

2. A. Cells of root meristematic zone has dense cytoplasm.
B. *Chrysanthemum*, Pineapple and *Jasminum* are examples of sucker.
C. A fleshy bud is called bulbil.
D. Root cap is absent in hydrophytes.
(1) All are correct
(2) All are correct, except B
(3) A & B are correct
(4) B & C are correct
3. All given modifications belong to adventitious roots, *except*
(1) Reproductive root of *Asparagus* (2) Storage roots of sweet potato
(3) Conical roots of carrot (4) Prop roots of banyan tree
4. Petiole when becomes green, flat and tends to function as leaf, is called
(1) Phylloclade (2) Cladode
(3) Cladophyll (4) Phyllode
5. More than two leaves are present at each node in
(1) *Alstonia* (2) Sunflower
(3) Guava (4) Mustard
6. All given statements w.r.t. cymose inflorescence are correct, *except*
(1) Centrifugal opening pattern of flowers (2) Unlimited growth of axis
(3) Main axis terminates in a flower (4) Basipetal arrangement of flowers
7. Flower in angiosperms
(1) Is a modified reproductive shoot
(2) Possess different floral appendages at successive nodes
(3) Have floral appendages which are modified leaves
(4) More than one option is correct
8. Which of the following aestivation involves non-uniform overlapping of petals?
(1) Valvate (2) Twisted
(3) Imbricate (4) Contorted
9. Stamens are united to petals in
(1) Lily (2) *Calotropis*
(3) China rose (4) *Verbena*
10. Syncarpous condition is seen in
(1) Lotus and rose (2) Mustard and tomato
(3) Mustard and lotus (4) Rose and tomato

11. Large posterior petal is characteristic to vexillary aestivation found in members of
- | | |
|----------------|---------------|
| (1) Solanaceae | (2) Liliaceae |
| (3) Fabaceae | (4) Malvaceae |
12. When only the filaments of stamens are united into more than two bundles, the condition is called
- | | |
|-------------------|-------------------|
| (1) Monoadelphous | (2) Diadelphous |
| (3) Polyandrous | (4) Polyadelphous |
13. In which placentation type, the ovary is two to many chambered and the ovules arise from central axis?
- | | |
|--------------|--------------|
| (1) Axile | (2) Marginal |
| (3) Parietal | (4) Basal |
14. Select a **correct** match :
- | |
|--|
| (1) Didynamous stamen – <i>Cassia</i> |
| (2) Tetradynamous stamen – Mustard |
| (3) Epiphyllous condition – China rose |
| (4) Syngenesious condition – Cucumber |
15. Flower is perigynous and the ovary is said to be half inferior in
- | | |
|----------|------------------|
| (1) Rose | (2) Peach |
| (3) Plum | (4) All of these |

THE FRUIT

Fertilized and ripened or mature ovary is called fruit. Some fruits which are formed without fertilisation of ovary are called **parthenocarpic fruits**. They are seedless e.g, Banana, Grapes, Pineapple.

Parts of a Fruit

A fruit mainly consists of two parts namely fruit wall and seed.

- (i) **Fruit wall** : **Fruit wall** or **pericarp** develops from the wall of the ovary. It can be dry or fleshy. If the pericarp is thick and fleshy then it differentiates into three different layers namely :

- (a) **Epicarp** (outer cover)
- (b) **Mesocarp** (middle layer)
- (c) **Endocarp** (innermost layer)

- (ii) **Seeds - develop from Ovules**

The fruit which develops from ovary is called **true fruit**. **Most of the fruits are true fruits**. If any other floral part takes part in fruit formation, it is called **false fruit (pseudocarp)**, e.g., Apple, Pear.

Types of fruit:

1. **Simple fruit** develops from the syncarpous ovary of the single flower with or without accessory parts.
2. **Aggregate fruits** are formed from polycarpellary, apocarpous ovary. Each carpel develops into a fruitlet and all fruitlets together form an aggregate fruit.
3. **Multiple or composite fruits** develop from the entire inflorescence.

EXERCISE

16. Choose odd one w.r.t. parthenocarpic fruit
 (1) Mango (2) Banana
 (3) Oranges (4) Grapes
17. Mesocarp and endocarp are edible in
 (1) Pomegranate (2) Banana
 (3) Coconut (4) Mango
18. Aleurone layer of maize seed stores _____ and is _____ in ploidy.
 (1) Proteins, n (2) Cellulose, 2n
 (3) Proteins, 3n (4) Fat, 3n
19. Find odd one w.r.t. non-endospermic seeds
 (1) Gram (2) Groundnut
 (3) Pea (4) Castor
20. Scar on the seed coat through which the developing seeds are attached to the fruit is called
 (1) Hilum (2) Kernel
 (3) Epicotyl (4) Caruncle
21. Which of the given symbol represents epitepalous condition?
 (1) $\overset{\frown}{C \quad A}$ (2) $\overset{\frown}{P \quad A}$
 (3) $\overset{\frown}{K \quad A}$ (4) %
22. $C_{x4} A_{2+4}$ condition is characteristic to
 (1) Asteraceae (2) Brassicaceae
 (3) Fabaceae (4) Liliaceae
23. Obliquely placed ovary, swollen placenta and epipetalous stamens are features of family
 (1) Solanaceae (2) Liliaceae
 (3) Fabaceae (4) Brassicaceae
24. Floral formula $Br \% \overset{\nearrow}{K}_{(5)} C_{1+2+(2)} A_{(9)+1} \underline{G}_1$ belongs to family
 (1) Solanaceae (2) Brassicaceae
 (3) Fabaceae (4) Liliaceae
25. Ornamental plants of liliaceae family is
 (1) Lupin (2) *Gloriosa*
 (3) Sweet pea (4) Belladonna
26. Tetradynamous condition of stamens is found in the members of family
 (1) Malvaceae (2) Solanaceae
 (3) Brassicaceae (4) Liliaceae
27. Ray florets of sunflower do not
 (1) Have inferior ovary (2) Show basal placentation in gynoecium
 (3) Have united petals (4) Have androecium
28. Presence of epicalyx and monadelphous condition of stamens is found in
 (1) Makoi (2) Mustard
 (3) Groundnut (4) China rose

29. Select the families in which members have bicarpellary, syncarpous, gynoecium and superior ovary. Solanaceae, Brassicaceae, Liliaceae, Fabaceae, Malvaceae, Asteraceae.

Choose the correct option

- (1) Three (2) Two
(3) Four (4) Five
30. All of the following are subfamilies of family Leguminosae, **except**
(1) Caesalpinoideae (2) Mimosoideae
(3) Gramineae (4) Papilionatae
31. The distinct monocot character shown by the flowers of Gramineae family is
(1) Bisexual flower (2) Actinomorphic flower
(3) Hypogynous flower (4) No clear distinction of petal and sepal
32. Siliqua or silicula is the fruit of
(1) Cotton (2) Mustard
(3) China rose (4) Grass
33. In which flower, the peduncle is flat on which florets are attached?
(1) Sunflower (2) Wheat
(3) Cotton (4) Groundnut

34. Match the following Column-I with Column-II and choose the correct option.

Column-I

Column-II

- a. Compositae
b. Gramineae
c. Malvaceae
d. Cruciferae

(i) $\text{Epi}_{5-7} \oplus \sigma^{\text{K}} \text{K}_{(5)} \overbrace{\text{C}_5 \text{A}_{(x)}} \text{G}_{(5)}$

(ii) $\oplus \sigma^{\text{K}} \text{K}_{2+2} \text{C}_{x4} \text{A}_{2+4} \text{G}_{(2)}$

(iii) $\% \sigma^{\text{P}} \text{P}_{2(\text{lodicule})} \text{A}_3 \text{G}_1$

(iv) $\text{Br}\% \sigma^{\text{K}} \text{K}_{\text{pappus or 0}} \text{C}_{(5)} \text{A}_0 \overline{\text{G}}_{(2)}$

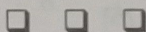
A B C D

- (1) (ii) (i) (iv) (iii)
(2) (iv) (iii) (i) (ii)
(3) (iii) (i) (ii) (iv)
(4) (iv) (iii) (ii) (i)
35. Calyx in the form of pappus is found in
(1) Cotton (2) Tobacco
(3) China rose (4) Disc floret of sunflower
36. How many among the following belong to Malvaceae family?
Gossypium, Helianthus, Triticum aestivum, Hibiscus, Brassica, Abutilon
(1) Five (2) Three
(3) Two (4) Four

