Exercise-1

ONLY ONE OPTION CORRECT TYPE

SECTION - A # ROOT

1. Which is not a stem modification
(1) Ginger (2) Mango Ginger (3) Potato (4) Garlic

2. Climbing roots are present in
(1) *Loranthus* (2) *Curcuma amada* (3) Rose (4) *Piper betle*

3. White spongy floating roots occur in
(1) *Trapa* (2) *Nymphea* (3) *Eichhornia* (4) *Jussiaea*

4. In Maize, the fibrous roots develop from
(1) Lower nodes (2) Upper nodes (3) Upper internodes (4) None of the above

5. Prop roots of Banyan tree are meant for
(1) Respiration (2) Absorption of water from soil
(3) Retention of water in soil (4) Providing support to big tree

6. Adventitious roots are adventitous in their-
(1) Function (2) Positon (3) Place of origin (4) Internal structure

SECTION - B # STEM

1. Muhlenbeckia (= *Coccoloba*) is an example of
(1) Phylloclade (2) Cladode (3) Stem tuber (4) Leaves

2. Prickles of Rose are
(1) Modified leaves (2) Modified stipules
(3) Exogenous in origin (4) Endogenous in origin

3. Largest bud is of
(1) Cabbage (2) Cauliflower (3) *Agave* (4) Onion

4. In *Amorphophallus*, vegetative multiplication occurs through
(1) Bulbils (2) Rhizome (3) Corm (4) Offset

5. In *Passiflora*, the tendrils are modified
(1) Axillary buds (2) Upper leaflets (3) Whole leaves (4) Stipules

6. Vegetative reproduction occurs by bulbil in
(1) *Agave* (2) *Colocasia* (3) *Zingiber* (4) *Vallisneria*

7. Thorn is a stem structure because it
(1) Develops from trunk (2) Develops from axillary bud
(3) Grows from external surface (4) is pointed

SECTION - C # LEAF

1. *Parkinsonia* shows one of the following modifications
(1) Phylloclade (2) Cladode (3) Phyllode (4) Leaf pitcher

2. Adnate stipules occur in
(1) China Rose (2) *Gardenia* (3) Rose (4) Cotton

3. A portion of leaf blade can regenerate whole plant in
(1) *Dioscorea* (2) *Bryophyllum* (3) Pineapple (4) Peepal

4. Tendrillar stipules occur in
(1) *Dolichos lablab* (2) *Acacia* (3) *Smilax* (4) Mango

5. Bud scales of *Ficus* are modified
(1) Leaves (2) Stipules (3) Stem (4) Prickles

6. Spiny leaf margins are found in
(1) *Opuntia* (2) *Papaver* (3) *Argemone* (4) *Polyalthia*

7. Swollen petiole of *Eichhornia* has
(1) Collenchyma (2) Chlorenchyma (3) Parenchyma (4) Aerenchyma

8. Free lateral stipules occur in
(1) Mango/*Mangifera* (2) Maize/*Zea*
(3) Rice/*Oryza* (4) China Rose/*Hibiscus*

SECTION - D # INFLORESCENCE

1. The inflorescence of Onion is
(1) Cyme umbel (2) Racemose umbel (3) Corymb (4) Catkin

2. Compound umbels occur in
(1) *Coriandrum* (2) *Daucos carota* (3) *Foeniculum* (4) All the above

3. The glumes are modified
(1) Petals (2) Sepals (3) Tepals (4) Bracts

4. Three types of flowers occur in inflorescence of
(1) Capitulum (2) Hypanthodium (3) Cyathium (4) Umbel

5. Inflorescence having a flattened axis, sessile flowers and a whorl of involucral bracts is
(1) Umbel (2) Head (3) Corymb (4) Raceme

6. Cyathium and hypanthodium types of inflorescence are similar in having
(1) Nectar glands (2) Apical pore (3) Petaloid bracts (4) Unisexual flowers

7. Floral bud tendril is found in
(1) *Antigonon* (2) *Smilax* (3) Rose (4) *Bryophyllum*

8. Pappus is modification of
(1) Bracts (2) Bracteoles (3) Corolla (4) Calyx

SECTION - E # FLOWER

1. Petals possess claw in
(1) Solanaceae (2) Liliaceae (3) Malvaceae (4) Cruciferae

2. Aestivation of corolla in Pea is
(1) Contorted (2) Valvate (3) Imbricate (4) Vexillary

3. If stamens are attached to petals then it is called
(1) Antipetalous (2) Epipetalous (3) Epiphyllous (4) Episepalous

4. A typical flower with superior ovary and other floral parts inferior is
(1) Polygamous (2) Hypogynous (3) Perigynous (4) Epigynous

5. Stamens adnate to perianth are
(1) Epiphyllous (2) Epipetalous (3) Episepalous (4) Gynandrous

6. In monoadelphous condition, stamens have
(1) Filaments of all united in one group but anthers are free
(2) Filaments united in groups but all anthers are free
(3) Anthers are fused but filaments are free
(4) Both anthers and filaments are fused.

7. An apocarpous flower is found in
(1) *Caesalpenia* (2) *Ranunculus* (3) *Brassica* (4) *Datura*

8. Persistent accrescent calyx around a berry is found in
(1) *Capsicum* (2) *Solanum* (3) *Physalis* (4) Potato

9. Gynobasic style is found in
(1) Labiatae/Lamiaceae (2) Liliaceae
(3) Gramineae/Poaceae (4) Compositae/Asteraceae

10. Syngenesious condition is found in
(1) Asteraceae (2) Labiatae (3) Solanaceae (4) Fabaceae

11. Whorl of small green structures present around Sunflower is
(1) Epicalyx (2) Calyx (3) Leaves (4) Involucre

12. A flower which can be divided into two equal halves by only one plane is
(1) Zygomorphic (2) Actinomorphic (3) Perfect (4) Regular.

13. Union of stamens with carpels form a complex called
(1) Gynostegium (2) Syngenesious (3) Gynandrium (4) Protandrous

14. Axile placentation is found in syncarpous ovaries. In this placentation the ovules are arranged along the -
(1) Base of the ovary (2) Margin of the ovary
(3) Axis in the centre of the ovary (4) None of the above

15. Find out the false statement from below ones -

(i) Calyx and corolla are reproductive organs of a flower.

(ii) Zygomorphic flower can be divided into two equal radial halves in any radial plane.

(iii) Flowers without bracts are termed as bracteate.

(iv) Parthenocarpic fruit is formed after fertilization of the ovary.

(v) In legumes seed is non-endospermic

(vi) Ovary is inferior in fabaceae

(vii) A fertile stamen is called staminode

(viii) Radicle buds develop on roots

(1) I, II, III, IV, VI, VII (2) I, II, V, VIII (3) III, IV, VIII (4) IV, V, VIII

SECTION - F # FRUIT

1. Aggregate fruit is formed from

(1) Polycarpellary apocarpous gynoecium

(2) Polycarpellary syncarpous gynoecium

(3) An inflorescence

(4) Both 1 and 2.

2. Fruit developed from a superior unilocular ovary which dehisces by one suture only is

(1) Follicle (2) Legume (3) Silicula (4) Siliqua.

3. In Asteraceae/Sunflower, the fruit is

(1) Drupe (2) Cypsela (3) Berry (4) Carcerulus.

4. Which one of the following is a nut?

(1) Walnut (2) Cashewnut

(3) Groundnut/Areca nut (4) Both 1 and 2.

5. Fruit of *Calotropis* is

(1) Nut (2) Follicle (3) Berry (4) Siliqua.

6. Edible part of Areca Nut is

(1) Epicarp (2) Mesocarp (3) Endocarp (4) Endosperm.

7. The fruit of *Annona squamosa* (Custard Apple) is

(1) Etaerio of berries (2) Etaerio of drupes

(3) Hypanthodium (4) Etaerio of achenes.

8. In a fruit the pericarp is fused with testa of the single seed. It is

(1) Nut (2) Achene

(3) Utricle (4) Caryopsis.

9. Lotus fruit is

(1) Etaerio of berries (2) Etaerio of drupes

(3) Etaerio of achenes (4) Capsule.

10. Fruit of Opium Poppy (*Papaver somniferum*) is

(1) Pepo (2) Berry

(3) Loculicidal capsule (4) Poricidal capsule.

11. Dry schizocarpic dehiscent fruit formed from tricarpellary, syncarpous, superior ovary with axile placentation is
(1) Regma (2) Septicidal capsule (3) Septifragal capsule (4) Siliqua.

