

India's Number 1 Education App

BIOLOGY

BOOKS - FULL MARKS BIOLOGY (TAMIL ENGLISH)

TAXONOMY AND SYSTEMATIC BOTANY

Textbook Evaluation Questions Solved Multiple Choice Questions Specimen derived from non-original collection serves as the nomenclatural type, when original specimen is missing. It is known as.

A. Holotype

B. Neotype

C. Isotype

D. Paratype

Answer:





2. Phylogenetic classification is the most favoured classification because it reflects

A. Comparative Anatomy

B. Number of flowers produced

C. Comparative cytology

D. Evolutionary relationships

Answer:



3. The taxonomy which involves the similarities and dissimilarities among the immune system of different taxa is termed as

A. Chemotaxonomy

B. Molecular systematics

C. Serotaxonomy

D. Numerical taxonomy

Answer:



4. Which of the following is a flowering plant with nodules containing filamentous nitrogen fixing micro-organisms?

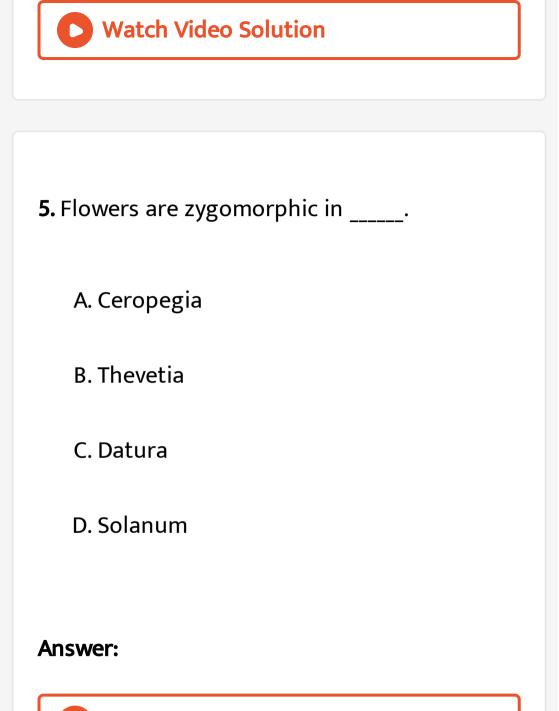
A. Crotalaria juncea

B. Cycas revoluta

C. Cicer arietinum

D. Casuarina equisetifolia

Answer:



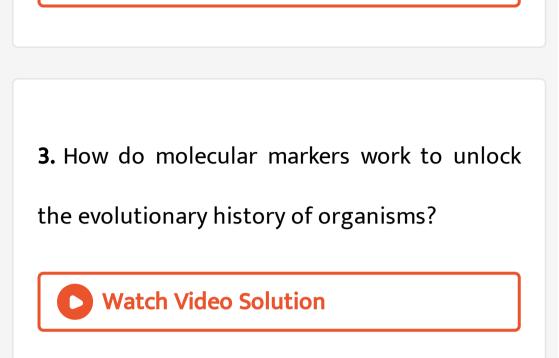
Textbook Evaluation Questions Solved

1. What is the role of national gardens in conserving biodiversity-discuss

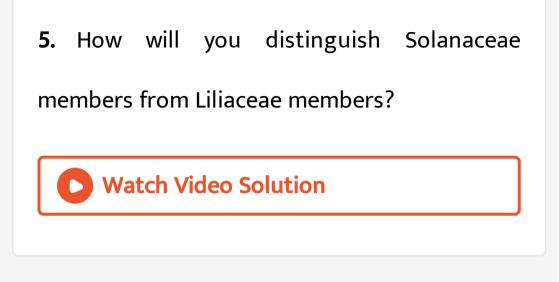
Watch Video Solution

2. Where will you place the plants which contain two cotyledons with cup shaped thalamus?





4. Give the floral characters of Clitoria ternatea.



Textbook Activities Solved

1. Write common name and scienctific name of

10 different plants around your home.

