STEPPING STONE SCHOOL (HIGH)

CLASS :6

Subject: Biology
Topic: Answers to worksheets 7 , 8 and 9
Dated: 1/06/2020 , 3/06/2020, 5/06/2020

Answers to Worksheet No. :7

***Date* :1/06/2020**

Ans.1) Dry Fruit: When the pericarp of a fruit is dry it is known as **dry fruit**. Example all nuts such as Almond, Walnut etc.
Fleshy Fruit:When the entire pericarp or it's part becomes juicy and fleshy on ripening the fruit is called **fleshy fruit.** Example, mango, papaya

Ans.2) The pericarp in a fleshy fruit is divided into three parts:-

1. **Epicarp**:- It is the outer, thin, and leathery part which forms the tough , outer skin of the fruit.
2. **Mesocarp**:- It is the sweet, fleshy and edible part of the fruit.
3. **Endocarp**:- It is the inner hard and woody part of the fruit that usually contains seeds.

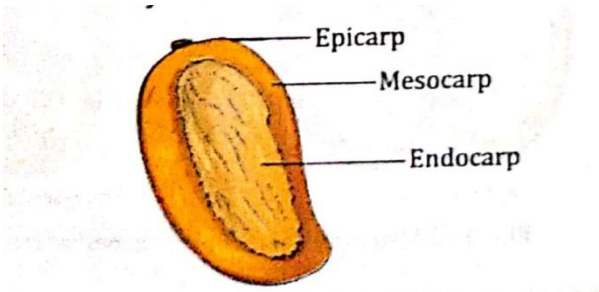


Fig. 2.10 Parts of a fruit (mango)

Ans.3) The three functions of a Fruit are as follows:-

- It protects the seeds from extreme environmental conditions.
- It stores food materials.
- It attracts birds and animals for dispersal of its seeds to far away places where in suitable climatic conditions these seeds grow into a new plant.

Ans.4)

- ***Simple fruits***:- These fruits develop from a single ovary e.g. cherry, mango, peach, pear
- ***Aggregate fruits***:- These fruits develop from a single flower which has many ovaries and each ovary gets fertilized separately e.g. strawberry and blackberry
- ***Multiple fruits***:- These fruits develop from a cluster of separate flowers borne on a single structure. e.g. pineapple and fig
- ***True fruit***:- This fruit develops from a mature and ripened ovary.E.g mango
- ***False fruit***:-This fruit develops from the other parts of the flower rather than the ovary. Example, apple because it does not develop from the flower but from the thalamus.

Ans.5)**:-** . The seed consists of the following parts:-

- ***Seed coat-*** It is the outer protective covering of the seed which protects rthe seed from external injury
- ***Hilum-*** It is a distinct small scar present on the seed coat.
- ***Micropyle-*** It is a tiny pore situated close to the hilum. It marks the opening through which the polen tube had entered the ovule.
- ***Cotyledons***-These are thick fleshy parts present below the seed coat. Cotyledons store food for the baby pant or ***embryo.***
- ***Embryo-*** It is a baby plant which contains two parts- ***radicle*** and ***plumule*** **.**The radical develops into root while the plumule develops into shoot.

Ans.6) **Germination of Seeds:-** The process by which the dormant embryo becomes active, grows and establishes itself as a seedling is called ***germination.***
Conditions necessary for germination:- The conditions necessary for germination of seeds are the sufficient ***water***, ***air***, and a suitable ***temperature.***

Ans.7)

Epigeal germination	**Hypogeal germination**
1.The cotyledons emerge above the ground.	1. The cotyledons remain underground.
2.Takes place mainly in dicot seeds.	2.Takes place mainly in monocot seeds.

Ans. 8) Diagram-based questions :-

- Part-1- style
- Part-2-stigma
- Part-3-anther
- Part-4-filament

- Part-5-ovary
- Part-6- ovule

b)The reproductive whorls of a flower are ***Androecium*** and ***Gynoecium***

Answers to Worksheet No 8

***DATe*:3/06/2020**

Q1) Choose the correct answer:-

1. Ovary
2. Pericarp
3. Seed coat
4. Two
5. Epigeal germination

Q2)Fill in the blanks with correct option.

1. Anther
2. Ovaries
3. Stigma and style
4. Insects
5. Ovule

Q3)State if the following statements are True or False. Correct the False statements.

1. False. The ovary is transformed into a fruit.
2. True
3. False. Most flowers have colourful **petals**.
4. True
5. False. A stamen has long stalk called **filament.**

Q4)Match the following:-

Column A	**Column B**
1.Style	a) Gynoecium
2. Stamens	b)Androecium
3.Fruit	c)Ripen ovary
4.Seed	d)Ovule
5.Epicarp	e) Outer skin of fruit

Q5) Choose the odd one out and give scientific reasons.

