
	INDIAN SCHOOL AL WADI AL KABIR	
CLASS: XI	DEPARTMENT: SCIENCE 2023-2024 SUBJECT: BIOLOGY	DATE OF SUBMISSION: SECOND WEEK OF NOVEMBER
WORKSHEET WITH ANSWERS	CHAPTER: MORPHOLOGY OF FLOWERING PLANTS	NOTE: A4 FILE FORMAT
NAME OF THE STUDENT	CLASS & SEC:	ROLL NO.

MULTIPLE CHOICE QUESTIONS (1M)

Q1. The following diagram can represent the position of the ovary in:



- a) Brinjal
- b) Guava
- c) Rose
- d) Mustard

Q2. Roots that grow from any other part of the plant other than the radicle are called.

- (a) taproots
- (b) adventitious roots
- (c) prop roots
- (d) epiphytic root

Q3. A large globular root that tapers sharply at the lower end is called

- (a) fusiform
- (b) napiform
- (c) conical
- (d) tuberous

Q4. Massive aerial roots present in a Banyan tree is

- (a) fibrous
- (b) respiratory
- (c) epiphytic
- (d) prop roots

Q5. The roots of the parasitic plant *Cuscuta* are of

- (a) climbing
- (b) prop or stilt
- (c) mycorrhizal
- (d) haustoria

Q6. Ginger is an example of

- (a) rhizome
- (b) bulb
- (c) corm
- (d) tuber

Q7. A long green stem with long internodes growing horizontally on the soil surface is called

- (a) runner
- (b) sucker
- (c) stolon
- (d) offset

Q8. When the leaflets are joined together at a common point at the petiole, the leaf is

- (a) simple leaf
- (b) pinnately compound leaf
- (c) palmately compound leaf
- (d) a branch

Q9. Phyllotaxy refers to an arrangement of

- (a) phloem in a vascular bundle
- (b) leaves on a branch
- (c) veins in a leaf
- (d) axillary buds in a plant

Q10. A flower that has only stamens is called.

- (a) unisexual flower
- (b) bisexual flower
- (c) complete flower

(d) neuter flower

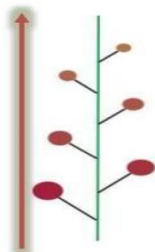
CASE STUDY

Q11. A flower is a modified shoot wherein the shoot apical meristem changes to floral meristem. The apex produces different kinds of floral appendages laterally at successive nodes instead of leaves. When a shoot tip transforms into a flower, it is always solitary. The arrangement of flowers on the floral axis is termed as inflorescence.

Depending on whether the apex gets developed into a flower or continues to grow, two major types of inflorescences are defined – racemose and cymose. In racemose type of inflorescences, the main axis continues to grow, the flowers are borne laterally in an acropetal succession. In cymose type of inflorescence the main axis terminates in a flower, hence is limited in growth. The flowers are borne in a basipetal order.

The flower is the reproductive unit in the angiosperms. It is meant for sexual reproduction. A typical flower has four different kinds of whorls arranged successively on the swollen end of the stalk or pedicel, called thalamus or receptacle.

1. Identify the type of inflorescence in the figure given below.



- a) Racemose
- b) Cymose
- c) Basipetal
- d) Solitary

2. The main function of the flower is:

- a) To produce nectar
- b) Vegetative growth
- c) Sexual reproduction
- d) Aesthetic beauty.

3. The stage on which the flower is placed is called the
- a) Pedicel
 - b) Receptacle
 - c) Calyx
 - d) Stigma
4. The accessory whorls that are indirectly helping in the function of reproduction are
- a) Corolla and Calyx
 - b) Androecium-filament and anther
 - c) Gynoecium-ovary, style, and sigma
 - d) Anther and Ovary
5. All incomplete flowers are unisexual.
- a) True
 - b) False

SHORT ANSWER TYPE QUESTIONS(2M)

Q12. Which part of Opuntia are modified to form spines?

Q.13. Name one plant in which leaves are pinnately compound.

Q.14. Which part of mango fruit is edible?

Q15. What is the name given to the cotyledon in case of monocots?

Q16. What is Placentation?

Q17. What is false fruit?

LONG ANSWER TYPE QUESTIONS (3M)

Q18. Differentiate between true fruit & false fruit.

Q19. How would you differentiate leaflets of a compound leaf from simple leaves on a branch?

Q20. Draw a well-labelled diagram of V.S. of maize seed.

Q21. Describe the parts of a typical dicot seed?

VERY LONG ANSWER TYPE QUESTIONS (5M)

Q22. Mention the role of cotyledons and endosperm in seed germination.

Q23. Describe a flower and its several parts.

Q24. Ques. Differentiate between racemose inflorescence and cymose inflorescence.