12. In Pineapple, the edible part is
(1) Pericarp and thalamus (2) Rachis/peduncle, bracts, perianth and pericarps
(3) Mesocarp and endocarp (4) Pericarp and placenta.

SECTION - G # SEEDS

1. Epigeal germination occurs in
(1) Pea (2) Gram (3) Castor (4) Maize.

2. Caruncle develops from
(1) Outer integument (2) Cotyledon (3) Funiculus (4) Inner integument.

3. Scutellum is
(1) Single fleshy cotyledon of *Trapa* (2) Single shield-shaped cotyledon of cereals
(3) Covering of plumule (4) Covering of radicle.

4. The storage tissue of Rice and other cereal grains is
(1) Embryo (2) Seed (3) Endosperm (4) Fruit.

5. An albuminous germination is
(1) Castor (2) Bean (3) Gram (4) Pea

6. Oil is stored in the endosperm of
(1) Groundnut (2) Soybean (3) Coconut (4) Cashewnut.

7. Aleurone layer helps in
(1) Storage of food in endosperm (2) Protection of embryo
(3) Utilization of stored food (4) All the above.

SECTION - H # FAMILIES OF FLOWERING PLANTS

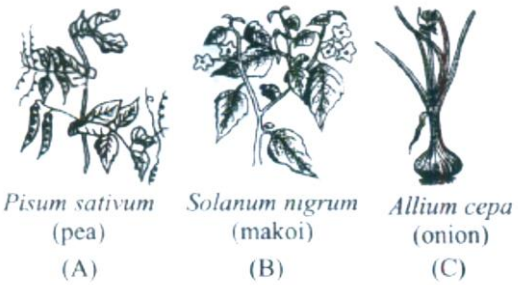
1. Which one of the following is correct explanation for the given floral formula?

% ⚥ $K_{(5)}C_{1+2+(2)}A_{(9)+1}\underline{G}_1$

(1) Zygomorphic, bisexual, sepals five and gamosepalous, petals five and papilionaceous, anthers ten and monadelphous, ovary superior and monocarpellary.
(2) Zygomorphic, unisexual, sepals five and gamosepalous, petals five and polypetalous, anthers nine united and one free, ovary superior and monocarpellary.
(3) Zygomorphic, bisexual, sepals five and gamosepalous, petals five and papilionaceous, anthers ten and diadelphous, ovary superior and monocarpellary.
(4) Zygomorphic, bisexual, sepals five and united, petals five and united, anthers ten and diadelphous, ovary superior and monocarpellary.

2. Pulses yielding main family of plants is:-
(1) Poaceae (Graminae) (2) Cucurbitaceae
(3) Liliaceae (4) Papilionaceae

3. Identify the correct families of the given plant species (A, B and C)



Pisum sativum (pea) (A) *Solanum nigrum* (makoi) (B) *Allium cepa* (onion) (C)

(1) A-Liliaceae, B-Compositae, C-Malvaceae
(2) A-Fabaceae, B-Solanaceae, C-Liliaceae
(3) A-Compositae, B-Malvaceae, C-Liliaceae
(4) A-Solanaceae, B-Fabaceae, C-Liliaceae

4. Many plants of which family are rich source of proteins -
(1) Cruciferae (2) Leguminosae (3) Liliaceae (4) compositae

5. In family papilionaceae, 5 petals form a unique association, In which 3 different elements participate, these are vexillum, alae & carina. What is the number of these elements-
(1) 1, 2, 2 respectively (2) 2, 1, 2 respectively
(3) 1, 1, 3 respectively (4) 2, 2, 1 respectively

6. Which of the following is not the characteristic features of fabaceae?
(1) Tap root system, compound leaves and racemose inflorescence.
(2) Flowers actinomorphic, twisted aestivation and gamopetalous.
(3) Stamens 10, introrse, basi fixed, dithecous.
(4) Monocarpellary, ovary superior and bent stigma.

7. Match column-I with column-II and choose the correct option.

Column-I (Members of Fabaceae)	**Column-II (Economic importance)**
A. Gram, sem, moong, soyabean	I. Medicine
B. Soyabean, groundnut	II. Ornamental
C. *Indigofera*	III. Fodder
D. Sunhemp	IV. Fibres
E. *Sesbania, Trifolium*	V. Dye
F. Lupin, sweet pea	VI. Edible oil
G. Mulethi	VII. pulses

(1) A–I, B–II, C–III, D–IV, E–V, F–VI, G–VII
(2) A–VII, B–VI, C–V, D–IV, E–III, F–II, G–I
(3) A–II, B–IV, C–VI, D–I, E–III, F–V, G–VII
(4) A–I, B–III, C–V, D–VII, E–II, F–IV, G–VI

8. Point out the correct floral formula of cruciferae-
(1) $\oplus\ \female\!\!\male\ K_{2+2}\ C_4\ A_{2+4}\underline{G}_{(2)}$ (2) $\%\ \female\!\!\male\ K_5\ C_6\ A_3\ \underline{G}_{(2)}$ (3) $\%\ \female\!\!\male\ K_{2+2}\ C_{2+2}\ A_{2+4}\ \underline{G}_{(2)}$ (4) $\oplus\ \female\!\!\male\ K_4\ C_4\ A_2\ \underline{G}_{(2)}$

9. Placentation of cruciferae plant is:-
(1) Parietal (2) Axial (3) Basal (4) Marginal

10. The special feature of the ovary in Mustard family is:-
(1) Hypogyny (2) Polyandry
(3) False septum (4) One row of ovules on each placenta

11. Epipetalous stamen, obliquely placed placenta and fruit berry or capsule are diagnostic features of family
(1) Cruciferae (2) Solanaceae (3) Malvaceae (4) Labiatae

12. Ornamental plant 'Tulip' belongs to which family
(1) Asterceae (2) Brassicaceae (3) Solanaceae (4) Liliaceae

13. Floral diagram is -
(1) The figure of a flower (2) The three dimensional appearance of a flower
(3) L.S. of a flower (4) T.S. of a floral bud

14. $\oplus \male \overset{\frown}{P_{(3+3)}\ A_{3+3}}\ \underline{G}_{(3)}$ is floral formula of
(1) Liliaceae (2) Brassicaceae (3) Asteraceae (4) Poaceae

15. Colchicine alkaloid obtained from the member of which family
(1) Leguminosae (2) Malvaceae (3) Liliaceae (4) Cruciferae

16. Subfamilies of Leguminosae family are differentiated on the basis of
(1) Gynoecium (2) Corolla & Androecium
(3) Nature of plant (4) Nature of fruit

17. Axile placentation occurs in
(1) Asteraceae and Fabaceae (2) Brassicaceae and Solanaceae
(3) Solanaceae and Liliaceae (4) Brassicaceae and Liliaceae

18. Soyabean belongs to
(1) Fabaceae (2) Poaceae (3) Solanaceae (4) Asteraceae

19. Most leguminous plants have -
(1) Simple petiolate leaves (2) Simple sessile leaves
(3) Pinnately compound leaves (4) Palmately compound leaves

20. Trimerous flower, superior ovary with axile placentation are characteristic of
(1) Liliaceae (2) Cucurbitaceae (3) Solanaceae (4) Asteraceae.