- 2. Can you identify this?
- (a) Name the family
- (b) Write the binomial
- (c) List the economic uses





Entrance Examination Questions Solved Choose The Correct Answer

1. Leaves are modified into spines in ____

A. Silk Cotton

- B. Opuntia
- C. Pea
- D. Onion

Answer:



2. Keel is the characteristic feature of flower of

A. Tomato

B. Tulip

C. Indigofera

D. Aloe

Answer:

Watch Video Solution

3. Perigynous flowers are found in

A. Rose

B. Guava

C. Cucumber

D. China rose

Answer:



4. Which one of the following statements is correct?

A. The seed in grasses is not endospermic

B. Mango is a parthenocarpic fruit

present in maize grain

D. A sterile pistil is called a staminode

Answer:

Watch Video Solution

5. An example of edible underground stem is

A. Carrot

B. Groundnut

C. Sweet potato

D. Potato

Answer:



6. Placenta and pericarp are both edible portions in

A. Apple

B. Banana

C. Tomato

D. Potato

Answer:



7. When the margins of sepals or petals overlap one another without any particular direction, the condition is termed as

A. Vexillary

B. Imbricate

C. Twisted

D. Valvate

Answer:

Watch Video Solution

8. An aggregate fruit is one which develops

from

A. Multicarpellary syncarpous gynoecium

B. Multicarpellary apocarpous gynoecium

C. Complete inflorescence

D. Multicarpellary superior ovary

Answer:

Watch Video Solution

9. Non-albuminous seed is produced in

A. Maize

B. Castor

C. Pea

D. Wheat

Answer:



10. Seed coat is not thin, membranous in

A. Coconut

B. Groundnut

C. Gram

D. Maize

Answer:

Watch Video Solution

11. In china rose the flower are

A. Actinomorphic. Epigynous with valvate

aestivation

B. Zygomorphic, hypogynous with

imbricate aestivation

C. Zygomorphic, epigynous with twisted

aestivation

D. Actinomorphic, hypogynous with twisted

aestivation

Answer:

Watch Video Solution

12. Placentation in tomato and lemon is

A. Marginal

B. Axile

C. Parietal

D. Free central

Answer:

Watch Video Solution

13. Vexillary aestivation is characteristic of the

family

A. Solanaceae

- B. Brassicaceae
- C. Fabaceae
- D. Asteraceae

Answer:

Watch Video Solution

14. Phyllode is present in

A. Australian Acacia

B. Opuntia

C. Asparagus

D. Euphorbia

Answer:

Watch Video Solution

15. How many plants in the list given below have composite fruits that develop from an inflorescence? Walnut, poppy, radish, pineapple, apple, tomato. A. Two

B. Three

C. Four

D. Five

Answer:

Watch Video Solution

16. Cymose inflorescence is present in _____

A. Trifolium

- B. Brassica
- C. Solanum
- D. Sesbania

Answer:

Watch Video Solution

17. Which one of the following organism is correctly matched with its three characteristics ?

A. Pea : C_3 pathway, Endospermic seed,

Vexillary aestivation

B. Tomato : Twisted aestivation, Axile

placentation, Berry

C. Onion: Bulb, Imbricate aestivation, Axile

placentation

D. Maize : C_3 pathway, Closed vascular

bundles, scutellum

Answer:

18. How many plants is marginal placentation?

Mustard, Gram, Tulip, Asparagus, Arhar, sun hemp ,Chilli ,Colchicine, Onion, Moong, Pea, 'Tobacco, Lupin

A. Four

,

B. Five

C. Six

D. Three





19. The Eyes of the potato tuber are

A. Axillary buds

B. Root buds

C. Flower buds

D. Shoot buds

Answer:



20. Which one of the following statements is correct?

A. Flower of tulip is a modified shoot

B. In tomato, fruit is a capsule

C. Seeds of orchids have oil-rich endosperm

D. Placentation in primrose is basal

Answer:





21. A drup develops in

A. Tomato

B. Mango

C. Wheat

D. Pea

Answer:

1. Father of Botany

A. Linnaeus

B. Theophrastus

C. Darwin

D. Thales

Answer:

2. Is the lowest level of classification

A. Kingdom

B. Class

C. Order

D. Species

Answer:



3. Who proposed the concepts of "idos" or species ?

A. Theophrastus

B. Stebbians

C. Darwins

D. Plato

Answer:

4. Which type of species develop by the process of evolution ?

A. Taxonomic species

B. Morphological species

C. Biological species

D. Phylogenetic species

Answer:

5. Who first propsed the early elementary rule

of naming plants ?

A. A.P. de Candolle

B. Linnaeus

C. Alphonse de Candolle

D. Simpson

Answer:

..... species .

A. Biological

B. Taxonomical

C. Phylogenetic

D. Morphological

Answer:

7. 18^{th} International Botanical congress was

held at

A. Sydney

B. leningard

C. Melbourne

D. London

Answer:

8. In 2017, International Botanical

congress was held at Shenzhen.