1. ***Anther*** is the odd one out because it is part of stamen and others are parts of carpel..
2. ***Androecium*** is the odd one out because it is the essential whorl of a flower whereas others are non essential whorl of a flower.
3. ***Self pollination*** is the odd one out because it does not require any agent whereas others depend on agents for pollination
4. ***Leaf*** is the odd one out because it is a part of plant whereas others are female parts of flowers.

5 .Root is the odd one out because it is the underground part of a plant and others are parts of flower.

Q6) Give one word answer for the following:-

1. Germination
2. Fruit

3. Mesocarp
4. Fertilisation
5. Epicarp

Q7) Answer the following question:-

Ans 1. Charecteristics of wind-pollinated flowers are as follows:-

1. *The pollen grains are dry and light.*
2. *They are produced in large quantity.*
3. *The flowers are small and not brightly coloured.*
4. *They do not produce scent or nectar.*

Ans.2

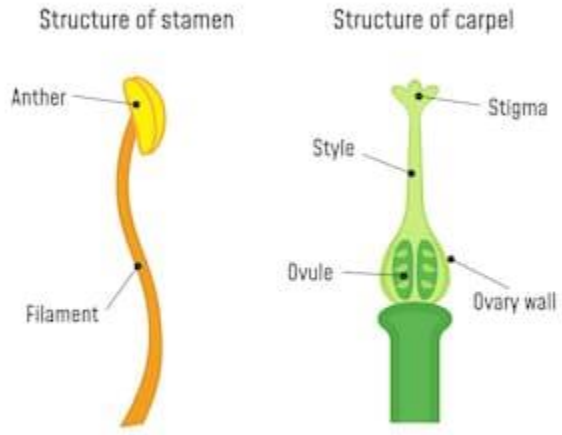
Part of a flower	**Changes that take place**
Petals	Dry up and fall off
Sepals	Often dries up and stay attached
Ovary	Fruit
Ovary wall	Fruit wall or pericarp
Ovule	seed
Stigma	Dry up and fall off
Anthers	Dry up and fall off

Ans.3 ***Structure of Androecium*** :- It consists of a collection of stamens. Each stamen has two main parts.

- A thin, long and narrow stalk called filament

Structure of Gynoecium:- It consists of a collection of carpels or pistils. Each carpel or pistil is composed of stigma, style or ovary.

- **Stigma** is the sticky disc-like structure on which the pollen grains land.
- **Style** is the long, narrow, thread like tube extending from the ovary.
- **Ovary** is the swollen part which contains small, round- shaped eggs called ovules.



Ans. 4

Dicot Seed	**Monocot Seed**
This type of seed has two cotyledon	This type of seed has only one cotyledon
e.g gram, beans	e.g. maize, rice

Ans.5

a. The pollen grains contain the male cells.
b. The stigma being sticky in nature traps the pollen grains which further grows into a pollen tube.
c. The female egg cell is present in the ovule.
d. The male cells travel through the pollen tube and pierces it's way into the ovule where the female egg cells are present.
e. The process of fusion of male gamete and the female gamete to form a single cell called zygote is known as fertilization.

Answers to worksheet No - 9

Date: 5/06/2020

Q1) Give one word answer for the following:-

1. Biotic component
2. Habitat
3. Adaptation
4. Gills
5. Terrestrial habitat

Q2) Answer the following questions:-.

1. The immediate or natural surroundings of an organism is called it's habitat. The benefit of a habitat is that it provides the living things with food, water and right kind of environment to live.
2. The leaves of submerged plants are ribbon shaped so that they can bend with the flowing water without bending.
3. The adaptive features of fish for aquatic habitat are:
    - Thet have streamlined body which offers minimum resistance against water.
    - They have an air bladder which help them to float in water.
    - They breathe in dissolved oxygen through gills.
    - The body is covered with protective scales and a layer of mucous which makes the body waterproof.

4. The adaptive features of fixed plants are as follows:-
    - Roots are fixed in the soil at the bottom of the pond.
    - They have plate- like leaves that float over te surface of water.
    - The stomata are present on the upper side of the leaf.
    - The leaves have waxy coating to make them waterproof.
    - The stems are hollow ,light and flexible.

5.

Floating plant	**Submerged plant**
1. Have flat, floating leaves to collect maximum sunlight.	1.Have flat, thin ribbon- like leaves that can easily bend with the flowing water without getting damaged.
2.These plants float on the surface of water.	These plants remain fixed below the surface of water.