37. In which flower stamens are syngenesious i.e., anthers are fused and filaments are free from each other is observed?

- (1) Ray florets of sunflower (2) *Hibiscus rosa-sinensis*
(3) Disc florets of sunflower (4) Neutral florets of sunflower

38. Fruits is called caryopsis in the members of the family
- | | |
|--------------|----------------|
| (1) Poaceae | (2) Malvaceae |
| (3) Fabaceae | (4) Compositae |
39. The subfamilies of leguminosae are differentiated from one another on the basis of
- | | |
|--------------------------|----------------------------|
| (1) Calyx and corolla | (2) Stems and leaves |
| (3) Androecium and fruit | (4) Corolla and androecium |
40. Consider the following characteristics and choose the flower which shows them
- | | |
|---|--------------------------|
| (a) Pentacarpellary gynoecium. | |
| (b) Monoadelphous androecium with numerous stamens. | |
| (c) Locule has one to numerous ovule in the gynoecium | |
| (1) <i>Triticum</i> | (2) <i>Oryza sativa</i> |
| (3) <i>Gossypium</i> | (4) <i>Chrysanthemum</i> |



Assignment

SECTION - A

NCERT Based MCQs

- Inferior ovary is found in [NCERT Pg. 73]
 - Soyabean
 - Guava
 - Mustard
 - Petunia
- In china rose [NCERT Pg. 75]
 - Petals show twisted aestivation
 - Ovary is superior
 - Diadelphous stamens are found
 - Placenta is present at periphery of ovary
 - Only (a) and (d) are true
 - Only (a) and (b) are true
 - (b), (c) and (d) are true
 - (a), (b) and (d) are true
- If the margins of sepals or petals overlap one another but not in any particular direction, the aestivation is known as [NCERT Pg. 74]
 - Valvate
 - Twisted
 - Imbricate
 - Vexillary
- Fruits of which of the given plants have persistent calyx? [NCERT Pg. 80]
 - Brinjal
 - Mustard
 - Tulip
 - Gloriosa*
- Out of the following, which one is a fodder plant? [NCERT Pg. 79]
 - Sesbania*
 - Lupin
 - Muliathi
 - Colchicum*
- Which of the given symbols represents union of stamens in tulip flower? [NCERT Pg. 81]
 - $\overline{C \ A}$
 - $\overline{P \ A}$
 - $\overline{P \ S}$
 - $\overline{C \ S}$
- Indigofera belongs to the plant family which have plants with [NCERT Pg. 79]
 - Endospermic seeds
 - Legume type of fruit
 - Actinomorphic flower
 - Cymose inflorescence
- Match the columns and select the correct option.

Column I	Column II
i. Sunhemp	(a) Solanaceae
ii. <i>Gloriosa</i>	(b) Fabaceae
iii. Belladonna	(c) Liliaceae

[NCERT Pg. 79,80,81]

 - i(b), ii(c), iii(a)
 - i(c), ii(a), iii(b)
 - i(b), ii(a), iii(c)
 - i(c), ii(b), iii(a)
- In bean flower the largest posterior petal is known as [NCERT Pg. 79]
 - Keel
 - Wing
 - Standard petal
 - Lateral petal
- Mark the following statements as true (T) or false (F) and select the correct option.
 - In *Salvia*, filaments of stamens are of variable lengths.
 - Epiphyllous stamens are found in the flowers of tomato.
 - A sterile stamen is called staminode.

[NCERT Pg. 80]

A	B	C
(1) T	F	F
(2) T	T	F
(3) T	F	T
(4) F	T	F
- In lotus [NCERT Pg. 75]
 - Carpels are united
 - Carpels are free
 - Ovary is syncarpous
 - Only one carpel is present

12. Choose the statement true for fruit of both mango and coconut. [NCERT Pg. 76]
 (1) They have fleshy thin and edible mesocarp
 (2) They develop from monocarpellary superior ovary
 (3) Their epicarp is hard and stony
 (4) Their endocarp is used in making coir
13. In banana, fruits [NCERT Pg. 76]
 (1) Develop without fertilization
 (2) Are multiseeded
 (3) Develop from floral parts other than ovary
 (4) Are drupe type
14. In castor seeds, endosperm is [NCERT Pg. 77]
 (1) Absent
 (2) Formed before fertilisation
 (3) Food storing tissue
 (4) Haploid
15. Identify the incorrect match. [NCERT Pg. 77]
 (1) Orchid – Non endospermic seeds
 (2) Aleurone layer – Protein rich
 (3) Scutellum – Cotyledons of dicot seeds
 (4) Maize – Seed coat fused with fruit wall
16. Which of the given is an ornamental plant of Solanaceae family? [NCERT Pg. 80]
 (1) Lupin (2) Tulip
 (3) Sweet pea (4) *Petunia*
17. A. Tobacco is a fumigatory plant of Solanaceae family.
 B. Seed coat is thin and membranous in monocots. [NCERT Pg. 77&80]
 (1) Only A is correct
 (2) Only B is correct
 (3) Both A & B are correct
 (4) Both A & B are incorrect
18. Identify the plant in which tap root is not modified to perform other specific functions? [NCERT Pg. 67]
 (1) Turnip (2) *Rhizophora*
 (3) Radish (4) Banyan
19. The stem bear single leaf at each node in [NCERT Pg. 71]
 (1) Sunflower (2) Guava
 (3) *Calotropis* (4) *Nerium*
20. In cymose inflorescence [NCERT Pg. 72]
 (1) Peduncle terminates into a flower
 (2) Flowers are borne in acropetal order
 (3) Youngest flowers are at the top
 (4) Main axis shows unlimited growth
21. Choose the odd one for the modification of axillary bud. [NCERT Pg. 71]
 (1) Thorn of *Citrus*
 (2) Tendril of watermelon
 (3) Spine of *Aloe*
 (4) Thorn of *Bougainvillea*
22. Perianth is found in the flowers [NCERT Pg. 81]
 (1) Lily (2) Tomato
 (3) Lupin (4) *Petunia*
23. Offsets are found in [NCERT Pg. 69]
 (1) *Pistia* (2) Mint
 (3) Banana (4) Pineapple

SECTION - B

Objective Type Questions

1. Which of the following region of root possess small cells with dense cytoplasm?
 (1) Maturation zone (2) Meristematic zone
 (3) Elongation zone (4) Root cap
2. Adventitious roots developing from stem branches and provide extra mechanical support to the plant are observed in
 (1) Wheat (2) Maize
 (3) *Ficus benghalensis* (4) Sugarcane
3. Thin, slender and spirally coiled structures called stem tendrils
 (1) Develop from axillary bud
 (2) Are commonly observed in grapevines but not in pumpkins
 (3) Protect plants from browsing animals
 (4) May become thick due to secondary growth
4. Short horizontal branch producing a rosette of leaves and a tuft of roots at each node, are found in
 (1) *Pistia*, *Eichhornia*
 (2) *Lemna*, *Asparagus*
 (3) *Pistia*, Jasmine
 (4) *Chrysanthemum*, *Eichhornia*
5. Leaflets tendrils are found in
 (1) Garden pea (2) Cucumber
 (3) *Smilax* (4) Watermelon
6. Racemose inflorescence is characterised by
 (1) Acropetal arrangement of flowers on the pedicel.
 (2) Basipetal arrangement of flowers on peduncle
 (3) Presence of active growing point on inflorescence axis as the apical bud does not convert into a flower
 (4) Presence of a definite or restricted number of flowers on peduncle

7. Match the following columns (w.r.t. aestivation of corolla).

Column-I

- (a) Valvate
(b) Imbricate
(c) Twisted
(d) Vexillary

Column-II

- (i) *Cassia*
(ii) Pea
(iii) *Calotropis*
(iv) Cotton

- (1) a(iii), b(i), c(iv), d(ii) (2) a(i), b(iii), c(iv), d(ii)
(3) a(iv), b(i), c(ii), d(iii) (4) a(ii), b(iv), c(iii), d(i)
8. Primary root is short lived and is replaced by a large number of roots in
- (1) Mango (2) Maize
(3) *Monstera* (4) Makoi
9. Roots in *Rhizophora*
- (1) Are green and photosynthetic
(2) Store water during dry seasons
(3) Grow vertically upward
(4) Provide only proper anchorage
10. Read the following statements w.r.t. stem and identify them as true(T) or false(F).
- A. Ascending part of plant
B. Main function is storage of food
C. Generally green when older but brown when young.
D. It may perform function of vegetative propagation.

