after fertilization?



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17. Given below is a diagrammatic representation of the process of fertilization. Study the same and then answer the

questions that follow:

What is the function of the synergids?



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18. Given below is a diagrammatic representation of the process of fertilization.

Study the same and then answer the questions that follow:

What part does the stigma play in the process

of fertilization ?



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