A. 17^{th}

- $\mathsf{B.}\,18^{th}$
- $\mathsf{C}.\,19^{th}$
- $D.\,20^{th}$

Answer:



9. The vernacular name of Albizia amara in

South Tamilnadu is

A. Thurinji

B. Kurinji

C. Nithyakalyani

D. Usilai

Answer:

10. Is a descriptive phrase of a plant.

A. Vernacular name

B. Binomial

C. Polynomial

D. Botanical name

Answer:

11. Who introduced binomial system of

nomenclature?

A. Linnaeus

B. Gaspard Bauhin

C. Darwin

D. Wallace

Answer:

12. Duplicate specimen of holotype is

A. Lectotype

B. Isotype

C. Neotype

D. Syntype

Answer:

13. Which is the tool for the identification of

unfamiliar plants?

A. Flora

B. Keys

C. Monograph

D. Catalogues

Answer:

14. Is a complete global account of a

texon of any rank.

A. Flora

B. Keys

C. Monograph

D. Catalogues

Answer:

15. The first botanical garden was established

and maintained by

A. Linnaeus

B. Babylonians

C. Theophrastus

D. Stebbins

Answer:

16. First modem botanical garden was

established by

A. Theophrastus

B. Linnaeus

C. Luca Ghini

D. Stebbins

Answer:

17. The largest botanical garden is in _____.

A. Royal Botanical garden

B. Madras Presidency College

C. Indian Botanical Garden

D. New York Botanical garden

Answer:

18. Who is the father of Taxonomy?

A. Engler & Prantl

B. Linnaeus

C. Theophrastus

D. Darwin

Answer:

19. Number of stamen(s) in monandria is

A. 4

.....

B. 3

C. 2

D. 1

Answer:

20. Which of the following classification is a

sexual system of classification?

A. Natural system

B. Artifical system

C. Phylogenetic

D. APG system

Answer:

21. Number of series under Polypetalae.

A. 1

B. 2

C. 3

D. 4

Answer:

22. Which one of the following series includes

the epigynous flowers?

A. Heteromerae

B. Disaflorea

C. Inferae

D. Thalanifloreae

Answer:

23. Undistinguished sepal and petal is called

as

A. Petaloid

B. Staminode

C. Perianth

D. Sepaloid

Answer:

24. Which is not a family of gymnospermae?

A. Gnetaceae

B. Equistae

C. Coniferae

D. Cycadaceae

Answer:

25. Which is not a monocotyledon character?

A. One cotyledon

B. Parallel venation

C. Pentamerous

D. Fibrous root

Answer:

26. Number of divisions in Engler and Prantl

classification?

A. 10

B. 11

C. 12

D. 13

Answer:

27. The book titled The 'Evoluation and classification of flowering plants' was written by____.

A. Engler & Prantl

B. Bentham & Hooker

C. Cronquist

D. Theophrasthus

Answer:

28. Which of the following is not a clade of

APG - classification?

A. Early angiosperm

B. Early gymnosperm

C. Monocots

D. Eudicots

Answer:

29. The term biosystematics was introduced by

A. Bauhin

B. Camp & Gilly

C. Cronquist

D. Smith

Answer:

30. Taxonomy based on chromosomal number

& characteristics is called

A. Serotaxonomy

B. Cytotaxonomy

C. Chemotaxonomy

D. Molecular taxonomy

Answer:

31. Classification based on protein content is

called

A. Serotaxonomy

B. Cytotaxonomy

C. Chemotaxonomy

D. Molecular taxonomy

Answer:

32. DNA bar coding was introduced by

A. Stebbins

B. Hebert

C. Camp & Gilly

D. Darwin

Answer:

33. Biosystematics is also called as

A. α -taxonomy

B. S-taxonomy

C. Ω - taxonomy

D. β -taxonomy

Answer:

A. Monogram

B. Monograph

C. Cladogram

D. Cladograph

Answer:

35. Taxa comprising all the descendents of a

common ancestor.

