

	INDIAN SCHOOL AL WADI AL KABIR	
<b>Class: XI</b>	<b>Department: SCIENCE 2021 - 22</b> <b>SUBJECT: BIOLOGY</b>	<b>Date of submission:</b> <b>29.08.2021</b>
<b>Worksheet No: 04</b> <b>WITH ANSWERS</b>	<b>MORPHOLOGY OF FLOWERING PLANTS</b>	<b>Note:</b> <b>A4 FILE FORMAT</b>
<b>NAME OF THE STUDENT</b>	<b>CLASS &amp; SEC:</b>	<b>ROLL NO.</b>

Read the passage carefully and answer the Questions that follows

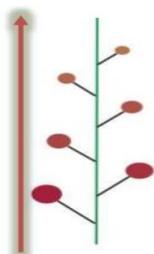
**CASE STUDY: FLOWER & INFLORESCENCE.**

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

**MCOs (One-mark question)**

1.———— are the non-essential parts of a flower

- a. Androecium and gynoecium
- b. Sepals and carpels
- c. Sepals and petals
- d. Sepals and androecium

2.In racemose, flowers are arranged in:

- a. Acropetal order
- b. Centrifugal order
- c. Centripetal order
- d. Basipetal order

3. Axis of inflorescence is:

- a. Pedicel
- b. Peduncle
- c. Petiole
- d. All

4. Diadelphous condition is related to:

- a. Androecium
- b. Gynoecium
- c. Inflorescence
- d. All

5. Androecium is a whorl of:

- a. Anthers
- b. Stamens
- c. Filaments
- d. Tepals

6. Syncarpous gynoecium has two or more:

- a. Free carpels
- b. Fused carpels
- c. Free ovaries
- d. All

7. A typical lower with superior ovary and other floral part inferior is called:

- a. Polygamous
- b. Hypogynous
- c. Perigynous
- d. Epigynous

8. Arrangement of ovules within the ovary is called

- a. Aestivation
- b. Placentation
- c. Both 1 and 2
- d. None

9. When gynoecium is present in the top most position of thalamus, the ovary is known as:

- a. Inferior
- b. Half Inferior
- c. Half Superior
- d. Superior

10. Placentation in Solanaceae is:

- a. Parietal
- b. Marginal
- c. Axile
- d. Basal

11. Keel is the characteristic features of:

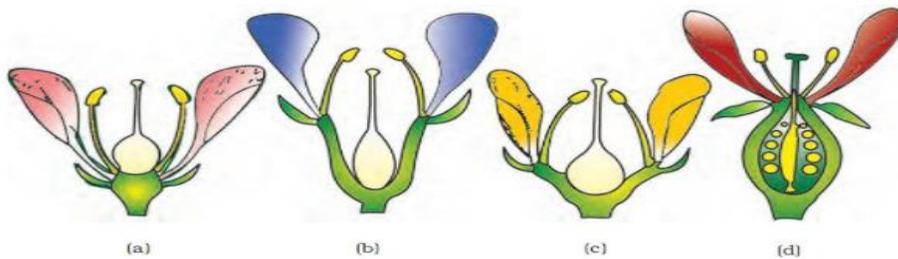
- a. Tulip
- b. Peas and beans
- c. Aloe
- d. Tomato

12. The tissue which attaches the ovules inside the ovary is:

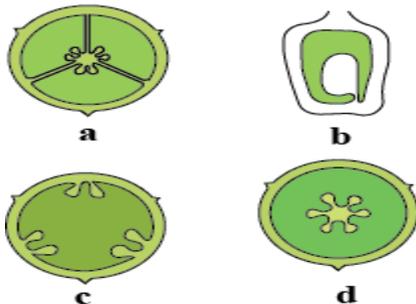
- a. Funicle
- b. Hilum
- c. Placenta
- d. Chalaza

### TWO MARK QUESTIONS

1. Identify the position of the floral parts on the thalamus as shown in the diagram below.



2. Identify the types of placentation as shown in the diagram below.



### THREE MARKS QUESTION

**Q.1. Name the floral parts of an angiosperm. Also, mention their arrangements.**

**A.1.** Following are the floral parts of a typical angiosperm:

- **Calyx-** Outermost whorl of the flower. It comprises of sepals. They are usually green and protective.
- **Corolla-** It comprises of petals. These are bright in colour.
- **Androecium-** It is made up of stamens which is the male reproductive organ. It consists of a filament and anther.
- **Gynoecium-** It is the female reproductive part of the flower and is made up of one or more carpels. Each carpel comprises of stigma, style, and ovary.

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### **FIVE MARKS QUESTIONS**

**Q.1.**What is aestivation, Explain the types with diagrammatic representation and any one example.

**Q.2.**What is Placentation, Explain the types with diagrammatic representation and any one example.

**(For answer refer to the notes)**

**Answer key (MCQs)**

<b>1-c</b>	<b>2-a</b>	<b>3-b</b>	<b>4-a</b>	<b>5-b</b>	<b>6-b</b>
<b>7-b</b>	<b>8-b</b>	<b>9-d</b>	<b>10-c</b>	<b>11-b</b>	<b>12-c</b>

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