A	B	C	D
---	---	---	---

- | | | | |
|-------|---|---|---|
| (1) T | F | F | T |
| (2) T | T | F | F |
| (3) T | F | T | T |
| (4) F | T | T | T |

11. All the given plants have underground stems performing function of perennation, **except**

- (1) *Colocasia*; Potato
(2) Turmeric; Onion
(3) Cucumber; Watermelon
(4) Ginger; *Alocasia*

12. Match the following leaf modifications with their functions.

Leaf modification**Function**

- | | |
|-----------------|------------------------|
| A. Tendrils | (i) Protection |
| B. Spines | (ii) Climbing |
| C. Phyllode | (iii) Trapping insects |
| D. Leaf pitcher | (iv) Photosynthesis |
- (1) A(ii), B(i), C(iv), D(iii) (2) A(i), B(ii), C(iii), D(iv)
(3) A(ii), B(iv), C(iii), D(i) (4) A(ii), B(i), C(iii), D(iv)

13. Indefinite inflorescence is **not** found in
- (1) Radish (2) Mustard
(3) *Solanum* (4) Wheat

14. Which of the following family has trimerous flowers?

- (1) Brassicaceae – Mustard
(2) Liliaceae – Tulips
(3) Solanaceae – Potato
(4) Fabaceae – Pea

15. The mode of arrangement of sepals or petals in floral bud with respect to the other members of the same whorl is known as

- (1) Aestivation (2) Inflorescence
(3) Placentation (4) Both (1) and (3)

16. Choose the **correct** option w.r.t cohesion of stamens in pea.

- (1) Diadelphous (2) Polyandrous
(3) Polyadelphous (4) Monoadelphous

17. $C_{1+2+(2)}$ represents

- (1) Cruciform corolla; Valvate aestivation
(2) Epipetalous stamens; Brinjal
(3) Papilionaceous corolla; Vexillary aestivation
(4) Epiphyllous stamens; *Trifolium*

18. Two plants A and B belonging to different families show following features

Plant A – Zygomorphic, bisexual flowers with non-endospermic seed

Plant B – Persistent calyx, epipetalous stamen and axile placentation

Identify these plants.

- (1) A – *Aloe*, B – Mustard
(2) A – Tomato, B – *Indigofera*
(3) A – *Sesbania*, B – *Asparagus*
(4) A – Soyabean, B – Tobacco

19. Which of the following represents a pair of fiber crop and a medicinal plant respectively?

- (1) Belladonna; *Colchicum*
(2) *Crotolaria*; *Withania*
(3) *Asparagus*; *Aloe*
(4) *Trifolium*; Muliathi

20. The feature which is **not** seen in maize seed is

- (1) Endosperm
(2) Testa fused with pericarp
(3) Single shield shaped cotyledon
(4) Plumule and radicle are not enclosed in any sheath

21. The scar on seed coat through which developing seeds are attached to the fruit is

- (1) Testa (2) Hilum
(3) Placenta (4) Raphae

22. Which of the following fruit arises from monocarpellary superior ovary?

(1) Mango (2) Strawberry
(3) Fig (4) Mulberry

23. Find the **correctly** matched pair w.r.t. family

	Family	Feature -1	Feature -2
(1)	Brassicaceae	Tetradynamous stamens	Monocarpellary gynoecium
(2)	Solanaceae	Persistent calyx	Endospermic seed
(3)	Fabaceae	Diadelphous condition	Fruit berry
(4)	Liliaceae	Tetramerous flower	Epipetalous stamens

24. Match the column w.r.t. placentation

Placentation

Example

- a. Axile (i) Primrose
b. Parietal (ii) Soyabean
c. Marginal (iii) Tulip
d. Free-central (iv) *Argemone*
(1) a(i), b(ii), c(iii), d(iv) (2) a(iii), b(ii), c(iv), d(i)
(3) a(iv), b(iii), c(ii), d(i) (4) a(iii), b(iv), c(ii), d(i)

25. Which of the following symbols stands **correct** for the Solanaceae family?

- (1) $C_{(5)} A_5$ (2) $\% \frac{\sigma}{\sigma}$
(3) P_{3+3} (4) \underline{G}_2

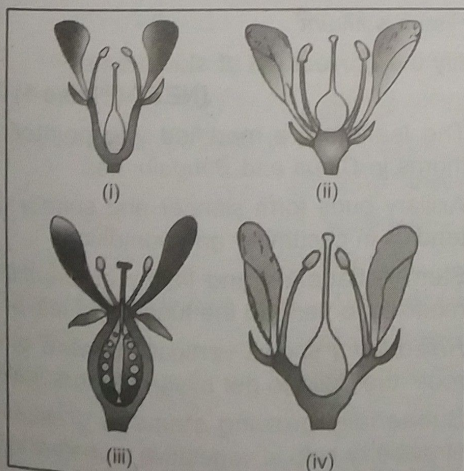
26. Read the following statement carefully.

"Plants are trees, shrubs and herbs, erect or climber and have reticulate venation in leaf with pulvinate leaf base."

Identify the plant family described above

- (1) Groundnut family (2) Mustard family
(3) Chilli family (4) *Gloriosa* family

27. Which of the following condition of ovary is present in flower of Mustard and Cucumber respectively?



- (1) (ii), (iv) (2) (ii), (iii)
(3) (i), (iii) (4) (i), (ii)

28. Bilateral symmetry of flower is seen in

- (1) Mustard (2) Brinjal
(3) Pea (4) Canna

29. Stilt roots

- a. Arise from lower nodes of stem
b. Provide support as they are hanging from branches
c. Present in maize and sugarcane
d. Are modified to help in gaseous exchange

- (1) a & c (2) b & c
(3) a & d (4) b & d

30. Find the **incorrectly** matched pair w.r.t. leaf.

	Plant	Venation	Type	Phyllotaxy
(1)	Guava	Reticulate	Simple	Opposite
(2)	Mustard	Reticulate	Simple	Alternate
(3)	<i>Alstonia</i>	Reticulate	Simple	Alternate
(4)	Pea	Reticulate	Compound	Alternate

SECTION - C

Previous Years Questions

1. In *Calotropis*, aestivation is: [NEET (Phase-2) 2023]

- (1) Imbricate (2) Twisted
(3) Valvate (4) Vexillary

2. In a pea flower, five petals are arranged in a specialized manner with one posterior, two lateral and two anterior. These are named as _____ and _____ respectively.

[NEET (Phase-2) 2023]

- (1) Keel, Standard and Carina
(2) Standard, Wings and Keel
(3) Keel, Wings and Standard
(4) Vexillum, Keel and Standard

3. Match the following :

Type of flower

Example

- (A) Zygomorphic (I) Mustard
(B) Hypogynous (II) Plum
(C) Perigynous (III) *Cassia*
(D) Epigynous (IV) Cucumber

Select the correct option: [NEET (Phase-2) 2023]

- (1) (A)-(IV), (B)-(I), (C)-(III), (D)-(II)
(2) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
(3) (A)-(I), (B)-(II), (C)-(IV), (D)-(III)
(4) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)

4. Family Fabaceae differs from Solanaceae and Liliaceae. With respect to the stamens, pick out the characteristics specific to family Fabaceae but not found in Solanaceae or Liliaceae.

[NEET (Phase-1) 2023]

- (1) Polyadelphous and epipetalous stamens
- (2) Monoadelphous and Monothealous anthers
- (3) Epiphyllous and Ditheous anthers
- (4) Diadelphous and Ditheous anthers

5. Axile placentation is observed in

[NEET (Phase-1) 2023]

- (1) China rose, Beans and Lupin
- (2) Tomato, Dianthus and Pea
- (3) China rose, Petunia and Lemon
- (4) Mustard, Cucumber and Primrose

6. Given below are two statements : One is labelled as Assertion A and the other is labelled as Reason R:

Assertion A: A flower is defined as modified shoot wherein the shoot apical meristem changes to floral meristem.

Reason R: Internode of the shoot gets condensed to produce different floral appendages laterally at successive node instead of leaves.