A. Monophyletic group

B. Diphyletic group

C. Paraphyletic group

D. Polyphyletic group

Answer:

36. Papilionaceous corolla is seen in

.....family

A. Apocyanaceae

B. Fabaceae

C. Solanaceae

D. Liliaceae

Answer:

37. Stipitate ovary is seen in

A. Solanaceae

B. Liliaceae

C. Fabaceae

D. Apocyanaceae

Answer:

38. Number of genus in fabaceae is

A. about 131

B. about 741

C. about 751

D. about 761

Answer:

A. Regima

B. Legume

C. Hespiridium

D. Berry

Answer:

40. In Arachis hypogea, the fruit development

is

A. Syncarpic

B. Apocarpic

C. Geocarpic

D. Photocarpic

Answer:

41. Which of the following plants root is a

Immunomodulator ?

A. Glycirrhiza glabra

B. Dalbergia latifolia

C. Mucum pruriens

D. Crotolaria jurcea

Answer:

42. Indigo dye is obtained from plant.

A. Lupin

B. Avuri

C. Sesban

D. Agathi

Answer:

43. Which plant is commonly called as the "Flame of the forest"?

A. Clitoriternatea

B. Butea frondosa

C. Lupinus hirsutus

D. Butea monosperma

Answer:

44. International year of pules

A. 2017

B. 2018

C. 2015

D. 2016

Answer:



45. Which is called as "Night Shade Family" ?

A. Solanaceae

- B. Fabaceae
- C. Apocyanaceae
- D. Liliaceae

Answer:

••••••

Watch Video Solution

46. Rhiphidium inflorescence is seen in

A. Solanum nigrum

- B. Solanum tuberosum
- C. Datura
- D. Withania somnifera

Answer:

Watch Video Solution

47. The fruit of Datura metal is

A. Spinescent Capsule

B. Regma

C. Legume

D. Capsule

Answer:

Watch Video Solution

48. Plicate inflorescence is seen in

A. Solanum nigrum

B. Datura metal

- C. Petunia hybrida
- D. Solanum tuberosum

Answer:

Watch Video Solution

49. drug is used to treat asthma &

whooping cough.

A. Atropine

B. Stramonium

C. Anabasin

D. Nornicotine

Answer:

Watch Video Solution

50. Inflorescence in Aloe is

A. Compound Spadix

B. Spike

C. Paricle

D. Solitary

Answer:

Watch Video Solution

51. Carpels are obliquely placed in

A. Fabaceae

B. Solanaceae

C. Liliaceae

D. Apocyanaeae

Answer:



52. Septal glands are present in the gynoeciums of

A. Solanaceae

B. Liliaceae

C. Fabaceae

D. Apocyanaeae





53. is an alkaloid that induces polyploidy.

A. Nictonine

- B. Stramonium
- C. Atropine
- D. Colchicine





54. The leaves of is used in hemorrhoidal

salves & shampoos.

A. Asparagus officinalis

B. Aloevera

C. Allium sativum

D. Allium cepa

Answer:



Watch Video Solution								
	Botanical							
•••••••		re	egiona	al centro	es in			
India.								
А	. 10							
В	. 11							
C	. 12							
D	0. 13							

Answer:





56. Synstamenous condition is seen in

- A. Haemodorum
- B. Ruscus
- C. Paris quadrfolia
- D. Maianthenum

Answer:

57. Scapigerous inflorescence is seen in

A. Allium sativum

B. Allium cepa

C. Aloevera

D. Maenodorum

Answer:

58.	Number	of	stamens	in	Schizanthus			
is								
,	A. 2							
I	B. 3							
	C. 4							
[D. 5							
Answer:								
Watch Video Solution								

A. Spike

......

B. Monochasical cyme

C. Helicoid cyme

D. Rhiphidium

Answer:

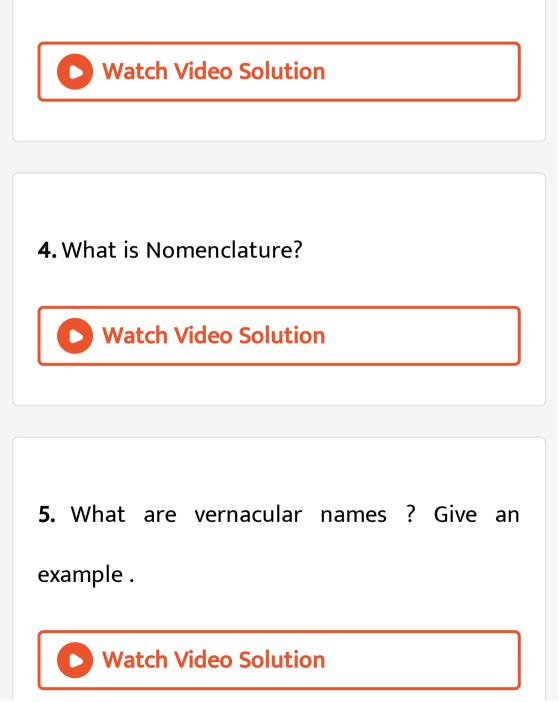
Additional Questions Solved Very Short Answer Type Questions

