

## Morphology of Flowering Plants

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### I. Select the correct answer from the following questions:

Question 1.

Which one of the following is not a characteristic of root?

- (a) Absence of buds
- (b) Presence of chlorophyll
- (c) Presence of root cap
- (d) Presence of Unicellular hair

▼ [Answer](#)

Answer: (b) Presence of chlorophyll

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Question 2.

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

- (a) Tap roots
- (b) Adventitious roots
- (c) Modified roots
- (d) Aerial roots

▼ [Answer](#)

Answer: (b) Adventitious roots.

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Question 3.

The place on stem or branch from where one or more leaves arise is called

- (a) Apex
- (b) Bud
- (c) Internode
- (d) Node

▼ [Answer](#)

Answer: (d) Node

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Question 4.

Which one of the following underground, fleshy structure is a stem?

- (a) Carrot
- (b) Potato
- (c) Turnip
- (d) Sweet Potato

▼ [Answer](#)

Answer: (b) Potato

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Question 5.

Phyllode is a modification of

- (a) Root
- (b) Flower
- (c) Petiole
- (d) Bud

▼ [Answer](#)

Answer: (c) Petiole

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Question 6.

Potato tubers are formed at the tips of

- (a) Primary roots
- (b) Adventitious roots
- (c) Petiole
- (d) Stolons

▼ [Answer](#)

Answer: (d) Stolons

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Question 7.

Mesocarp and endocarp is the edible part of the fruit of

- (a) Apple
- (b) Mango
- (c) Banana
- (d) Litchi

▼ [Answer](#)

Answer: (c) Banana

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Question 8.

Drupe is recognised by

- (a) Stony mesocarp
- (b) Fleshy seed coat
- (c) Thin seed coat
- (d) Stony endocarp

▼ [Answer](#)

Answer: (d) Stony endocarp

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Question 9.

What do you eat in coconut?

- (a) Mesocarp
- (b) Fruit wall
- (c) Entire seed
- (d) Embryo

▼ [Answer](#)

Answer: (c) Entire seed

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Question 10.

The positions of shoot apex in monocot embryo is

- (a) Lateral
- (b) Basal
- (c) Sub-terminal
- (d) Terminal

▼ [Answer](#)

Answer: (a) Lateral

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Question 11.

In which one of the following plants the oil is stored in endosperm

- (a) Coconut
- (b) Ground nut
- (c) Sesame
- (d) Soyabean

▼ [Answer](#)

Answer: (a) Coconut

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Question 12.

In maize, the flower are

- (a) Bisexual
- (b) Unisexual but on the same plant
- (c) Absent
- (d) Unisexual but on different plants

▼ [Answer](#)

Answer: (b) Unisexual but on the same plant

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Question 13.

Epipetalous is condition of

- (a) Aestivation of petal
- (b) Placentation
- (c) Stamens
- (d) Position of ovary

▼ [Answer](#)

Answer: (c) Stamens

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Question 14.

A characteristic of angiosperm is

- (a) Flower
- (b) Root
- (c) Seed
- (d) All of these

▼ [Answer](#)

Answer: (d) All of these

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Question 15.

An aspect of flower shown in floral formula but not in floral diagram is

- (a) Aestivation
- (b) Floral symmestry
- (c) Position of ovary
- (d) Cohesion of floral parts

▼ [Answer](#)

Answer: (c) Position of ovary

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Question 16.

In grass and banyan tree these are roots arising from parts of the plant other than the radicle, these are called

- (a) Adventitious roots
- (b) Fibrous root system
- (c) Tap root system
- (d) Tertiary root system

▼ [Answer](#)

Answer: (a) Adventitious roots

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Question 17.

In some leguminous plants the leaf base may become swollen, which is called the

- (a) Pulvinus
- (b) Lamina
- (c) Petiole
- (d) Leaf base

▼ [Answer](#)

Answer: (a) Pulvinus

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Question 18.

The arrangement of flowers on the floral axis is termed as

- (a) Inflorescence
- (b) racemose
- (c) cymose
- (d) thalamus

▼ [Answer](#)

Answer: (a) Inflorescence.

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Question 19.

When the floral appendages are in multiple of 3,4 or 5 respectively, a flower may be

- (a) Trimerous
- (b) Teramerous
- (c) Pentamerous
- (d) All of these types

▼ [Answer](#)

Answer: (d) All of these types

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Question 20.

A sterile stamen is called

- (a) Staminode
- (b) Stigma
- (c) Apocarpous
- (d) Syncarpous

▼ [Answer](#)

Answer: (a) Staminode

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## II. Fill in the blanks

Question 1.

Solanaceae is a large family, commonly called as the '.....'

▼ [Answer](#)

Answer: Potato family

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Question 2.

Fabaceae family was earlier called ....., a sub family of family .....

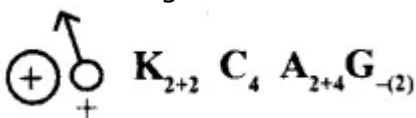
▼ [Answer](#)

Answer: Papilonoideae, Leguminosae

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Question 3.

The following floral formula represents the ..... (Family: Brassicaceae)



▼ [Answer](#)

Answer: mustard plant

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Question 4.

In the floral formula, 'K' for ..... 'P' for ..... 'A' for .....

▼ [Answer](#)

Answer: calyx, perianth, androecium

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Question 5.

The outer covering of endosperm separates the embryo by a layer called .....

▼ [Answer](#)

Answer: aleurone layer

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Question 6.