In the light of the above statements, choose the correct answer from the options given below:

[NEET (Phase-1) 2023]

- (1) Both A and R are true but R is NOT the correct explanation of A
- (2) A is true but R is false
- (3) A is false but R is true
- (4) Both A and R are true and R is the correct explanation of A

7. Which of the following statement is not correct?

[NEET (Phase-2) 2022]

- (1) The rhizome is thick, prostrate and branched
- (2) Rhizome is a condensed form of stem
- (3) The apical bud in rhizome always remains above the ground
- (4) The rhizome is aerial with no distinct nodes and internodes

8. The residual persistent part which forms the perisperm in the seeds of beet is

[NEET (Phase-2) 2022]

- (1) Integument
- (2) Calyx
- (3) Endosperm
- (4) Nucellus

9. Match List - I with List - II. [NEET (Phase-2) 2022]

List - I

- a. Imbricate
- b. Valvate
- c. Vexillary
- d. Twisted

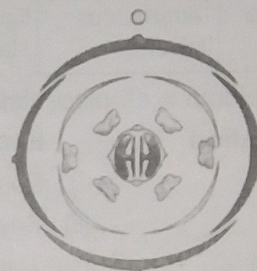
List - II

- (i) Calotropis
- (ii) Cassia
- (iii) Cotton
- (iv) Bean

Choose the correct answer from the options given below

- (1) a(i), b(iii), c(iv), d(ii)
- (2) a(ii), b(i), c(iii), d(iv)
- (3) a(ii), b(i), c(iv), d(iii)
- (4) a(ii), b(iv), c(iii), d(i)

10. The Floral Diagram represents which one of the following families? [NEET (Phase-2) 2022]



- (1) Liliaceae
- (2) Fabaceae
- (3) Brassicaceae
- (4) Solanaceae

11. The flowers are Zygomorphic in:

[NEET (Phase-1) 2022]

- (a) Mustard
- (b) Gulmohar
- (c) Cassia
- (d) Datura
- (e) Chilly

Choose the correct answer from the options given below:

- (1) (d), (e) Only
- (2) (c), (d), (e) Only
- (3) (a), (b), (c) Only
- (4) (b), (c) Only

12. Which one of the following plants shows vexillary aestivation and diadelphous stamens?

[NEET (Phase-1) 2022]

- (1) *Allium cepa*
- (2) *Solanum nigrum*
- (3) *Colchicum autumnale*
- (4) *Pisum sativum*

13. Identify the **correct** set of statements :

[NEET (Phase-1) 2022]

- (a) The leaflets are modified into pointed hard thorns in *Citrus* and *Bougainvillea*
- (b) Axillary buds form slender and spirally coiled tendrils in cucumber and pumpkin
- (c) Stem is flattened and fleshy in *Opuntia* and modified to perform the function of leaves
- (d) *Rhizophora* shows vertically upward growing roots that help to get oxygen for respiration
- (e) Subaerially growing stems in grasses and strawberry help in vegetative propagation

NEET

Choose the correct answer from the options given below :

- (1) (b), (c), (d) and (e) Only
- (2) (a), (b), (d) and (e) Only
- (3) (b) and (c) Only
- (4) (a) and (d) Only

14. Diadelphous stamens are found in [NEET-2021]

- (1) China rose and citrus
- (2) China rose
- (3) Citrus
- (4) Pea

15. Match Column-I with Column-II [NEET-2021]

Column-I	Column-II
(a) $\% \text{ } \overline{\text{K}}_{(5)} \text{C}_{1+2+(2)} \text{A}_{(9)+1} \underline{\text{G}}_1$	(i) Brassicaceae
(b) $\oplus \overline{\text{K}}_{(5)} \text{C}_{(5)} \text{A}_{(5)} \underline{\text{G}}_{(2)}$	(ii) Liliaceae
(c) $\oplus \overline{\text{P}}_{(3+3)} \text{A}_{3+3} \underline{\text{G}}_{(3)}$	(iii) Fabaceae
(d) $\oplus \overline{\text{K}}_{2+2} \text{C}_4 \text{A}_{2-4} \underline{\text{G}}_{(2)}$	(iv) Solanaceae

Select the correct answer from the options given below.

- | | | | |
|-----------|-------|-------|-------|
| (a) | (b) | (c) | (d) |
| (1) (iv) | (ii) | (i) | (iii) |
| (2) (iii) | (iv) | (ii) | (i) |
| (3) (i) | (ii) | (iii) | (iv) |
| (4) (ii) | (iii) | (iv) | (i) |

16. The body of the ovule is fused within the funicle at [NEET (Phase-1) 2020]

- | | |
|---------------|--------------|
| (1) Micropyle | (2) Nucellus |
| (3) Chalaza | (4) Hilum |

17. The roots that originate from the base of the stem are [NEET (Phase-1) 2020]

- | | |
|-------------------|-------------------|
| (1) Primary roots | (2) Prop roots |
| (3) Lateral roots | (4) Fibrous roots |

18. Ray florets have [NEET (Phase-1) 2020]

- | | |
|-------------------------|----------------------|
| (1) Superior ovary | (2) Hypogynous ovary |
| (3) Half inferior ovary | (4) Inferior ovary |

19. The ovary is half inferior in :

[NEET (Phase-1) 2020]

- | | |
|-------------|---------------|
| (1) Mustard | (2) Sunflower |
| (3) Plum | (4) Brinjal |

20. Which of the following is the correct floral formula of Liliaceae? [NEET (Phase-2) 2020]

- | | |
|---|---|
| (1) $\oplus \overline{\text{K}}_{(5)} \text{C}_{(5)} \text{A}_{(5)} \underline{\text{G}}_{(2)}$ | (2) $\% \overline{\text{K}}_{1+2+(2)} \text{A}_{(9)+1} \underline{\text{G}}_1$ |
| (3) $\oplus \overline{\text{K}}_{(5)} \text{C}_{(5)} \text{A}_{(5)} \underline{\text{G}}_{(2)}$ | (4) $\text{Br } \oplus \overline{\text{P}}_{(3+3)} \text{A}_{3+3} \underline{\text{G}}_{(3)}$ |

21. In some plants thalamus contributes to fruit formation. Such fruits are termed as:

[NEET (Phase-2) 2020]

- (1) Parthenocarpic fruit
- (2) False fruits
- (3) Aggregate fruits
- (4) True fruits

22. Correct position of floral parts over thalamus in mustard plant is [NEET (Phase-2) 2020]

- (1) Gynoecium is situated in the centre, and other parts of the flower are located at the rim of the thalamus, at the same level.
- (2) Gynoecium occupies the highest position, while the other parts are situated below it.
- (3) Margin of the thalamus grows upward, enclosing the ovary completely, and other parts arise below the ovary.
- (4) Gynoecium is present in the centre and other parts cover it partially.

23. Identify the correct features of Mango and Coconut fruits. [NEET (Phase-2) 2020]

- (i) In both fruit is a drupe
- (ii) Endocarp is edible in both
- (iii) Mesocarp in Coconut is fibrous, and in Mango it is fleshy
- (iv) In both, fruit develops from monocarpellary ovary

Select the correct option from below :

- | | |
|------------------------------|------------------------------|
| (1) (i) and (ii) only | (2) (i), (iii) and (iv) only |
| (3) (i), (ii) and (iii) only | (4) (i) and (iv) only |

24. Match the placental types (column-I) with their examples (column-II). [NEET-2019 (Odisha)]

Column-I	Column-II
a. Basal	(i) Mustard
b. Axile	(ii) China rose
c. Parietal	(iii) <i>Dianthus</i>
d. Free central	(iv) Sunflower

Choose the correct answer from the following options :

- | | |
|--------------------------------|--------------------------------|
| (1) a(iii), b(iv), c(i), d(ii) | (2) a(ii), b(iii), c(iv), d(i) |
| (3) a(i), b(ii), c(iii), d(iv) | (4) a(iv), b(ii), c(i), d(iii) |

25. Which of the following shows whorled phyllotaxy?

[NEET-2019 (Odisha)]

- | | |
|-----------------------|---------------------|
| (1) <i>Calotropis</i> | (2) Mustard |
| (3) China rose | (4) <i>Alstonia</i> |

26. Bicarpellary ovary with obliquely placed septum is seen in : [NEET-2019 (Odisha)]

- | | |
|---------------------|---------------------|
| (1) <i>Sesbania</i> | (2) <i>Brassica</i> |
| (3) <i>Aloe</i> | (4) <i>Solanum</i> |

27. Placentation in which ovules develop on the inner wall of the ovary or in peripheral part, is

[NEET-2019]

- (1) Basal (2) Axile
(3) Parietal (4) Free central

28. Persistent nucellus in the seed is known as

[NEET-2019]

- (1) Chalaza (2) Perisperm
(3) Hilum (4) Tegmen

29. Pneumatophores occur in

[NEET-2018]

- (1) Halophytes
(2) Free-floating hydrophytes
(3) Submerged hydrophytes
(4) Carnivorous plants

30. Sweet potato is a modified

[NEET-2018]

- (1) Stem (2) Adventitious root
(3) Rhizome (4) Tap root

31. In *Bougainvillea* thorns are the modifications of

[NEET-2017]

- (1) Stipules (2) Adventitious root
(3) Stem (4) Leaf

32. The morphological nature of the edible part of coconut is

[NEET-2017]

- (1) Perisperm (2) Cotyledon
(3) Endosperm (4) Pericarp

33. Root hairs develop from the region of

[NEET-2017]

- (1) Maturation (2) Elongation
(3) Root cap (4) Meristematic activity

34. Coconut fruit is a

[NEET-2017]

- (1) Drupe (2) Berry
(3) Nut (4) Capsule

35. The term 'polyadelphous' is related to

[NEET (Phase-2) 2016]

- (1) Gynoecium (2) Androecium
(3) Corolla (4) Calyx

36. How many plants among *Indigofera*, *Sesbania*, *Salvia*, *Allium*, *Aloe*, mustard, groundnut, radish, gram and turnip have stamens with different lengths in their flowers?