21. In scapigerous umbel the flowers are arranged in manner
(1) Corymb (2) Umbel
(3) Panicle (4) Monochasial scorpiod cyme

22. The floral formula for sub family Papilionatae is represented as
(1) Br % $\male K_{(5)}\ C_{1+2+(2)}\ A_{1+(9)}\ \underline{G}_1$ (2) Br $\oplus \male\ K_{(5)} C_5\ A_{1+(9)}\ \underline{G}_1$
(3) Br % $\male K_{(5)}\ C_{1+2+(2)}\ A_{9+1} \underline{G}_1$ (4) Ebr or Br % $K_{(5)}\ C_{1+2+(2)}\ A_{10}\ \underline{G}_1$

23. Which of the following genera is Characterised by the production of geocarpic fruits
(1) Cucurbita (2) *Pisum* (3) *Glycine* (4) *Arachis*

24. Blue dye is obtained from the leaves of
(1) *Indigofera tinctoria* (2) Opium (3) *Aloe* (4) *Delbergia sisoo*

25. The name Papilionatae and Cruciferae is based on
(1) Corolla (2) Androecium (3) Gynoecium (4) Fruit

26. *Parkinsonia* is an example of
(1) Phylloclade (2) Winged fruit
(3) Parachute mechanism (4) Phyllode

27. In which of the family the stamens are in two whorls and epiphyllous
(1) Malvaceae (2) Solanaceae (3) Liliaceae (4) Caesalpinoideae

28. Which of the following is a characteristic feature of fabaceae?
(1) Descending imbricate, ten stamens, diadelphous, ovary inferior
(2) Sepals five, gamosepalous, imbricate aestivation, axile placentation
(3) Monocarpellary ovary inferior, style long, slightly bent at the apex
(4) Zygomorphic flowers, vexillary aestivation in corolla, monocarpellary, ovary superior, diadelphous ten stamens, many ovules, placentation marginal

29. *Colchicum autumnale* is a member of
(1) Brassicaceae (2) Liliaceae (3) Poaceae (4) Fabaceae

30. Red Pepper is
(1) *Capsicum annum* (2) *Solanum nigrum*
(3) *Lycopersicum esculentum* (4) *Physalis peruviana.*

31. Oil yielding legume is
(1) *Carthamus* (2) *Glycine max* (3) *Ricinus* (4) *Vigna sinensis*.

32. *Lycopersicum esculentum* belongs to family
(1) Brassicaceae (2) Solanaceae (3) Liliaceae (4) Poaceae

MISCELLANEOUS QUESTIONS

ROOT

1. Root cap is absent in
(1) Hydrophytes (2) Lithophytes (3) Xerophytes (4) Mesophytes.

2. Velamen containing structures of epiphyte *Vanda* are
(1) Stems (2) Absorbing roots (3) Hanging roots (4) Clinging roots.

3. Bacteria found in root nodules of legumes are
(1) *Nitrobacter* (2) *Nitrosomonas* (3) *Rhizobium* (4) *Azotobacter*

4. A plant with photosynthetic roots is
(1) *Trapa* (2) *Dahlia* (3) *Momordica* (4) *Mirabilis*

5. *Stora*ge roots found in clusters at base of stem are
(1) Nodulose roots (2) Annulated roots (3) Tuberous roots (4) Fasciculated roots

6. Pneumatophores are characteristic features of
(1) *Hydrilla* (2) *Typha*
(3) *Rhizophora/Sonneratia* (4) Banyan

7. A plant with epidermis specialised to absorb moisture from air is
(1) *Avicennia* (2) *Vanda* (3) *Rhizophora* (4) *Jussiaea*

8. Hygroscopic roots occur in
(1) *Vanda* (2) *Rhizophora* (3) *Bryophyllum* (4) All the above

9. Roots originating from parts other than radicle are
(1) Stilt roots (2) Adventitious roots (3) Tap root (4) Fibrous roots

10. Root cap does not occur in
(1) *Ipomoea* (2) Mangrove plants (3) *Pandanus* (4) *Pistia*

11. Outer covering of epiphytic root is
(1) Osmophore (2) Rhizophore (3) Pneumatophore (4) Velamen

12. Match the column

Column I	**Column II**
(i) Tubercular storage roots	a. *Tinospora*
(ii) Pneumatophores	b. *Heritiera*
(iii) Haustoria	c. *Asparagus*
(iv) Stilt roots	d. *Viscum*
(v) Assimilatory roots	e. Screwpine

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

13. The aerial, short and branched roots of an autotrophic plant that provide stability are known as
(1) Lateral roots (2) haustoria (3) velamen roots (4) Clinging roots

14. Roots are absent in
(1) *Wolffia* (2) *Podostemon* (3) *Pistia* (4) *Lemna*

STEM

15. Stem tendrils occur in
(1) *Smilax* (2) *Gloriosa* (3) *Vitis* (4) *Lathyrus*

16. Phylloclade is found in
(1) *Chrysanthemum* (2) *Asparagus* (3) *Ruscus* (4) *Opuntia*

17. Thick underground stem growing parallel to soil surface is
(1) Stolon (2) Rhizome (3) Sucker (4) Offset.

18. Green leaf-like one internode long stem branches/phylloclades are called
(1) Phylloclades (2) Phyllodes (3) Bulbils (4) Cladodes

19. Edible part of Ginger is

(1) Corm (2) Rhizome (3) Bulb (4) Tuber

20. Phylloclades are
(1) Leaf modifications (2) One internode long stems
(3) Modified petioles (4) Green succulent stems of indefinite growth

21. A rhizome which grows vertically upward is
(1) Corm (2) Stolon (3) Bulbil (4) Rootstock

22. Bamboo is
(1) Culm (2) Bulb (3) Runner (4) Twiner

23. Turmeric powder is obtained from
(1) *Curcuma longa* (2) *Curcuma amada* (3) *Cucurbita sativa* (4) *Cassia tora*

24. Which one is found only in aquatic plant?
(1) Runner (2) Stolon (3) Tuber (4) Offset

25. Ginger multiplies vegetatively by
(1) bud (2) tuber (3) stem (4) rhizome

26. In *Ruscus*, the stem is a
(1) Phyllode (2) Cladode (3) Offset (4) Sucker

27. In turmeric, stem is a
(1) Tuber (2) Bulb (3) Rhizome (4) Corm

LEAF

28. Phyllode is a
(1) Modified leaf (2) Modified root (3) Modified stem (4) Petiole

29. The spines of Cacti are modified
(1) Scales (2) Stems (3) Leaves (4) Petioles

30. Leaf apex is modified into tendril in
(1) *Smilax* (2) *Gloriosa* (3) Australian Acacia (4) *Pisum*

31. Petiole is modified into tendril in
(1) *Passiflora* (2) *Gloriosa* (3) *Pisum* (4) *Clematis*

32. Presence of sheathing leaf base and ligule are characteristic of
(1) *Cycas* leaf (2) Fern leaf (3) Banana leaf (4) Grass leaf

33. Arrangement of leaves in the bud condition is
(1) Phyllotaxy (2) Ptyxis (3) Vernation (4) Venation

34. Occurrence of different types of leaves in *Limnophylla* is called
(1) Heterophylly (2) Pseudophylly (3) Heterophily (4) Heterotrophy

35. In Sweet Pea, the tendrils are modified
(1) Stem branches (2) Leaflets (3) Leaves (4) Stipules

36. *Bombax* leaf is

(1) Tripinnate (2) Unipinnate (3) Multifoliate (4) Quadrifoliate

37. Leaves develop from
(1) Nodes (2) Internodes (3) Epidermis (4) Endodermis

38. Phyllode is found in
(1) *Clematis* (2) *Gloriosa* (3) *Acacia* (4) *Dischidia*

39. Pick up the leaf modification
(1) Cladode (2) Phyllode (3) Corm (4) Phylloclade

40. Identify the order where plants show alternate, opposite and whorled phyllotaxy
(1) China Rose, *Calotropis* and *Nerium* (2) China Rose, *Nerium* and *Calotropis*
(3) *Nerium*, China Rose and *Calotropis* (4) *Nerium*, *Calotropis* and China Rose

41. Pulvinus is found in
(1) *Calotropis* (2) *Ocimum* (3) Legume plants (4) *Alstonia*

42. Stipules are modified into spines in.
(1) *Citrus* and *Euphorbia* (2) *Euphorbia* and *Zizyphus*
(3) *Ziziphus* and *Bougainvillea* (4) *Citrus* and *Bougainvillea*

43. A compound leaf which appears simple due to suppression of 1-2 lateral leaflets is found in
(1) *Hardwickia* (2) *Parkinsonia* (3) *Citrus* (4) *Coriandrum*

44. Leaves are modified into tendrils, hooks, pitchers and bladders in
(1) Sweet Pea, Cat's Nail (*Bignonia*), *Nepenthes*, *Utricularia*
(2) Sweet Pea, Cat's Nail, *Utricularia*, *Nepenthes*
(3) *Nepenthes*, Sweet Pea, Cat's Nail, *Utricularia*
(4) *Utricularia*, *Nepenthes*, Cat's Nail, Sweet Pea

INFLORESCENCE

45. The ratio of female to male flowers is 1 : α. It is found in
(1) Hypanthodium (2) Cyathium (3) Catkin (4) Verticillaster

46. Inflorescence having unisexual sessile flowers is
(1) Spike (2) Spikelet (3) Catkin (4) Spadix

47. Inflorescence of Sunflower is
(1) Umbel (2) Cyathium (3) Hypanthodium (4) Capitulum

48. Which is true
(1) Umbel is racemose inflorescence where stalked flowers aggregate on a flat receptacle
(2) In raceme the main axis is shortened and flowers are borne acropetally
(3) Spadix is a pendulous spike with main axis much flattened
(4) Spike is a racemose inflorescence having sessile flowers.