1. Define Taxonomy.

Watch Video Solution

2. List out the various rank or taxa of taxonomic hierarchy.

3. Which is the lowest rank of classification?





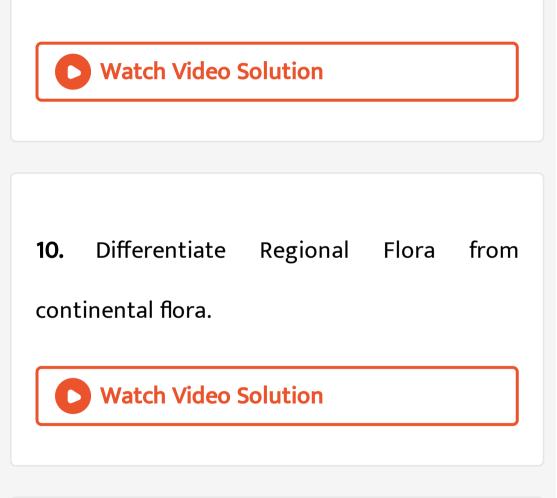


7. What is electronic flora?

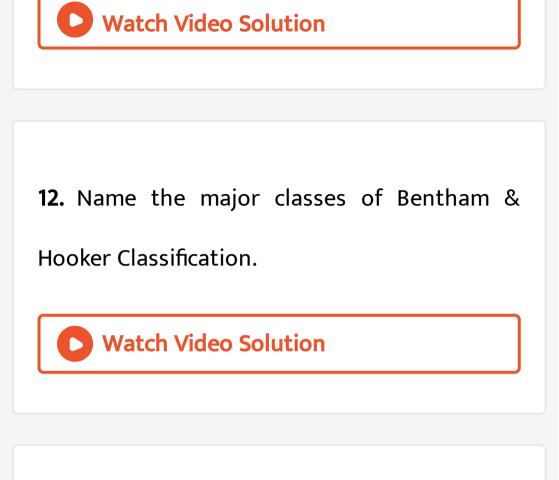
Watch Video Solution

8. When a neotype specimen is selected?

9. What do you mean by taxonomical aids?



11. Define herbarium specimen.



13. How Cronquist classified the angiosperms?



14. Cronquist classification is a failure. Justify



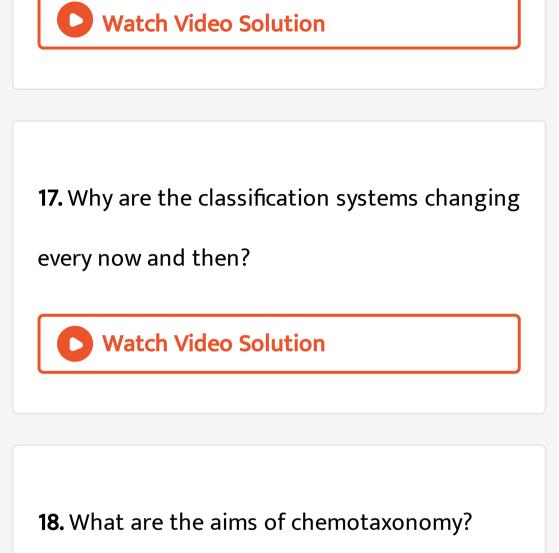
15. Which is the most recent classification of

flowering plants? How many versions it had

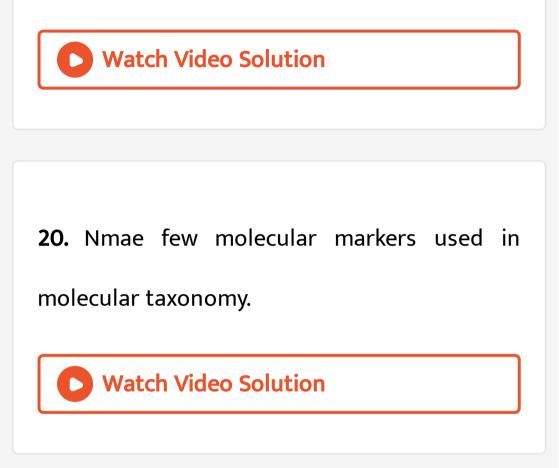
been published so far?