[NEET (Phase-2) 2016]

- (1) Three (2) Four
(3) Five (4) Six

37. Radial symmetry is found in the flowers of

[NEET (Phase-2) 2016]

- (1) *Brassica* (2) *Trifolium*
(3) *Pisum* (4) *Cassia*

38. Free-central placentation is found in

[NEET (Phase-2) 2016]

- (1) *Dianthus* (2) *Argemone*
(3) *Brassica* (4) *Citrus*

39. Match **Column-I** with **Column-II** and select the correct option using the codes given below

[NEET (Phase-2) 2016]

Column-I**Column-II**

- | | |
|---------------------------------|-------------------|
| a. Pistils fused together | (i) Gametogenesis |
| b. Formation of gametes | (ii) Pistillate |
| c. Hyphae of higher Ascomycetes | (iii) Syncarpous |
| d. Unisexual female flower | (iv) Dikaryotic |

Codes :

- (1) a(iv), b(iii), c(i), d(ii) (2) a(ii), b(i), c(iv), d(iii)
(3) a(i), b(ii), c(iv), d(iii) (4) a(iii), b(i), c(iv), d(ii)

40. Cotyledon of maize grain is called

[NEET-2016]

- (1) Scutellum (2) Plumule
(3) Coleorhiza (4) Coleoptile

41. Tricarpellary, syncarpous gynoecium is found in flowers of

[NEET-2016]

- (1) Poaceae (2) Liliaceae
(3) Solanaceae (4) Fabaceae

42. Which of the following is **not** a stem modification?

[NEET-2016]

- (1) Flattened structures of *Opuntia*
(2) Pitcher of *Nepenthes*
(3) Thorns of citrus
(4) Tendrils of cucumber

43. Stems modified into flat green organs performing the functions of leaves are known as

[NEET-2016]

- (1) Scales (2) Cladodes
(3) Phyllodes (4) Phylloclades

44. The standard petal of a papilionaceous corolla is also called

[NEET-2016]

- (1) Corona (2) Carina
(3) Pappus (4) Vexillum

45. Among china rose, mustard, brinjal, potato, guava, cucumber, onion and tulip, how many plants have superior ovary?

[Re-AIPMT-2015]

- (1) Four (2) Five
(3) Six (4) Three

46. Flowers are unisexual in :

[Re-AIPMT-2015]

- (1) Onion
(2) Pea
(3) Cucumber
(4) China rose

47. Leaves become modified into spines in [AIPMT-2015]
 (1) Silk Cotton (2) *Opuntia*
 (3) Pea (4) Onion
48. Keel is the characteristic feature of flower of [AIPMT-2015]
 (1) Tomato (2) Tulip
 (3) *Indigofera* (4) *Aloe*
49. Perigynous flowers are found in [AIPMT-2015]
 (1) Rose (2) Guava
 (3) Cucumber (4) China rose
50. $\oplus \frac{\sigma}{\tau} K_{(5)} \bar{C}_{(5)} A_{(5)} G_{(2)}$ is the floral formula of [AIPMT-2015]
 (1) *Brassica* (2) *Allium*
 (3) *Sesbania* (4) *Petunia*
51. Which one of the following statements is correct? [AIPMT-2014]
 (1) The seed in grasses is not endospermic
 (2) Mango is a parthenocarpic fruit
 (3) A proteinaceous aleurone layer is present in maize grain
 (4) A sterile pistil is called a staminode
52. An example of edible underground stem is : [AIPMT-2014]
 (1) Carrot (2) Groundnut
 (3) Sweet potato (4) Potato
53. Placenta and pericarp are both edible portions in : [AIPMT-2014]
 (1) Apple (2) Banana
 (3) Tomato (4) Potato
54. When the margins of sepals or petals overlap one another without any particular direction, the condition is termed as : [AIPMT-2014]
 (1) Vexillary (2) Imbricate
 (3) Twisted (4) Valvate
55. An aggregate fruit is one which develops from [AIPMT-2014]
 (1) Multicarpellary syncarpous gynoecium
 (2) Multicarpellary apocarpous gynoecium
 (3) Complete inflorescence
 (4) Multicarpellary superior ovary
56. Non-albuminous seed is produced in [AIPMT-2014]
 (1) Maize (2) Castor
 (3) Wheat (4) Pea
57. Seed coat is not thin, membranous in [NEET-2013]
 (1) Coconut (2) Groundnut
 (3) Gram (4) Maize
58. Among bittergourd, mustard, brinjal, pumpkin, china rose, lupin, cucumber, sunnhemp, gram, guava, bean, chilli, plum, *Petunia*, tomato, rose, *Withania*, potato, onion, *Aloe*, and *Tulip* how many plants have hypogynous flower? [NEET-2013]
 (1) Ten (2) Fifteen
 (3) Eighteen (4) Six
59. In china rose the flower are [NEET-2013]
 (1) Actinomorphic, epigynous with valvate aestivation
 (2) Zygomorphic, hypogynous with imbricate aestivation
 (3) Zygomorphic, epigynous with twisted aestivation
 (4) Actinomorphic, hypogynous with twisted aestivation
60. Placentation in tomato and lemon is [AIPMT (Prelims)-2012]
 (1) Marginal (2) Axile
 (3) Parietal (4) Free central
61. Vexillary aestivation is characteristic of the family [AIPMT (Prelims)-2012]
 (1) Solanaceae (2) Brassicaceae
 (3) Fabaceae (4) Asteraceae
62. Phyllode is present in [AIPMT (Prelims)-2012]
 (1) Australian *Acacia* (2) *Opuntia*
 (3) *Asparagus* (4) *Euphorbia*
63. How many plants in the list given below have composite fruits that develop from an inflorescence? Walnut, poppy, radish, fig, pineapple, apple, tomato, mulberry [AIPMT (Prelims)-2012]
 (1) Two (2) Three
 (3) Four (4) Five
64. Cymose inflorescence is present in [AIPMT (Prelims)-2012]
 (1) *Trifolium* (2) *Brassica*
 (3) *Solanum* (4) *Sesbania*
65. How many plants in the list given below have marginal placentation? [AIPMT (Mains)-2012]
 Mustard, Gram, Tulip, *Asparagus*, Arhar, Sun hemp, Chilli, Colchicine, Onion, Moong, Pea, Tobacco, Lupin
 (1) Four (2) Five
 (3) Six (4) Three
66. The 'Eyes' of the potato tuber are [AIPMT (Prelims)-2011]
 (1) Axillary buds (2) Root buds
 (3) Flower buds (4) Shoot buds

67. Which one of the following statements is **correct**? [AIPMT (Prelims)-2011]

- (1) Flower of tulip is a modified shoot
- (2) In tomato, fruit is a capsule
- (3) Seeds of orchids have oil - rich endosperm
- (4) Placentation in Primrose is basal

68. The **correct** floral formula of chilli is

[AIPMT (Prelims)-2011]

- (1) $\oplus \text{ } \overline{\text{K}}_5 \text{ } \overline{\text{C}}_5 \text{ } \overline{\text{A}}_{(5)} \text{ } \overline{\text{G}}_2$
- (2) $\oplus \text{ } \overline{\text{K}}_5 \text{ } \overline{\text{C}}_5 \text{ } \overline{\text{A}}_{(5)} \text{ } \overline{\text{G}}_{(2)}$
- (3) $\oplus \text{ } \overline{\text{K}}_{(5)} \text{ } \overline{\text{C}}_{(5)} \text{ } \overline{\text{A}}_{(2)} \text{ } \overline{\text{G}}_2$
- (4) $\oplus \text{ } \overline{\text{K}}_{(5)} \text{ } \overline{\text{C}}_{(5)} \text{ } \overline{\text{A}}_{(5)} \text{ } \overline{\text{G}}_2$