ANSWER KEY

- A1. (c) Rose
A2. (b) adventitious roots
A3. (b) napiform
A4. (d) prop roots
A5. (d) haustoria
A6. (a) rhizome
A7. (a) runner
A8. (c) palmately compound leaf
A9. (b) leaves on a branch
A10. (a) unisexual flower
A11. 1. Racemose
2. Reproduction
3. Pedicel
4. Calyx and corolla
5. True
A12. Leaves
A.13. Neem
A.14. Mesocarp of the mango fruit.
A15. Scutellum.
A16. Placentation refers to the arrangement of the ovule within the ovary.
A17. A false fruit is derived when the floral parts other than the ovary takes part in the formation of fruit and becomes edible. It is also known as the pseudocarp or accessory fruit.
Ans18: The below-given table shows the difference between true fruit and false fruit:-

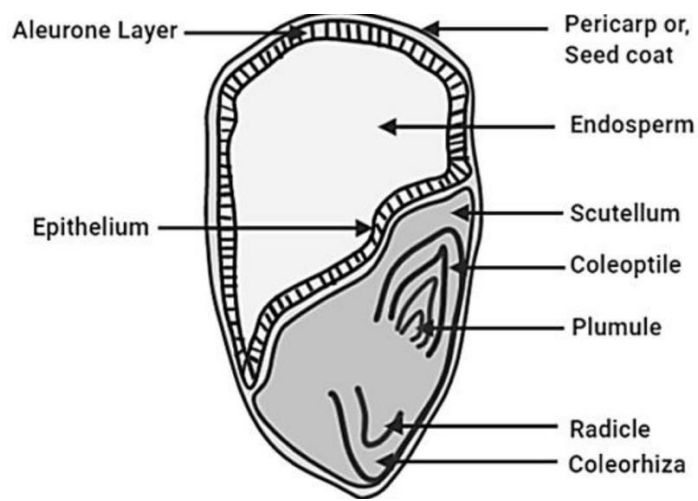
<u>True Fruit</u>	<u>False Fruit</u>
1. It arises from the ovary.	1. It arises from floral parts other than the ovary.
2. No other part is involved in the formation of fruit.	2. Thalamus and perianth are involved in fruit formation.
3. for example: Pea	3. For example: Apple

A19: The difference between the leaflets of a compound leaf and simple leaves on a branches are:

<u>SIMPLE LEAF</u>	<u>COMPOUND LEAF</u>
1. there are no distinct lobes or leaflets in the lamina.	1. the lamina is made up of two or more leaflets.
2. A Simple leaf has an axillary bud in its axil.	2. The entire leaf has a bud in the axil.

3. Simple leaves grow in acropetal succession on the stem.	3. The leaflets of a compound leaf are not arranged in acropetal succession.
4. The base of the simple leaf may have stipules.	4. Stipules may be present at the base of the compound leaf.
5. Simple leaves appear in one or more planes.	5. Leaves in a compound leaf only exist in one plane only.

A20.



A21. Dicot seed: Refer to NCERT, dicot seed diagram.

A22. The cotyledons and endosperm store food material. The seed imbibes water and activates the enzyme. These enzymes hydrolyze the reserve food material and provide it to the germinating seed.

Ans23. A flower is a reproductive unit of flowering plants.

- It carries out sexual reproduction and acts as a modified stem with a condensed axis.
- A flower has 4 different parts: calyx, corolla, **androecium**, and gynoecium.
- A unisexual flower contains either androecium or gynoecium, and a bisexual flower typically contains both androecium and gynoecium.
- Corolla and calyx are generally distinct but may be fused into forming a structure called a perianth.
- The flower that contains all 4 of the floral parts is called a complete flower.

The parts:

- **Calyx:** This forms the outermost whorl of a flower containing sepals. It is a green leafy structure that covers and protects the flower during its bud stage.
- **Corolla:** This is a layer that lies inside the calyx. It contains beautifully coloured petals, which help to attract insects for pollination.
- **Androecium or stamen:** This is the male reproductive part of a flower and consists of two parts: the filament and bilobed anther. The bilobed anther holds pollen grains which produce male gametes for reproduction.
- **Gynoecium:** This is the female reproductive part of a flower. It consists

Racemose Inflorescence	Cymose Inflorescence
Younger flower is present at the tip and older flower is present at the base, in an arrangement called acropetal succession.	Younger flower is present at the base while the older flower exists at the tip in an arrangement called basipetal succession.
The main axis in racemose inflorescence continues to grow and give flowers laterally.	The main axis in cymose inflorescence has limited growth, and later terminates into a flower.

of an ovary which is connected to the stigma by a long tube called style. Ovary bears numerous ovules attached to the [placenta](#).

A24. **Inflorescence** is the complete arrangement of stems, stalks, bracts, and flowers on a flower head.

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