16. What are the sub-classes of Liliopsida?

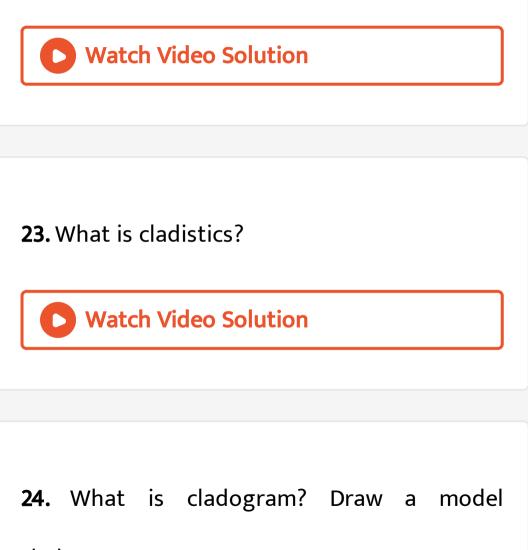


19. Define biosystematics.



21. Write the significance of DNA barcoding?

22. State the demerits of RAPD analysis.



cladogram.



25. The genetic sequence used to identify a

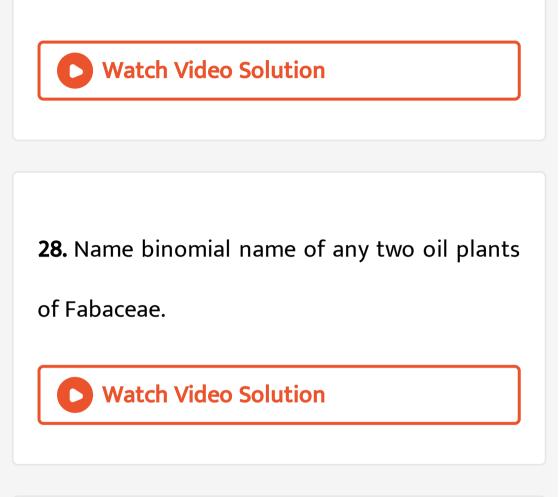
plant is knows as_____.

Watch Video Solution

26. Compare the Gynoecium of Pisum sativum

and Datura metal.

27. Write the floral formula of Pisum sativum.



29. Write a note on the classical taxonomical

tools.





30. Name the type of fruit seen in Capsicum

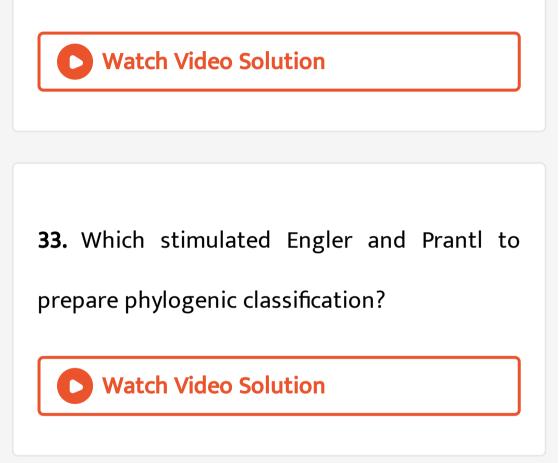
and Datura.



31. What is atropine?



32. What is Stramonium?



Additional Questions Solved Short Answer Type Questions 1. How dichotomous key helps in identification

of plants ?



2. List the differences between taxonomy and

systematics.

Watch Video Solution

3. What is Binomial Nomenclature?



4. Enumerate the steps involved in herbarium

preparation.

Watch Video Solution

5. Why do we need the classification of organisms ?

6. Classification is a essential part of biology -

Justify.