49. Which is not a correct match

(1) Catkin - Mulberry (2) Capitulum - Sunflower
(3) Corymb - Candytuft (4) Raceme - Wheat

50. Edible part of Cauliflower is
(1) Cotyledons (2) Mesocarp (3) Endocarp (4) Inflorescence

51. Number of female flowers found in cyathium is
(1) 1 (2) 2 (3) 3 (4) Several

52. Cyathium inflorescence is found in
(1) *Morus* (2) *Dorstenia* (3) *Ficus* (4) *Euphorbia*

53. Inflorescence of Liliaceae is
(1) Actinomorphic (2) trimerous (3) pentamerous (4) imperfect

FLOWER

54. Monothecous anthers occur in
(1) *Hibiscus rosa-sinensis*/Malvaceae (2) *Allium cepa*/Liliaceae
(3) *Brassica oleracea*/Cruciferae (4) *Solanum nigrum*/Solanaceae

55. Stamens of Jowar/Grass are
(1) DorsifIxed (2) Versatile (3) BasifIxed (4) Adnate

56. In obdiplostemonous androecium, stamens are arranged in
(1) One whorl alternating with petals
(2) Two whorls with outer whorl opposite the petals
(3) Two whorls with outer whorl alternating with petals
(4) One whorl opposite the petals.

57. Petals of a flower are arranged in such a way that each overlaps a petal on one side and is overlapped by other petal on the other side. The aestivation is
(1) Valvate (2) Quincuncial (3) Imbricate (4) Twisted

58. Individual components of corolla are called
(1) Sepals (2) Petals (3) Tepals (4) Bracts

59. Saffron is
(1) Stamens of *Hibiscus* (2) Style and stigma of *Crocus* plant
(3) Roots of *Indigofora* (4) Petals of *Musa.*

60. Gynoecium having three fused carpels with a single ovule containing chamber is
(1) Tricarpellary, syncarpous, unilocular (2) Tricarpellary, polycarpellary, unilocular
(3) Tricarpellary, syncarpous, trilocular (4) Tricarpellary, polycarpellary, trilocular

61. Clove used as spice represents
(1) Seed (2) Leaves (3) Flower buds (4) Stem tip

62. Arrangement of ovules on the placentae developed from central axis of ovary is
(1) Parietal placentation (2) Basal placentation
(3) Marginal placentation (4) Axile placentation.

63. The position of ovary is below sepals, petals and stamens. The flower is

(1) Epigynous (2) Perigynous (3) Mesogynous (4) Metagynous.

64. Identify the wrong statement

(1) A plant that bears male, female and bisexual flowers is polygamous

(2) Actinomorphic flower can be dissected into two equal halves from any plane

(3) Superior ovary is found in hypogynous flowers

(4) Side of the flower towards the bract is called posterior side.

65. Compare the columns and find out the correct combination.

	Column I		Column II
a	*Tridax*	(i)	Synandrous
b	*Dolichos*	(ii)	Monoadelphous
c	*Ceiba*	(iii)	Syngenesious
d	*Cucurbita*	(iv)	Polyadelphous
		(v)	Diadelphous

(1) (a) – (iv), (b) – (v), (c) – (ii), (d) – (i) (2) (a) – (iii), (b) – (v), (c) – (iv), (d) – (i)

(3) (a) – (iii), (b) – (v), (c) – (i), (d) – (iv) (4) (a) – (v), (b) – (iii), (c) – (iv), (d) – (ii)

66. Colour of *Bougainvillea* flower is due to colour of its

(1) Corolla (2) Bracts (3) Calyx (4) Androecium

67. Non-essential floral organs without differentiation of calyx and corolla are called

(1) Thalamus (2) Pedicel (3) Perianth (4) Lodicules

68. Epicalyx occurs in

(1) *Cycas* (2) Jowar (3) *Nephrolepis* (4) China Rose

69. Bract is a modified

(1) Petal (2) Sepal (3) Leaf (4) Involucre

70. The term “Keel” is used for special type of

(1) Sepals (2) Petals (3) Stamens (4) Carpels

71. Polyadelphous stamens are found in

(1) Cotton (2) Sunflower (3) Grain (4) Lemon

72. Replum is the characteristic feature of the

(1) Asteraceae (2) Brassicaceae (3) Malvaceae (4) Liliaceae

73. Flowers are zygomorphic in

(1) Mustard (2) Radish (3) lily (4) Candytuft

FRUIT

74. Fruit of Candytuft is

(1) Capsule (2) Follicle (3) Silicula (4) Lomentum

75. Fruit of coconut is

(1) Berry (2) Cypsela (3) Drupe (4) Cremocarp

76. Coir is obtained from

(1) Fruit of *Cocos nucifera* (2) Seed of *Cocos nucifera*
(3) Stem of *Cocos nucifera* (4) Leaves of *Cocos nucifera*

77. Edible part of Mulberry is
(1) Thalamus (2) Perianth (3) Rachis (4) Ripened ovary

78. Aril is
(1) Outgrowth of integument
(2) Persistent nucellus
(3) Outgrowth of funicle which grows around the ovule
(4) Outgrowth from micropyle.

79. Fruit formed from an inflorescence is
(1) Simple fruit (2) Pseudocarp (3) Composite fruit (4) Aggregate fruit

80. Fruit of Elephant Apple (*Dillenia indica*) is
(1) Balausta (2) Pepo (3) Amphisarca (4) Berry

81. A dry indehiscent fruit is
(1) Caryopsis (2) Follicle (3) Capsule (4) Pod

82. Drupes are called stony fruits as they have
(1) Hard endocarp (2) Hard mesocarp
(3) Hard epicarp (4) Hard epicarp and hard meso carp

83. Edible part in sorosis fruit is
(1) Perianth (2) Perianth + sepals (3) Placenta (4) Perianth + placenta

84. A fruit that has fleshy mesocarp and stony endocarp is
(1) Pome (2) Berry (3) Pepo (4) Drupe

85. Lomentum is
(1) Achenial fruit (2) Schizocarpic fruit (3) Composite fruit (4) Syconus fruit

86. Edible part in the fruit of Hesperidium is
(1) Endocarp (2) Mesocarp (3) Juicy hairs (4) Pericarp

87. A small, dry, one-seeded fruit with its pericarp fused with the seed-coat, developing from a monocarpellary gynoecium is called
(1) Cypsela (2) Siliqua (3) Caryopsis (4) Samara

88. Lady finger (bhindi) belongs to
(1) Malvaceae (2) Cruciferae (3) Solanaceae (4) Liliaceae

89. From which part of coconut coir is obtained
(1) Pericarp (2) Mesocarp (3) Epicarp (4) Endocarp

90. Stony endocarp is found in
(1) Aggregate fruit (2) Drupe fruit (3) Berry fruit (4) Pome fruit

91. The fruit of Compositae is
(1) Aggregate (2) Cypsela (3) Drupe (4) Pome

92. Edible part of litchi is
(1) Semilla (2) Aril (3) Pericarp (4) Pedicel

93. Pome fruit is found in
(1) Mango (2) Apple (3) *Litchi* (4) Peach

SEEDS

94. Mitochondria produce more energy during
(1) Formation of seed (2) Seed maturation
(3) Dormant seed (4) Seed germination

95. Embryo of Sunflower has
(1) One cotyledon (2) Two cotyledons (3) Many cotyledons (4) No cotyledon

96. Which of the following is an oil seed plant?
(1) Sunflower (2) *Hibiscus* (3) Marigold (4) Rose

97. In Groundnut, oil is stored in
(1) Embryo axis (2) Endosperm (3) Cotyledons (4) None of the above

98. Dry fruit 'Chilgoza' is
(1) Fruit of *Cycas* (2) Seed of *Cycas*
(3) Fruit of *Pinus gerardiana* (4) Seed of *Pinus gerardiana*

99. A dicot plant lacking cotyledons is
(1) *Cuscuta* (2) *Santalum* (3) *Lodoicea* (4) None of the above

100. In Maize grain, plumule is covered by protective sheath called
(1) Scutellum (2) Coleorrhiza (3) Coleoptile (4) Tegmen