69. A drupe develops in [AIPMT (Prelims)-2011]

- (1) Tomato
- (2) Mango
- (3) Wheat
- (4) Pea

70. Flowers are Zygomorphic in

[AIPMT (Prelims)-2011]

- (1) *Datura*
- (2) Mustard
- (3) Gulmohur
- (4) Tomato

71. Whorled simple leaves with reticulate venation are present in [AIPMT (Mains)-2011]

- (1) China Rose
- (2) *Alstonia*
- (3) *Calotropis*
- (4) Neem

72. Which one of the following pairs is **wrongly** matched while the remaining three are correct?

[AIPMT (Mains)-2011]

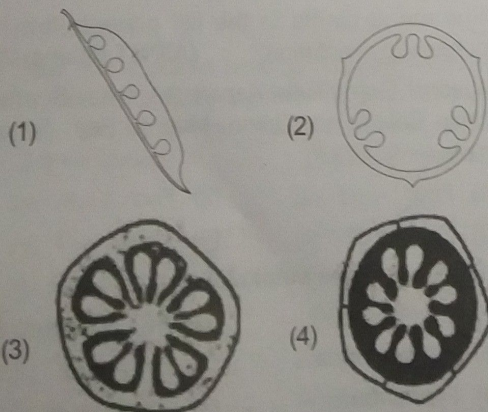
- (1) *Bryophyllum* – Leaf buds
- (2) *Agave* – Bulbils
- (3) *Penicillium* – Conidia
- (4) Water hyacinth – Runner

73. Sweet potato is homologous to

[AIPMT (Mains)-2011]

- (1) Ginger
- (2) Turnip
- (3) Potato
- (4) *Colocasia*

74. Which one of the following diagrams represent the placentation in *Dianthus*? [AIPMT (Mains)-2011]



75. The ovary is half inferior in flowers of :

[AIPMT (Prelims)-2011]

- (1) Guava
- (2) Peach
- (3) Cucumber
- (4) Cotton

76. The technical term used for the androecium in a flower of China rose (*Hibiscus rosa-sinensis*) is

[AIPMT (Prelims)-2010]

- (1) Polyadelphous
- (2) Monadelphous
- (3) Diadelphous
- (4) Polyandrous

77. The scutellum observed in a grain of wheat or maize is comparable to which part of the seed in other monocotyledons? [AIPMT (Prelims)-2010]

- (1) Plumule
- (2) Cotyledon
- (3) Endosperm
- (4) Aleurone layer

78. Keel is characteristic of the flowers of

[AIPMT (Prelims)-2010]

- (1) Bean
- (2) Gulmohur
- (3) *Cassia*
- (4) *Calotropis*

79. In unilocular ovary with a single ovule the placentation is [AIPMT (Prelims)-2010]

- (1) Axile
- (2) Marginal
- (3) Basal
- (4) Free central

80. Ovary is half-inferior in the flowers of

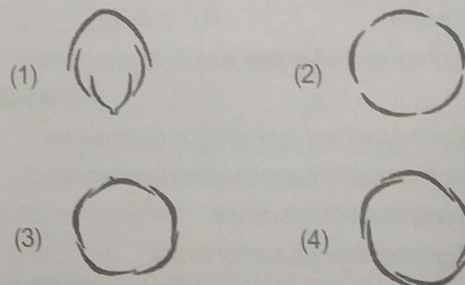
[AIPMT (Prelims)-2010]

- (1) Cucumber
- (2) Guava
- (3) Plum
- (4) Brinjal

81. Which one of the following is a xerophytic plant in which the stem is modified into the flat, green and succulent structure? [AIPMT (Mains)-2010]

- (1) *Opuntia*
- (2) *Casuarina*
- (3) *Hydrilla*
- (4) *Acacia*

82. Aestivation of petals in the flower of cotton is correctly shown in [AIPMT (Mains)-2010]



83. The **correct** floral formula of soyabean is

[AIPMT (Mains)-2010]

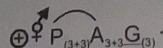
- (1) $\% \overline{\text{K}}_{(5)} \text{ } \overline{\text{C}}_{1+(2)+2} \text{ } \overline{\text{A}}_{(9)+1} \text{ } \overline{\text{G}}_1$
- (2) $\% \overline{\text{K}}_{(5)} \text{ } \overline{\text{C}}_{1+(2)+2} \text{ } \overline{\text{A}}_{(9)+1} \text{ } \overline{\text{G}}_1$
- (3) $\% \overline{\text{K}}_{(5)} \text{ } \overline{\text{C}}_{1+2+(2)} \text{ } \overline{\text{A}}_{(9)+1} \text{ } \overline{\text{G}}_1$
- (4) $\% \overline{\text{K}}_{(5)} \text{ } \overline{\text{C}}_{1+2+(2)} \text{ } \overline{\text{A}}_{(9)+1} \text{ } \overline{\text{G}}_1$

NEET

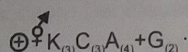
84. Consider the following four statements A, B, C and D and select the right option for two **correct** statements

Statements

- (A) In vexillary aestivation, the large posterior petal is called - standard, two lateral ones are wings and two small anterior petals are termed keel
(B) The floral formula for Liliaceae is



- (C) In pea flower the stamens are monadelphous
(D) The floral formula for Solanaceae is



The **correct** statements are

[AIPMT (Mains)-2010]

- (1) (A) and (C) (2) (A) and (B)
(3) (B) and (C) (4) (C) and (D)

85. Vegetative propagation in *Pistia* occurs by

[AIPMT (Mains)-2010]

- (1) Stolon (2) Offset
(3) Runner (4) Sucker

86. The floral formula $\oplus \frac{\text{K}_{(5)} \text{C}_{(5)} \text{A}_{(5)} \text{G}_{(2)}}{\text{G}_{(2)}}$ is that of

[AIPMT (Prelims)-2009]

- (1) Soybean (2) Sunnhemp
(3) Tobacco (4) Tulip

87. Vegetative propagation in mint occurs by :

[AIPMT (Prelims)-2009]

- (1) Offset (2) Rhizome
(3) Sucker (4) Runner

88. Cotyledons and testa respectively are edible parts in:

[AIPMT (Prelims)-2009]

- (1) Walnut and tamarind
(2) French bean and coconut
(3) Cashew nut and litchi
(4) Groundnut and pomegranate

89. An example of axile placentation is :

[AIPMT (Prelims)-2009]

- (1) *Dianthus*
(2) Lemon
(3) Marigold
(4) *Argemone*

90. Thorn of *Bougainvillea* and tendril of cucurbita are example of

[AIPMT (Prelims)-2008]

- (1) Retrogressive evolution
(2) Analogous organs
(3) Homologous organs
(4) Vestigial organs

91. The fruit is chambered, developed from inferior ovary and has seeds with succulent testa in

[AIPMT (Prelims)-2008]

- (1) Cucumber (2) Pomegranate
(3) Orange (4) Guava

92. Endosperm is consumed by developing embryo in the seed of

[AIPMT (Prelims)-2008]

- (1) Maize (2) Coconut
(3) Castor (4) Pea

93. Replum is present in the ovary of flower of

[AIPMT (Prelims)-2008]

- (1) Pea (2) Lemon
(3) Mustard (4) Sunflower

94. Pineapple (annanas) fruit develops from :

[AIPMT (Prelims)-2006]

- (1) A unilocular polycarpellary flower
(2) A multipistillate syncarpous flower
(3) A cluster of compactly borne flowers on a common axis
(4) A multilocular monocarpellary flower

95. Pentamerous, actinomorphic flowers, bicarpellary ovary with oblique septa, and fruit a capsule or berry, are characteristic features of :

[AIPMT (Prelims)-2006]

- (1) Asteraceae (2) Brassicaceae
(3) Solanaceae (4) Liliaceae

96. What type of placentation is seen in sweet pea?

[AIPMT (Prelims)-2006]

- (1) Basal (2) Axile
(3) Free central (4) Marginal

Questions asked Prior to Medical Ent. Exams. 2005

97. Pneumatophores are found in

- (1) The vegetation which is found in marshy and saline lake
(2) The vegetation which is found in acidic soil
(3) Xerophytes
(4) Epiphytes

98. In a longitudinal section of a root, starting from the tip upward, the four zones occur in the following order

- (1) Root cap, cell division, cell enlargement, cell maturation
(2) Root cap, cell division, cell maturation, cell enlargement
(3) Cell division, cell enlargement, cell maturation, root cap
(4) Cell division, cell maturation, cell enlargement, root cap