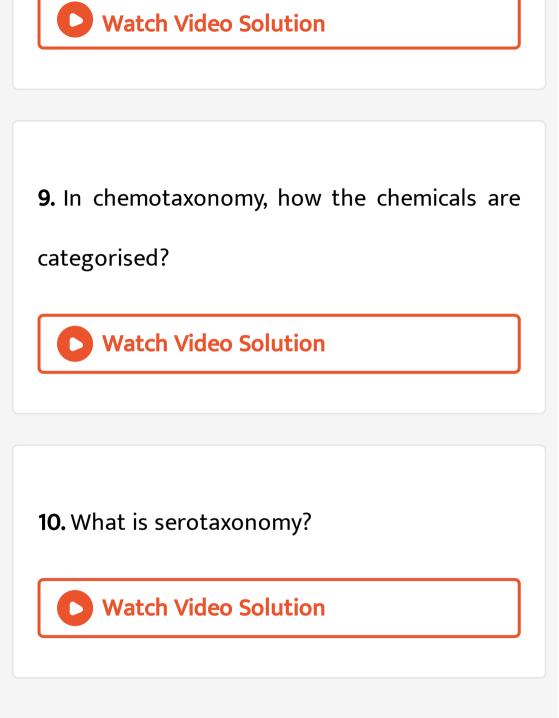


7. Linnaeus classification is also called sexual

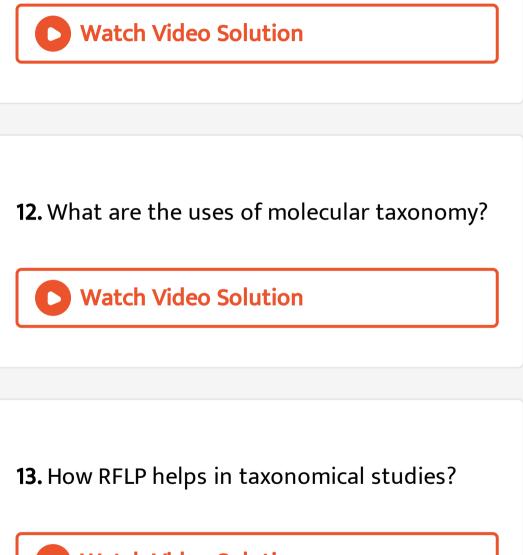
system of classification. Why?



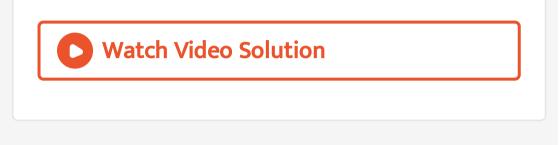
8. Write short notes on Monochlamydeae.



11. What is molecular taxonomy?



14. What is DNA barcoding?



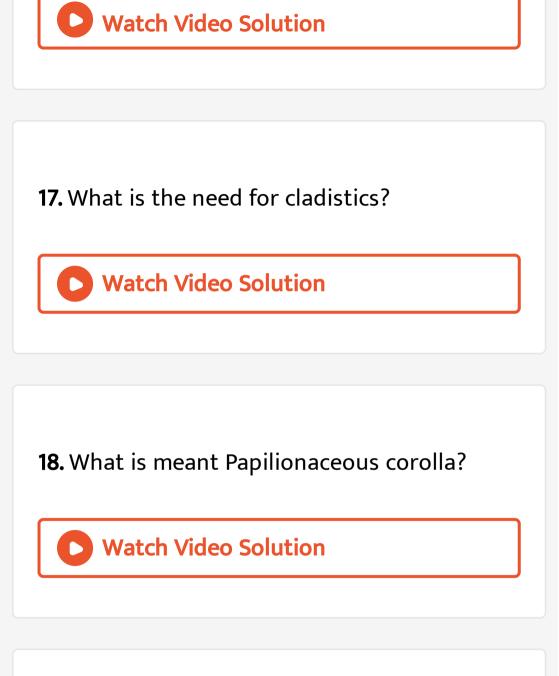
15. In which organelle of plant cell does the

barcode genes are located? Name the genes.

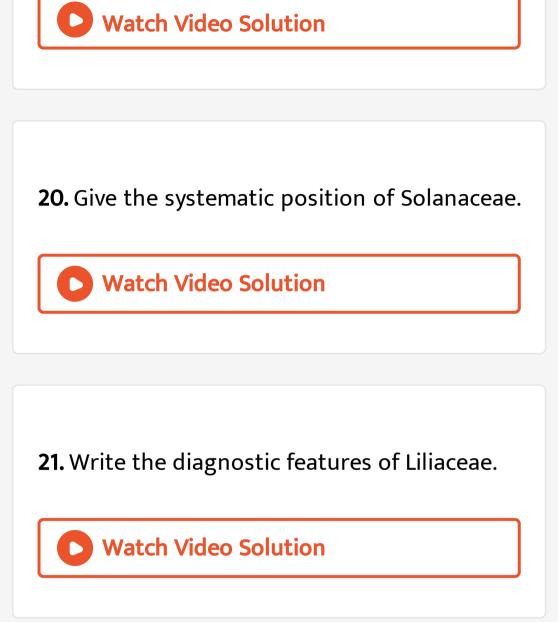
Watch Video Solution

16. Differentiate between Monophyletic group

and paraphyletic group.