101. Seeds possess spongy aril in
(1) *Eicchornia* (2) *Potamogeton* (3) *Sagittaria* (4) *Nymphea*

102. Endosperm is not completely consumed during embryo development in seeds of
(1) Gram (2) Pea (3) Bean (4) Castor

103. Seed coat is not thin, membranous in:
(1) Coconut (2) Groundnut (3) Gram (4) Maize

FAMILIES OF FLOWERING PLANTS

104. Belladona is obtained from
(1) *Atropa* (2) *Hyoscyamus* (3) *Calendula* (4) *Aconitum*

105. Name the plant from seeds of which oil is obtained
(1) *Cicer arietinum* (2) *Saccharum officinarum*
(3) *Saccharum munja* (4) *Arachis hypogea*

106. Largest family of flowering plants is
(1) Fabaceae (2) Liliaceae (3) Poaceae (4) Asteraceae

107. Seeds which are used as Jeweller's weight
(1) *Xanthium* (2) *Abrus precatorius* (3) *Calotropis* (4) *Thespasia*

108. Cladode is the modification of
(1) Leaf (2) Root (3) Petiole (4) Stem

109. The fruit of orange is
(1) Pepo (2) Pome (3) Hesperidium (4) Drupe

110. Diadelphous condition occurs in
(1) Solanaceae (2) Fabaceae (3) Asteraceae (4) Liliaceae

111. Flower of Fabaceae is
(1) Complete, zygomorphic, pentamerous (2) Complete, actinomorphic, trimerous
(3) Incomplete, zygomorphic, trimerous (4) Incomplete, actinomorphic, pentamerous

112. Family Liliaceae is characterised by
(1) Trimerous flower (2) Tetramerous flower
(3) Pentamerous flower (4) Zygomorphic flower

113. In sweet pea tendrils are modified
(1) Stipule (2) Stem (3) Leaf (4) Leaflet

114. In which of the following aestivation of sepals & petals one margin covers the other & its margin is covered by previous one
(1) Valvate (2) Twisted (3) Imbricate (4) Quincuncial

115. Swollen placentae, oblique septum and epipetalous stamen are characteristics of family
(1) Brassicaceae (2) Asteraceae (3) Poaceae (4) Solanaceae

116. Epipetalous stamens and axile placentation are found in
(1) Cruciferae (2) Leguminosae (3) Malvaceae (4) Liliaceae

117. Floral diagram represents
(1) Position of Flower (2) Number and arrangement of floral parts
(3) Structure of Flower (4) Nature of plant

118. Green Gram is
(1) *Vigna radiata* (2) *Vigna mungo* (3) *Phaseolus vulgaris* (4) *Phaseolus coccineus*

119. Which of the following members of family Solanaceae is rich in vitamin C
(1) Guava (2) Gooseberry (3) Strawberry (4) Tomato

120. In Solanaceae the fruit is
(1) Drupe (2) Berry or Capsule (3) Siliqua (4) Pod or achene

121. Perianth occurs in family
(1) Solanaceae (2) Fabaceae (3) Brassicaceae (4) Liliaceae

122. *Aloe* used in medicine belongs to family
(1) Solanaceae (2) Liliaceae (3) Asteraceae (4) Malvaceae

123. Leguminous plant used for prevention of Parkinson's syndrome is
(1) *Acacia catechu* (2) *Acacia arabica* (3) *Abrus precatorius* (4) *Arabidopsis*

124. Monocarpellary ovary, diadelphous androecium and marginal placentation occur in
(1) Brassicaceae (2) Asteraceae (3) Liliaceae (4) Papilionaceae/Fabaceae

125. Lady finger (Bhindi) belongs to
(1) Malvaceae (2) Cruciferae (3) Solanaceae (4) Liliaceae

126. Replum is the characteristic feature of the
(1) Asteraceae (2) Brassicaceae (3) Malvaceae (4) Liliaceae

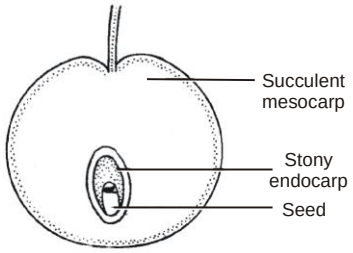
127. Coffee and Quinine are obtained from the plants of
(1) Leguminosae (2) Asteraceae (3) Rubiaceae (4) Poaceae

128. Which of the following includes largest number of genera and species of plants?
(1) Brassicaceae (2) Liliaceae (3) Malvaceae (4) Asteraceae

129. Flowers are zygomorphic in
(1) Mustard (2) Radish (3) Lily (4) Candytuft

Exercise-2

1.# Wall of ovary of flowering plants gets converted as a result of fertilization. The type of ovary wall shown facilitates. **(2nd INBO)**



(1) Wind dispersal (2) Animal dispersal
(3) Water dispersal (4) Mechanical dispersal

2. A fruit developed from a condensed inflorescence is **(2nd NSO II L)**
(1) Simple fruit (2) Aggregate fruit (3) Composite fruit (4) Etaerio

3. The tissue in plant seeds that serves the same nutritive function as yolk in chicken embryos is the **(1ST ABO)**
(1) Seed coat (2) Endosperm (3) Epicotyl (4) Embryo

4. Flower with a feathery and sticky stigma, numerous light pollen, reduced petals is characteristically. **(2nd NSEB)**

(1) Moth pollinated flower (2) Bird pollinated flower
(3) Bee pollinated flower (4) Wind pollinated flower

5. The fruits showing edible thalamus are **(3rd NSEB)**

(1) Apple, custard apple, guava (2) Apple, strawberry, pear
(3) Pear, pineapple, strawberry (4) Jackfruit, guava, pineapple

6. A fruit dehiscing by both the sutures and derived from monocarpellary ovary with marginal placentation is **(2nd NSEB)**

(1) Follicle (2) Siliqua (3) Legume (4) Berry

7. Which one of the following structure found in dicot seed will be genetically identical with its maternal plant? **(4th NSO I L)**

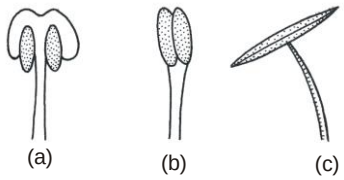
(1) Testa (2) Radicle (3) Plumule (4) Cotyledon

8. Which of the following characteristics do monocotyledon plants typically have? **(4th ABO)**

(i) Four or five petals in each flower
(ii) Parallel leaf veins
(iii) Fibrous roots system

(1) (i) only (2) (iii) only (3) (i) and (ii) only (4) (ii) and (iii) only

9.# Which of the following condition/s of attachement between the anther lobes and filament is/are most primitive? **(4th NSEB)**



(1) (a) (2) (b) (3) (c) (4) Both (a) and (b)

10. Flowers consist of 4 whorls the two outer ones are sterile and the other two inner whorls produce the haploid reproductive structures. These whorls, arranged from outside to inside, in correct order are **(1st NSEB)**

(1) Stamens, carpels, radicle and petals (2) Carpels, petals, stamens and plumule
(3) Petals, sepals, stamens and carpels (4) Sepals, petals, stamens and carpels

11. Plants with inferior ovary always bear **(NSEB 1ST 2012)**

(1) Pseudocarps (2) berries (3) aggregate fruits (4) seedless fruits

12. One can distinguish a leaflet from leaf by the absence of **(NSEB 1ST 2011)**

(1) midrib (2) petiole (3) axillary bud (4) venation

13. The odd one among the following is **(NSEB 1ST 2011)**

(1) cladode (2) phyllode (3) staminode (4) phylloclade

Exercise-3

PART - I : NEET / AIPMT QUESTION (PREVIOUS YEARS)

ROOT

1. Which of the following plants are used as green manure in crop fields and in sandy soils? **(AIPMT-2003)**
(1) *Crotolaria juncea* and *Alhagi camelorum*
(2) *Calotropis procera* and *Phyllanthus nintri*
(3) *Saccharum munja* and *Lantana camara*
(4) *Dichanthium annulatum* and *Azolla nilotica*.

2. What is the arrangement starting from root tip **(AIPMT-2004)**
(1) Root cap, cell division, cell enlargement and cell maturation.
(2) Root cap, cell division, cell maturation and cell enlargement.
(3) Cell division, cell maturation, cell enlargement and root cap.
(4) Cell division, cell enlargement, cell maturation and root cap.