99. A plant bears fruit, has a column of vascular tissue and a tap root system. This plant is a/an
 (1) Angiosperm and dicot
 (2) Gymnosperm and dicot
 (3) Angiosperm and monocot
 (4) Gymnosperm and monocot
100. What is the eye of potato?
 (1) Axillary bud (2) Accessory bud
 (3) Adventitious bud (4) Apical bud
101. How many plants among China rose, *Ocimum*, sunflower, mustard, *Alstonia*, guava, *Calotropis* and *Nerium* (Oleander) have opposite phyllotaxy?
 (1) Two (2) Three
 (3) Four (4) Five
102. The lid of pitcher in pitcher plant, is the modification of
 (1) Leaf apex (2) Leaf base
 (3) Petiole (4) Lamina
103. In a cymose inflorescence the main axis
 (1) Terminates in a flower
 (2) Has unlimited growth
 (3) Bears a solitary flower
 (4) Has unlimited growth but lateral branches end in flowers
104. Inflorescence is racemose in
 (1) Soyabean (2) Brinjal
 (3) Tulip (4) *Aloe*
105. Floral features are chiefly used in angiosperms, identification, because
 (1) Flowers can be safely pressed
 (2) Reproductive parts are more stable and conservative than vegetative parts
 (3) Flowers are nice to work with
 (4) Flowers are of various colours
106. Tetrastemonous condition occurs in
 (1) Cruciferae (2) Malvaceae
 (3) Solanaceae (4) Liliaceae
107. Anthesis is a phenomenon which refers to
 (1) Reception of pollen by stigma
 (2) Formation of pollen
 (3) Development of anther
 (4) Opening of flower bud
108. Coir is the commercial product of coconut's
 (1) Endocarp
 (2) Endosperm
 (3) Pericarp
 (4) Mesocarp
109. Which plant will lose its economic value, if its fruits are produced by induced parthenocarpy?
 (1) Orange (2) Banana
 (3) Grape (4) Pomegranate
110. Edible part in coconut is
 (1) Endosperm (2) Pericarp
 (3) Mesocarp (4) Fleshy aril
111. Edible part of banana is
 (1) Epicarp
 (2) Mesocarp and less developed endocarp
 (3) Endocarp and less developed mesocarp
 (4) Epicarp and mesocarp
112. Edible part in mango is
 (1) Mesocarp (2) Epicarp
 (3) Endocarp (4) Epidermis
113. Juicy hair-like structures observed in the lemon fruit develop from
 (1) Exocarp
 (2) Mesocarp
 (3) Endocarp
 (4) Mesocarp and endocarp
114. Scutellum in a caryopsis represents
 (1) Outermost layer of endosperm
 (2) A sheath that protects the radicle
 (3) The place where the seed is attached to raphe
 (4) A cotyledon
115. An example of a seed with endosperm, perisperm and caruncle is
 (1) Castor (2) Cotton
 (3) Coffee (4) Lily
116. Which is expressing right appropriate pairing?
 (1) Brassicaceae - Sunflower
 (2) Malvaceae - Cotton
 (3) Papilionaceae - Catechu
 (4) Liliaceae - Wheat
117. Bicarpellary gynoecium and oblique ovary occur in
 (1) Mustard (2) Banana
 (3) *Pisum* (4) Brinjal

SECTION - D

NEET Booster Questions

1. Endosperm is consumed during seed development and the food is stored in cotyledons. This statement is true for
 (1) Gram, Tulip, *Piper*
 (2) Wheat, *Pisum*, *Sorghum*
 (3) Onion, Maize, Orchid
 (4) *Crotalaria*, *Glycirriza*

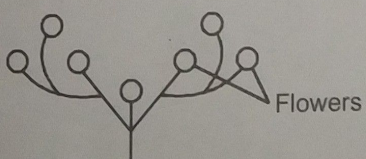
2. In flowers of guava and cucumber
 (1) Ovary is semi-inferior
 (2) Stamens are superior in position
 (3) Thalamus is convex or conical
 (4) Ovary wall and thalamus are free from each other
3. Which is a **correct** match?
 (1) *Indigofera* – Dye – Solanaceae
 (2) Muliathi, Belladonna – Medicine – Fabaceae
 (3) *Gloriosa*, tulip – Ornamentals – Liliaceae
 (4) *Aloe* – Cosmetics – Brassicaceae
4. Mark the **correct** option w.r.t. analogous structures.
 (1) Phylloclade, cladode
 (2) Spine, phylloclade
 (3) Phylloclade, phyllode
 (4) Phyllode, thorn
5. Flowers of tobacco and onion plants have
 (1) Bicarpellary gynoecium
 (2) Marginal placentation
 (3) Axile placentation
 (4) Tricarpellary gynoecium
6. How many of the following plants show cohesion of stamens?

<i>Pisum sativum</i> , Tomato, China rose, Brinjal, <i>Citrus</i>
--

 (1) Four (2) Five
 (3) Two (4) Three
7. In which of the following plants, adventitious root become swollen and fleshy due to storage of food?
 (1) Radish, turnip (2) Beet, carrot
 (3) Sweet potato (4) Ginger, *Dahlia*
8. Find the **mis-matched** pair w.r.t. functions of stem
 (1) Protection against – Thorns of
 grazing animals *Bougainvillea*
 (2) Storage of food – Tuber of potato
 (3) Perennation – Stolon of grass
 (4) Manufacture of food – Leaf base of
 Nepenthes
9. Which of the following is **incorrectly** matched?
 (1) Modified tap root for respiration – *Rhizophora*
 (2) Storage tap root – Turmeric
 (3) Modified tap root for food storage – Turnip
 (4) Photosynthetic stem – *Opuntia*
10. The modified stem in potato, ginger and *Amorphophallus* is concerned with how many similar functions?
 a. Food synthesis
 b. Food storage
 c. Defensive or protective
 d. Vegetative reproduction
 e. Perennation
 (1) Five (2) Four
 (3) Three (4) Two
11. Find the **correct** match.
 a. Pulvinus leaf base (i) China rose
 b. Sheathing leaf base (ii) *Nepenthes*
 c. Stipulate leaf (iii) Grasses
 d. Tendrillar petiole (iv) *Mimosa*
 (1) a(iv), b(iii), c(i), d(ii) (2) a(iv), b(iii), c(ii), d(i)
 (3) a(i), b(iii), c(iv), d(ii) (4) a(iii), b(iv), c(i), d(ii)
12. Flowers having corolla of different sized petals represent which one of the following aestivation?
 (1) Valvate
 (2) Twisted
 (3) Imbricate
 (4) Vexillary
13. Read the statements given below and select correct one(s).
 A. Maturation region of root gives rise to exogenous and endogenous structures.
 B. Root cap is thimble-like protective structure in all land and aquatic plants.
 C. Supporting roots in maize arise from base of stem.
 (1) A & B
 (2) B & C
 (3) Only A
 (4) All are correct
14. False fruits with fleshy and edible thalamus are
 (1) Coconut, Apple
 (2) Pear, Date palm
 (3) Strawberry, Tomato
 (4) Pear, Apple and Strawberry
15. Find the **correct** option w.r.t fruits of almond and *Mangifera indica*.
 (1) Develop from monocarpellary epigynous flowers
 (2) Endocarp is thin and membranous
 (3) Fleshy and pseudocarpic
 (4) Do not dehisce or split at maturity