19. Draw the floral diagram of Pisum sativum.



22. Give the systematic position of Liliaceae.

Additional Questions Solved Long Answer Type Questions



Watch Video Solution

2. Explain the role of Botanical garden in taxonomy.



3. What are the uses of herbarium.

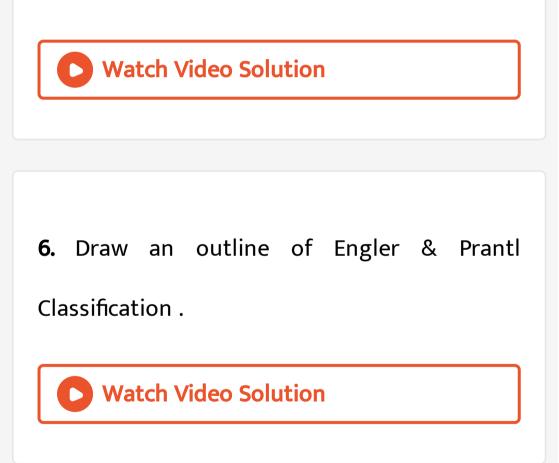
Watch Video Solution

4. Point out the characters of Early

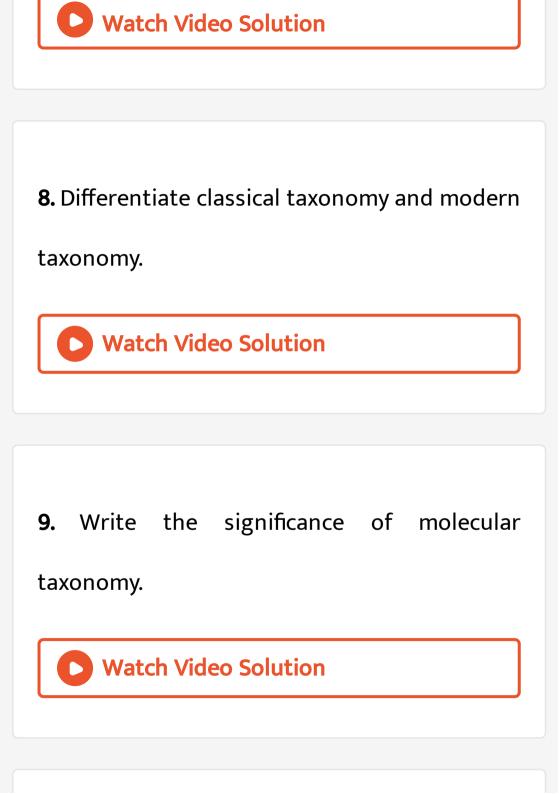
angiosperm according to APG Classification,

5. Draw a flow chart depicting the Bentham

and Hooker Classification.



7. list out the aim of biosystematics.



10. Explain Clitoria ternatea in botanical terms.

Draw floral diagram.



11. Explain Datura metal in botanical terms.

draw floral diagram

12. Descrine the Floral characters of Allium

cepa with a neat floral diagram.

Watch Video Solution

13. List out the economic importance of plants

& their uses of Fabaceae.



14. List out the economic importance of plants

belonging to Solanacene & their uses.



15. List out the economic importance of plants

& their uses of Liliaceae.



Additional Questions Solved Higher Order Thinking Skills Hots **1.** Neem is highly valued tree in Indian medicine. It is called by the name veppu in Malayalam, Arishta in Sanskrit, Vembu in Tamil, Nimbo in Portuguese. Suggest a solution for this varied naming problem considering as a taxonomist.



According to Binomial nomenclature,
Human beings are named as Homosapiens.

Following this, write the binomials for Brinjal

and Rosewood.



3. Officially, every state in the Republic of India has its own flower, fruit etc. If Andhra Pradesh has Lotus as its state flower, what is the state flower of Tamil Nadu? Mention its family.

4. Peanut is a geocarpic fruit - Comment on

the statement.

Watch Video Solution

5. You are given an entire plantlet of Clitoria ternatea. Give possible reasons to say that it is a dicot plantlet.

6. Give possible terms explaining the

gynoecium of a flower liliaceae