3. Sweet potato is homolgous to **(AIPMT mains-2011)**
(1) Potato (2) *Colocasia* (3) Ginger (4) Turnip

4. Roots play insignificant role in absorption of water in: **(RE AIPMT-2015)**
(1) *Pistia* (2) Pea (3) Wheat (4) Sunflower

5. Root hairs develop from the region of : **(NEET-2017)**
(1) Maturation (2) Elongation (3) Root cap (4) Meristematic acticvity

6. Sweet potato is a modified **(NEET-2018)**
(1) Stem (2) Rhizome
(3) Tap root (4) Adventitious root

STEM

7. Eye of Potato is **(AIPMT-2001)**
(1) Apical bud (2) Axillary bud (3) Accessory bud (4) Adventitious bud.

8. The "Eyes" of the potato tuber are **(Pre AIPMT-2011)**
(1) root buds (2) flower buds (3) shoot buds (4) axillary buds

9. Which one of the following is **correctly** matched **(AIPMT Pre.-2012)**
(1) Onion - Bulb (2) Ginger - Sucker
(3) *Chlamydomonas* - Conidia (4) *Yeast* - Zoospores

10. An example of edible underground stem is **(AIPMT-2014)**
(1) Carrot (2) Groundnut (3) Sweet potato (4) Potato

11. In ginger vegetative propagation occurs through **(AIPMT-2015)**
(1) Offsets (2) Bulbils (3) Runners (4) Rhizome

12. Which of the following pairs is **not** correctly matched? **(Re-AIPMT-2015)**

Mode of reproduction	**Example**
(1) Rhizome	Banana
(2) Binary fission	*Sargassum*
(3) Conidia	*Penicillium*
(4) Offset	Water hyacinth

13. Stems modified into flat green organs performing the functions of leaves are known as: **(NEET-I-2016)**

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

14. In Bougainvillea thorns are the modification of: **(NEET-2017)**

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

LEAF

15. Whorled, simple leaves with reticulate venation are present in **(AIPMT mains-2011)**

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

16. Phyllode is present in: **(AIPMT Pre.-2012)**

(1) *Asparagus* (2) *Euphorbia* (3) Australian Acacia (4) *Opuntia*

17. Your mother is a trained Botanist. While walking through a local agricultural field, she wanted to show you a leaf modified for storing food. She dug up the plant **(AIPMT-2014)**

(1) Cactus (2) potato (3) ginger (4) garlic

18. Leaves become modified into spines in **(AIPMT-2014)**

(1) Cactus (2) Rose (3) *Citrus* (4) *Pistia*

19. Leaves become modified into spines in **(AIPMT-2015)**

(1) Pea (2) Onion (3) Silk Cotton (4) *Opuntia*

20. Which of the following is not a stem modification? **(NEET-I - 2016)**

(1) Flattened structures of Opuntia (2) Pitcher of Nepenthes

(3) Thorns of citrus (4) Tendrils of cucumber

21. Which of the following shows whorled phyllotaxy? **(NEET-2-2019)**

(1) Mustard (2) China rose (3) Alstonia (4) Calotropis

22. Bicarpellary ovary with obliquely placed septum is seen in : **(NEET-2-2019)**

(1) Brassica (2) Aloe (3) Solanum (4) Sesbania

23. Match the placental types (column-I) with their examples (column-II) **(NEET-2-2019)**

Column–I	**Column–II**
(a) Basal	(i) Mustard
(b) Axile	(ii) China rose
(c) Parietal	(iii) Dianthus
(d) Free central	(iv) Sunflower

Choose the correct answer from the following options:

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

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

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

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

INFLORESCENCE

24. Catkin inflorescence is found in **(AIPMT, RPMT-2011)**
(1) Wheat (2) Oat (3) Mulberry (4) Fig

25. A racemose type of inflorescence with its main axis almost flat is called **(AIPMT RPMT-2011)**
(1) Corymb (2) Umbel (3) Spike (4) Capitulum

26. Spathe is present in the flowers of **(AIPMT RPMT-2011)**
(1) Banana (2) Rice (3) Marigold (4) Sunflower

27. Cymose inflorescence is present in: **(AIPMT Pre.-2012)**
(1) *Solanum* (2) *Sesbania* (3) *Trifolium* (4) *Brassica*

FLOWER

28. Bicarpellary gynoecium with oblique ovary occurs in **(AIPMT-2001)**
(1) Banana (2) Brinjal (3) *Pisum* (4) Mustard.

29. An ovule bent to come at right angles to funicle is (**AIPMT-2004**)
(1) Anatropous (2) Orthotropous (3) Campylotropous (4) Hemitropous.

30. Anthesis is **(AIPMT-2004)**
(1) Opening of floral bud (2) Development of anthers
(3) Maturation of anthers (4) Reception of pollen by stigma.

31. Tetradynamous condition occurs in **(AIPMT- 2004**)
(1) *Petunia hybrida* (2) *Helianthus annuus*
(3) *Brassica campestris* (4) *Hibiscus rosa sinensis*.

32. Long filamentous threads protruding at the end of young cob of Maize are **(AIPMT-2006)**
(1) Hairs (2) Anthers (3) Styles (4) Ovaries.

33. Thorn of *Bougainvillea* and tendril of *Cucurbita* are examples of **(AIPMT-2008)**
(1) Vestigial organs (2) Analogous organs
(3) Retrogressive evolution (4) Homologous organs.

34. Replum is present in the ovary of flower of **(AIPMT-2008)**
(1) Sunflower (2) Mustard (3) Pea (4) Lemon.

35. In unilocular ovary with a single ovule the placentation is **(AIPMT-2010)**
(1) Basal (2) Free Central (3) Axile (4) Marginal

36. Which one of the following statement is correct? **(AIPMT Pre-2011)**
(1) In Tomato, fruit is a capsule (2) Seeds of Orchids have oil-rich endosperm
(3) Placentation in Primrose is basal (4) Flower of Tulip is a modified shoot

37. Flower are Zygomorphic in **(AIPMT Pre-2011)**
(1) Mustard (2) Gulmohur (3) Tomato (4) *Datura*

38. The ovary is half inferior in flowers of **(Pre AIPMT-2011)**
(1) Peach (2) Cucumber (3) Cotton (4) Guava

39.# Which one of the following diagrams represents the placentation in *Dianthus*? **(AIPMT mains-2011)**
(1)  (2)  (3)  (4) 

40. Epigynous flowers are present in **(AIPMT RPMT - 2011)**
(1) Mustard (2) Brinjal (3) China rose (4) Cucumber

41. In *Dianthus*, placentation is **(AIPMT, RPMT - 2011)**
(1) Basal (2) Free central (3) Axile (4) Marginal

42. Ovary is half-inferior in the flower of **(AIPMT RPMT-2011)**
(1) Apple (2) Guava (3) Peach (4) Garlic

43. Placentation in tomato and lemon is **(AIPMT Pre.-2012)**
(1) Parietal (2) Free central (3) Marginal (4) Axile

44. The gynoecium consists of many free pistils in flowers of **(AIPMT Pre.-2012)**
(1) *Aloe* (2) Tomato (3) *Papaver* (4) *Michelia*

45. Vexillary aestivation is characteristic of the family **(AIPMT Pre.-2012)**
(1) Fabaceae (2) Asteraceae (3) Solanaceae (4) Brassicaceae

46. Which one of the following organisms is correctly matched with its three characteristics?
(1) Pea : C_3 pathway, Endospermic seed, Vexillary aestivation **(AIPMT Mains-2012)**
(2) Tomato : Twisted aestivation, Axile placentation, Berry
(3) Onion : Bulb, Imbricate aestivation, Axile placentation
(4) Maize : C_3 pathway, Closed vascular bundles, Scutellum

47. Among bitter gourd, mustard, brinjal, pumpkin, china rose, lupin, cucumber, sunhemp, 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

48. In China rose the flowers 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

49. 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

50. Keel is the characteristic feature of flower of: **(AIPMT-2015)**
(1) *Indigofera* (2) *Aloe* (3) Tomato (4) Tulip

51. Perigynous flowers are found in: **(AIPMT-2015)**
(1) Cucumber (2) China rose (3) Rose (4) Guava

52. Among China rose, mustard, brinjal, potato, guava, cucumber, onion and tulip, how many plants have superior ovary? **(Re-AIPMT-2015)**
(1) Six (2) Three (3) Four (4) Five