16. The correct floral formula of *Brassica campestris* is
- $\text{♀ } K_{2+2} C_{x4} A_{2+4} \underline{G_{(2)}}$
 - $\text{♀ } K_{x4} C_{2+2} A_{2+4} \underline{G_{(2)}}$
 - $\text{♀ } K_{2+2} C_{x4} A_{2+2} \underline{G_{(2)}}$
 - $\text{♀ } K_{2+2} C_{x4} A_{(2+4)} \underline{G_2}$
17. In some plants growing in swampy areas, many roots come out of the ground vertically upwards to get oxygen for respiration. Such roots are
- Branches of tap root system
 - Green and photosynthetic
 - Positively geotropic
 - Provide mechanical support to heavy branches
18. Read the following statements (w.r.t. inflorescence of radish)
- Older flowers are present at the base of axis
 - Main axis terminates into a flower
- Both (a) & (b) are correct
 - Only (a) is correct
 - Both (a) & (b) are incorrect
 - Only (b) is correct
19. Mark the correct feature w.r.t. cucumber
- Free central placentation
 - Leaf tendril
 - Superior ovary
 - Epigynous flowers
20. Leaf or its part may modify into long, slender, thread-like, sensitive structures in all, **except**
- Garden pea
 - Pumpkin
 - Sweet pea
 - Nepenthes*
21. How many plants given below in box have actinomorphic flowers with superior ovary?
- Tomato, Cotton, Cucumber,
Guava, China rose, Lily
- Four
 - Five
 - Six
 - Three
22. If the margins of petals overlaps one another in any particular direction then it is called _____ and represented by _____ family.
- Valvate; *Solanum*
 - Twisted; China rose
 - Imbricate; *Calotropis*
 - Vexillary; Cotton
23. Flower with ovary completely enclosed by thalamus is found in
- Plum
 - Petunia*
 - Ray florets of sunflower
 - Lady's finger
24. Some plants of arid region modify their stem into
- Spines for defence in cacti
 - Flattened phyllode as in *Euphorbia*
 - Flattened phylloclade for food synthesis
 - More than one option is correct
25. In which of the following the lateral branches originate from the basal and underground portion of the main stem, grow horizontally beneath the soil and then come out obliquely upward giving rise to leafy shoot?
- Pineapple and *Chrysanthemum*
 - Mint and strawberry
 - Grasses and mint
 - Strawberry and jasmine
26. The origin of root hairs and lateral roots is
- Exogenous and endogenous respectively
 - Endogenous and exogenous respectively
 - Both endogenously
 - Both exogenously
27. Find odd one w.r.t. radicle leaves
- | | |
|------------|------------|
| (1) Maize | (2) Radish |
| (3) Carrot | (4) Turnip |
28. Match the following
- | Column I | Column II |
|--------------------------------|--------------------------------|
| a. <i>Cuscuta</i> | (i) Hygroscopic root |
| b. <i>Rhizophora</i> | (ii) Stilt root |
| c. <i>Vanda</i> | (iii) Haustorial root |
| d. Sugarcane | (iv) Respiratory root |
| (1) a(i), b(iii), c(iv), d(ii) | (2) a(iii), b(iv), c(i), d(ii) |
| (3) a(iii), b(i), c(iv), d(ii) | (4) a(ii), b(iv), c(i), d(iii) |
29. Stem modified into green, flattened branches of unlimited growth for assimilatory function is
- Phyllode
 - Phylloclade
 - Cladode
 - Bulbil
30. Leafless stem of onion which produces cluster of terminal flowers is called as
- Peduncle
 - Floral axis
 - Scape
 - Rachis
31. Which is not a modification of stem?
- Tuber of potato
 - Pitcher of *Nepenthes*
 - Corm of *Colocasia*
 - Rhizome of ginger

NEET

32. Reticulate venation is the feature of dicots but some monocots also exhibit this venation, like
 (1) *Calophyllum* (2) *Smilax*
 (3) *Eryngium* (4) *Corymbium*
33. Thorns, spines and prickles work as _____ in plants.
 (1) Respiratory organs (2) Excretory organs
 (3) Organs of offense (4) Defensive organs
34. Leaflet tendril and entire leaf tendril are found in respectively
 (1) *Cucurbita*, *Smilax*
 (2) *Pisum*, *Lathyrus sativus*
 (3) *Passiflora*, *Vitis*
 (4) *Luffa*, *Pisum*
35. Select an **incorrect** match.
 (1) Whorled phyllotaxy – *Alstonia*, *Nerium*
 (2) Decussate phyllotaxy – *Quisqualis*, *Psidium*, *Syzygium*
 (3) Alternate phyllotaxy – Mustard, China rose, Sunflower
 (4) Opposite phyllotaxy – *Zinnia*, *Calotropis*
36. Which of the following is not the modification of leaf?
 (1) Tendril of watermelon (2) Tendril in pea
 (3) Tendril of sweet pea (4) Both (1) and (3)
37. Select a **correct** set.
- | Plant | Organ | Function |
|----------------------|----------|---------------------|
| (1) <i>Vanda</i> | Tap root | Moisture absorption |
| (2) <i>Jasmine</i> | Offset | Photosynthesis |
| (3) <i>Pineapple</i> | Sucker | Propagation |
| (4) <i>Nepenthes</i> | Leaf tip | Photosynthesis |
38. Inflorescence with thick, fleshy axis and large coloured bracts is
 (1) Spathe (2) Spadix
 (3) Spikelet (4) Hypanthodium
39. Bisexual, sessile and bracteate flowers develop acropetally in
 (1) Raceme (2) Panicle
 (3) Spike (4) Corymb
40. Which kind of inflorescence is shown in the figure given below?
- 
- (1) Simple dichasial cymose
 (2) Verticillaster
 (3) Simple monochasial cymose
 (4) Polychasial cymose
41. Find the odd one (w.r.t. inflorescence axis elongation)
 (1) Umbel
 (2) Spike
 (3) Raceme
 (4) Catkin
42. The type of inflorescence characterized by having dimorphic flower is
 (1) Catkin (2) Umbel
 (3) Corymb (4) Capitulum
43. In Head or Capitulum inflorescence
 (1) Ray florets : pistillate and neuter; actinomorphic
 (2) Disc florets : bisexual; zygomorphic
 (3) Ray florets : pistillate or neuter; zygomorphic
 (4) Disc florets : pistillate; actinomorphic
44. A. *Citrus* have polyandrous stamens.
 B. In epitepalous condition, the cohesion occurs between tepal and filament of stamen.
 C. Tetrastemonous condition consists of two long and four short stamen filaments.
 (1) All are incorrect (2) Only A is incorrect
 (3) Only C is incorrect (4) Only B is incorrect
45. Match the following:
- | Column I | Column II |
|--------------------------------|--------------------------------|
| a. Amphicarca | (i) <i>Aegle</i> |
| b. Pepo | (ii) <i>Cucumis</i> |
| c. Drupe | (iii) <i>Ananas</i> |
| d. Sorosis | (iv) <i>Juglans</i> |
| (1) a(i), b(ii), c(iv), d(iii) | (2) a(i), b(ii), c(iii), d(iv) |
| (3) a(iii), b(ii), c(i), d(iv) | (4) a(ii), b(i), c(iv), d(iii) |
46. Find **incorrect** matching
 (1) Pome – Fleshy thalamus
 (2) Schizocarp – Mericarp
 (3) Balusta – Aril
 (4) Syconus – Hypanthodium
47. Most common fruits of fabaceae and brassicaceae are respectively
 (1) Lomentum and Siliqua
 (2) Legume and Samara
 (3) Lomentum and Silicula
 (4) Legume and Siliqua
48. A dry dehiscent fruit which develops from multicarpellary, syncarpous superior ovary with axile placentation, is
 (1) Capsule
 (2) Siliqua
 (3) Achene
 (4) Lomentum

49. Scutellum is a
 (1) Food storing haploid structure in grass embryo
 (2) Remnant of cotyledon in maize
 (3) Shield shaped and large cotyledon of grasses
 (4) Protective covering of plumule in grasses
50. Flowers with monadelphous condition and pentacarpellary ovary are present in
 (1) China rose family (2) Pea family
 (3) Potato family (4) *Yucca* family
51. There are given some plants below, select among the options that, to how many families they belong? Plants are - *Crotolaria*, *Atropa*, *Solanum*, *Arachis*, *Bambusa* and *Triticum*
 (1) 4 families (2) 6 families
 (3) 2 families (4) 3 families
52. Floral formula $\text{Br. } \oplus \text{ } \overline{\text{P}}_{(3+3)} \text{ } \overline{\text{A}}_{3+3} \text{ } \overline{\text{G}}_{(3)}$ represents the family with one of the following group of plants?
 (1) *Crotolaria* and *Indigofira*
 (2) Lily and *Petunia*
 (3) *Allium* and *Asparagus*
 (4) Pea and mustard
53. Find out a set of common N_2 fixing fodder plants
 (1) *Trifolium*, *Atropa* (2) *Withania*, *Abrus*
 (3) *Sesbania*, *Trifolium* (4) *Aloe*, *Gloriosa*
54. Family fabaceae is concerned with
 (1) Diadelphous stamen, marginal placentation, obliquely placed ovary and vexillary corolla
 (2) Diadelphous stamen, marginal placenta and large posterior petal
 (3) Basal placentation, versatile stamens, spikelet inflorescence
 (4) Axile placentation, non-endospermic seed, legume fruit
55. Butterfly shaped corolla, monocarpellary ovary and zygomorphic flowers are found in family
 (1) Liliaceae (2) Solanaceae
 (3) Fabaceae (4) Graminae
56. Most primitive and advanced families of dicots are respectively
 (1) Solanaceae and Asteraceae
 (2) Leguminosae and Poaceae
 (3) Ranunculaceae and Asteraceae
 (4) Asteraceae and Cucurbitaceae