The embryo consists of one large and shield shaped cotyledon known as ..... and a short axis with a ..... and a radicle

▼ [Answer](#)

Answer: scutellum, Plumule

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Question 7.

Above the hilum, is a small pore called the .....

▼ [Answer](#)

Answer: Micropyle

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Question 8.

If a fruit is formed without fertilisation of the ovary, it .....

▼ [Answer](#)

Answer: Parthenocarpic fruit.

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Question 9.

The calyx is the outer most whorl of the flower and members are called .....

▼ [Answer](#)

Answer: Sepals

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Question 10.

If gynoecium is situated in the centre and other parts of the flower are located on the rim of the thalamus almost at the same level, it is called .....

▼ [Answer](#)

Answer: Perigynous

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Question 11.

Flowers with bracts, reduced, leaf found in flower are called ..... and those without bracts, .....

▼ [Answer](#)

Answer: bracteate, ebracteate.

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Question 12.

In symmetry, the flower may be ..... or .....

▼ [Answer](#)

Answer: actinomorphic (regular), zymomorphic (bilateral)

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Question 13.

A flower having only stamens or carpel is .....

▼ [Answer](#)

Answer: unisexual

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Question 14.

..... is the pattern of arrangement of leaves on the stem or branch.

▼ [Answer](#)

Answer: Phyllotaxy

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Question 15.

When the incisions of the lamina reach up to the midrib breaking it into a number of leaflets, the leaf is called .....

▼ [Answer](#)

Answer: compound

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### III. Mark the statements True (T) or False (F):

Question 1.

The study of external features of plants is known as external morphology and that of internal features as anatomy.

▼ [Answer](#)

Answer: True

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Question 2.

The knowledge of external morphology of flowering plants is not essential for the study of all

branches of botany.

▼ [Answer](#)

Answer: False

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Question 3.

The root is covered at the apex by a thimble-like structure called the not cap

▼ [Answer](#)

Answer: True

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Question 4.

A few millimetre above the root cap is the region of meristematic activity.

▼ [Answer](#)

Answer: True

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Question 5.

Tap roots of carrot, turnip and adventitious roots of sweet potato, get swollen and store food.

▼ [Answer](#)

Answer: True

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Question 6.

The main function of the stem is spreading out branches bearing leaves, flowers and fruits. It conducts water, minerals and photosynthates.

▼ [Answer](#)

Answer: True

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Question 7.

Underground stems of potato, ginger, turmeric, zaminkand modify to store food in them.

▼ [Answer](#)

Answer: True

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Question 8.

A typical leaf consists of three main parts: Leaf base, petiole and lamina.

▼ [Answer](#)

Answer: True

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Question 9.

In some leguminous plants the leafbase may become swollen, which is called the pulvinus.

▼ [Answer](#)

Answer: True

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Question 10.

The lamina or the leaf blade is the green expanded part of the leaf with veins and veinlets.

▼ [Answer](#)

Answer: True

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Question 11.

Veins provide rigidity to the leaf blade and act as channels of transport for water, minerals and food materials.

▼ [Answer](#)

Answer: True

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Question 12.

Leaves are often modified to perform functions other than photosynthesis. They are converted into tendrils for climbing as in peas, or into spines for defence as in cacti.

▼ [Answer](#)

Answer: True

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Question 13.

Calyx and corolla are accessory organs, while androecium and gynoecium are reproductive organs.

▼ [Answer](#)

Answer: True

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Question 14.

When a flower has both androecium and gynoecium, it is termed as bisexual.

▼ [Answer](#)

Answer: True

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Question 15.

A flower is asymmetric or irregular, if it cannot be divided into similar halves by any vertical plane passing through the centre as in canna.

▼ [Answer](#)

Answer: True

#### IV. Match the items of Column I

##### Column I

- (a) External features of plants
- (b) Internal features of plants
- (c) The stems of maize and sugar cane have supporting roots coming out of the lower portion of
- (d) The primary roots and its branches constitute the
- (e) Help to get oxygen for respiration
- (f) Internodes are the portions
- (g) Thorns are found in many plants
- (h) Some leguminous plants the leaf-base may become swollen
- (i) The leaflets are attached at a common points i.e. at the tip of petiole as in
- (j) Androecium and gynoecium are
- (k) Each flower normally has four floral whorls viz.
- (l) Corolla is composed of
- (m)  $\begin{matrix} 7 \\ \nearrow \\ \text{O} \\ \perp \end{matrix} \text{K}_5 \text{C}_{1+2+(2)} \text{A}_{(9)+1} \text{G}_1$
- (n) A floral diagram provides
- (o) In alternate type of phyllotaxy, a single leaf arises at each node in alternate manner.

##### Column II

- 1. Pneumatophores
- 2. such as citrus, bongainvillea
- 3. between two nodes.
- 4. external morphology
- 5. Pulvinus
- 6. silk cotton
- 7. reproductive organs.
- 8. calyx, corolla, and androecium and gynoecium
- 9. petals
- 10. Fabaceae
- 11. information about the
- the number of parts of a flower
- 12. as in china rose, mustard and sun flower plants.
- 13. stilt roots
- 14. Tap root system
- 15. anatomy

#### ▼ Answer

Answer:

- (a) → 4
- (b) → 15
- (c) → 13
- (d) → 14
- (e) → 1
- (f) → 3
- (g) → 2
- (h) → 5
- (i) → 6
- (j) → 7
- (k) → 8
- (l) → 9
- (m) → 10

(n)  $\rightarrow$  11  
(o)  $\rightarrow$  12

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