53. Flowers are unisexual in: **(Re-AIPMT-2015)**
(1) Cucumber (2) China rose (3) Onion (4) Pea

54. Axile placentation is present in **(Re-AIPMT-2015)**
(1) Lemon (2) Pea (3) *Argemone* (4) *Dianthus*

55. The standard petal of a papilionaceous corolla is also called **(NEET-I-2016)**
(1) Corona (2) Carina (3) Pappus (4) Vexillum

56. The term 'polyadelphous' is related to **(NEET-II-2016)**
(1) calyx (2) gynoecium (3) androecium (4) corolla

57. Radial symmetry is found in the flowers of **(NEET-II-2016)**
(1) Cassia (2) Brassica (3) Trifolium (4) Pisum

58. Free-central placentation is found in **(NEET-II-2016)**
(1) Citrus (2) Dianthus (3) Argemone (4) Brassica

59. Placentntion, in which ovules develop on the inner wall of the ovary or in peripheral part, is: **(NEET-1-2019)**
(1) Free central (2) Basal (3) Axile (4) Parietal

FRUIT

60. Geocarpic fruit is **(AIPMT-2000)**
(1) Mango (2) Orange (3) Water Melon (4) Peanut.

61. Which is correct match for edible part **(AIPMT-2001)**
(1) Tomato- Thalamus (2) Maize-Cotyledons
(3) Guava-Mesocarp (4) Date-Mesocarp.

62. Edible part of Banana is **(AIPMT-2001)**
(1) Epicarp (2) Epicarp and mesocarp
(3) Mesocarp and less developed endocarp (4) Endocarp and less developed·mesocarp.

63. Juicy hair like structures observed in lemon fruit develop from **(AIPMT-2003)**
(1) Exocarp (2) Mesocarp (3) Endocarp (4) Mesocarp and endocarp.

64. Pineapple (Ananas) fruit develops from **(AIPMT-2006)**
(1) Cluster of flowers borne compactly on a common axis
(2) Multilocular monocarpellary flower
(3) Unilocular polycarpellary flower
(4) Multipistillate syncarpous flower.

65. Banana is **(AIPMT-2006)**

(1) Cremocarp (2) Parthenocarpic berry
(3) Drupe (4) Capsule

66. The fruit is chambered, developed from inferior ovary and has seeds with succulent testa in **(AIPMT-2008)**
(1) Guava (2) Pomegranate (3) Cucumber (4) Orange.

67. Dry indehiscent single-seeded fruits formed from bicarpellary syncarpous inferior ovary is **(AIPMT-2008)**
(1) Berry (2) Cremocarp (3) Cypsela (4) Caryopsis.

68. A drupe develops in **(AIPMT Pre-2011)**
(1) Mango (2) Wheat (3) Pea (4) Tomato

69. 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 Pre.-2012)**
(1) Four (2) Five (3) Two (4) Three

70. The coconut water and the edible part of coconut are equivalent to **(AIPMT Pre.-2012)**
(1) Endosperm (2) Endocarp (3) Mesocarp (4) Embryo

71. Placenta and pericarp are both edible portions in **(AIPMT-2014)**
(1) Apple (2) Banana (3) Tomato (4) Potato

72. An aggregate fruit is one which devloped from **(AIPMT-2014)**
(1) Multicarpellary syncarpous gynoecium (2) Multicarpellary apocarpous gynoecium
(3) Complete inflorescence (4) Multicarpellary superior ovary

73. Which one of the followning fruits is parthenocarpic? **(Re-AIPMT-2015)**
(1) Apple (2) Jackfruit (3) Banana (4) Brinjal

74. Coconut fruit is a **(NEET-2017)**
(1) Drupe (2) Berry (3) Nut (4) Capsule

75. The morphological nature of the edible part of coconut is **(NEET-2017)**
(1) Perisperm (2) Cotyledon (3) Endosperm (4) Pericarp

SEEDS

76. Aleurone layer of Maize grain is specially rich in **(AIPMT-2003)**
(1) Proteins (2) Starch (3) Lipids (4) Auxins.

77. Why vivipary is an undesirable character for annual crop plants? **(AIPMT-2005)**
(1) It reduces vigour of the plant.
(2) It adversely affects the fertility of the plant
(3) The seeds exhibit long dormancy
(4) The seeds cannot be stored under normal conditions for next season.

78. In cereal grain, single cotyledon is represented by **(AIPMT-2006)**
(1) Coleoptile (2) Coleorhiza (3) Scutellum (4) Prophyll

79. 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.

80. Non- albuminous seed is produced in: **(AIPMT-2014)**
(1) Maize (2) Castor (3) Wheat (4) Pea

81. The wheat grain has an embryo with one, large, shield-shaped cotyledon known as: **(Re-AIPMT-2015)**
(1) Coleorrhiza (2) Scutellum (3) Coleoptile (4) Epiblast

FAMILIES OF FLOWERING PLANTS

82. Plants which are used as green manure in crop fields and in sandy soil **(AIPMT-2003)**
(1) C*rotolaria juncea* and *Alhagi camelorum* (2) *Calotropis procera* and *Phyllanthus niruri*
(3) *Saccharum munja* and *Lantana camara* (4) *Dichanthium annulatum* and *Acacia nilotica*

83. Three crops that contribute maximum to global food production are **(AIPMT-2005)**
(1) Wheat, Rice and Maize (2) Wheat, Rice and Barley
(3) Wheat, Maize and *Sorghum* (4) Rice, Maize and *Sorghum*

84. What type of placentation is seen in Sweet Pea? **(AIPMT-2006)**
(1) Marginal (2) Basal (3) Axile (4) Free central

85. Pentamerous actinomorphic flowers, bicarpellary ovary with oblique septum and a fruit of capsule or berry, belong to family **(AIPMT-2006)**
(1) Liliaceae (2) Asteraceae (3) Brassicaceae (4) Solanaceae

86. The floral formula $\oplus\ \male\female K_{(5)}\overset{\frown}{C_{(5)}}A_{5}\underline{G}_{(2)}$ is that of **(AIPMT-2009)**
(1) Tobacco (2) Tulip (3) Soybean (4) Sunnhemp

87. The floral formula $\oplus\ \male\female K_{2+2}C_{4}A_{2+4}G_{(2)}$ represents **(AIPMT-2010)**
(1) *Solanum nigrum* (2) *Hibiscus rosa-sinensis*
(3) *Citrus aurantum* (4) *Brassica campestris*

88. Keel is characteristic of the flowers of **(AIPMT Pre-2010)**
(1) *Cassia* (2) *Calotropis* (3) Bean (4) Gulmohur

89. Consider the following four statement A, B, C, and D select the right option for two **correct** statements.
Statements **(AIPMT Main-2010)**
(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 $\oplus\ \male\female P_{3+3}\ A_{3+3}\ \underline{G}_{3}$
(C) In pea flower the stamens are monoadelphous
(D) The floral formula for Solanaceae is $\oplus\ \male\female K_{(3)}\ C_{(3)}\ A_{(4)}\ \underline{G}_{(2)}$
The correct statements are
(1) (C) and (D) (2) (A) and (C) (3) (A) and (B) (4) (B) and (C)

90. Vexillary aestivation is characteristic of the family **(AIPMT-2012)**
(1) Fabaceae (2) Asteraceae (3) Solanaceae (4) Brassicaceae

91. In China rose the flowers 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

92. Among Bitter gourd, 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

93. Keel is the characteristic feature of flower of: **(AIPMT-2015)**

(1) *Indigofera* (2) *Aloe* (3) Tomato (4) Tulip

94. $\oplus \, ♂ \, ♀ \, K_{(5)} \overset{\curvearrowleft}{C}_{(5)} A_5 \underline{G}_{(2)}$ is the floral formula of: **(AIPMT-2015)**

(1) *Sesbania* (2) *Petunia* (3) *Brassica* (4) *Allium*

95. Tricarpellary, syncarpous gynoecium is found in flowers of: **(NEET-I-2016)**

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

96. How many plants among *Indigofera, Sesbania, Salvia, Allium, Aloe*, mustard, groundnut, radish, gram and turnip have stamens with different lengths in their flowers? **(NEET-II-2016)**

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

PART - II : AIIMS QUESTION (PREVIOUS YEARS)

1. Name the family having (9) + 1 arrangement of stamens **(AIIMS-2001)**

(1) Solanaceae (2) Asteraceae (3) Liliaceae (4) Fabaceae

2. Potato and sweet potato **(AIIMS-2004)**

(1) have edible parts which are homologous organs

(2) have edible parts which are analogous organs

(3) have been introduced in India from the same place

(4) are two species of the same genus

3. The family containing mustard and its main characters are **(AIIMS-2005)**

(1) Brassicaceae - Tetramerous flowers, six stamens, bicarpellary gynoecium, siliqua type fruit

(2) Brassicaceae - Pentamerous flowers, many stamens, pentacarpellary gynoecium, capsule type fruit

(3) Solanaceae - Pentamerous flowers, five stamens, bicarpellary gynoecium, berry type fruit

(4) Poaceae - Trimerous flowers, three stamens; monocarpellary gynoecium, caryopsis type of fruit

4. Cocoa is the plant from which chocolate is made. Which part is used to extract it? **(AIIMS-2007)**

(1) flower (2) fruit (3) seeds (4) bark

5. Composite fruit develops from **(AIIMS-2007)**

(1) single ovary (2) inflorescence (3) apocarpous ovary (4) pericarp

6. Which among the following is a rootless plant? **(AIIMS-2007)**

(1) *Nymphea* (2) *Sagittaria* (3) *Ceratophyllum* (4) *Vallisneria*

7. Upon fertilization, what structure develops from carpel? **(AIIMS-2009)**

(1) testa (2) tegmen (3) pericarp (4) perisperm

8. Which of the following is true? **(AIIMS-2009)**

(1) umbel is a racemose inflorescence where all stalked flower aggregate on the flat receptacle

(2) raceme is a racemose inflorescence having main axis shortened & flower born acropetally

(3) spadix is a racemose inflorescence having pendulous spike with main axis much flattened

(4) spike is a racemose inflorescence having sessile flowers

9. A fruit developed from a condensed inflorescence is **(AIIMS-2010)**

(1) Simple fruit (2) Aggregate fruit (3) Composite fruit (4) Etaerio

10. Pappus helps in dispersal of pollen in **(AIIMS-2011)**

(1) Asteraceae (2) Brassicaceae (3) Malvaceae (4) Solanaceae

11. Feathery stigma belongs to **(AIIMS-2011)**

(1) Wheat (2) Pea (3) *Datura* (4) *Caesalpinia*

12. Pappus helps in dispersal of pollen in **(AIIMS-2011)**

(1) Asteraceae (2) Brassicaceae (3) Malvaceae (4) Solanaceae

13. Feathery stigma belongs to **(AIIMS-2011)**

(1) Wheat (2) Pea (3) *Datura* (4) *Caesalpinia*

14. Inflorescence of Liliaceae is **(AIIMS-2011)**

(1) Actinomorphic (2) Trimerous (3) Pentamerous (4) Imperfect

15. The family in which many plants are C_4 type **(AIIMS-2012)**

(1) Malvaceae (2) Solanaceae (3) Crucifereae (4) Graminae

16. Tetradynamous condition is found in **(AIIMS-2016)**

(1) *Hibiscus rosa-sinesis* (2) *Ocimum sanctum*

(3) *Helianthus annuus* (4) *Brassica compestris*

17. Which one of the following option is not correctly matched? **(AIIMS-2017)**

(1)	Cymose	*Acacia*
(2)	Hypanthodium	Banyan
(3)	Cyanthium	*Euphorbia*
(4)	Verticillaster	*Calotropis*

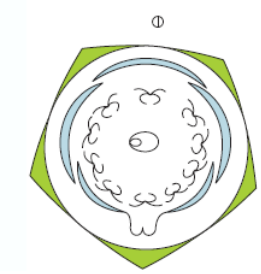
18._ Which of the following group does not represent monocot? **(AIIMS-I-2018)**

Apricot mango, guava, apple, coconut, strawberry

(1) Apricot, mango, Guava (2) Apple, strawberry, coconut

(3) Coconut, apple, cashewnut (4) Coconut, strawberry, mango

19._

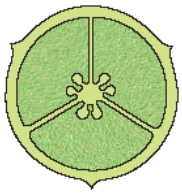
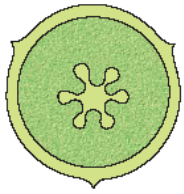


The above floral diagram shows the floral formula **(AIIMS-I-2018)**

(1) $\oplus \male\!\!\female P_{3+3} A_{3+3} \underline{G}_{(3)}$ (2) $\oplus \male\!\!\female K_{(5)} C_{1+2+(2)} A_{(9)+1} \underline{G}_{1}$

(3) $\oplus \male\!\!\female K_{2+2} C_4 A_{2+4} \underline{G}_{(2)}$ (4) $\oplus \male\!\!\female K_{(5)} \overset{\frown}{C_{(5)}} A_5 \underline{G}_{(2)}$

20._ Select the correct matching **(AIIMS-II-2018)**

A.	B.	C.	D.
			

Option:

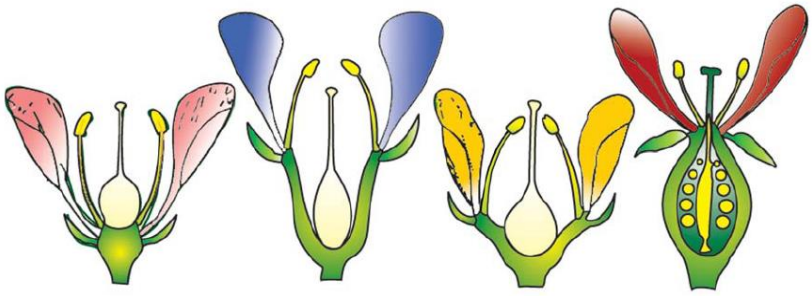
(1) A – Tomato, B - Argemone, C- Dianthus, D - Sunflower

(2) A – Dianthus, B - Argemone, C- Tomato, D - Sunflower

(3) A – Tomato, B - Sunflower, C- *Dianthus*, D - Argemone

(4) A - Argemone, B - Tomato, C- Dianthus, D - Sunflower

21._ Diagram of hypogynous, perigynous, Epigynous are given respectively **(AIIMS-IV-2018)**



(a) (b) (c) (d)

Find out the correct option for the above diagrams a, b, c, d that has correct examples

(1) a-Mustard, b- Rose, c- Plum, d- Guava

(2) a-Cucumber, b- Plum, c- Rose, d- Brinjal

(3) a-China rose, b- Guava, c- Rose, d-Mustard

(4) a-Mustard, b- Rose, c- Plum, d- Brinjal

Answers

EXERCISE - 1

SECTION - A

1.	(2)	**2.**	(4)	**3.**	(4)	**4.**	(1)	**5.**	(4)	**6.**	(3)

SECTION - B

1.	(1)	**2.**	(3)	**3.**	(1)	**4.**	(3)	**5.**	(1)	**6.**	(1)	**7.**	(2)

SECTION - C

1.	(3)	**2.**	(3)	**3.**	(2)	**4.**	(3)	**5.**	(2)	**6.**	(3)	**7.**	(4)
8.	(4)												

SECTION - D

1.	(1)	**2.**	(4)	**3.**	(4)	**4.**	(2)	**5.**	(2)	**6.**	(4)	**7.**	(1)
8.	(4)												

SECTION - E

1.	(4)	**2.**	(4)	**3.**	(2)	**4.**	(2)	**5.**	(1)	**6.**	(1)	**7.**	(2)
8.	(3)	**9.**	(1)	**10.**	(1)	**11.**	(4)	**12.**	(1)	**13.**	(1)	**14.**	(3)
15.	(1)												

SECTION - F

1.	(1)	**2.**	(1)	**3.**	(2)	**4.**	(4)	**5.**	(2)	**6.**	(4)	**7.**	(1)
8.	(4)	**9.**	(3)	**10.**	(4)	**11.**	(1)	**12.**	(2)				

SECTION - G

1.	(3)	**2.**	(1)	**3.**	(2)	**4.**	(3)	**5.**	(1)	**6.**	(3)	**7.**	(3)

SECTION - H

1.	(3)	**2.**	(4)	**3.**	(2)	**4.**	(2)	**5.**	(1)	**6.**	(2)	**7.**	(2)
8.	(1)	**9.**	(1)	**10.**	(3)	**11.**	(2)	**12.**	(4)	**13.**	(4)	**14.**	(1)
15.	(3)	**16.**	(2)	**17.**	(3)	**18.**	(1)	**19.**	(3)	**20.**	(1)	**21.**	(4)
22.	(1)	**23.**	(4)	**24.**	(1)	**25.**	(1)	**26.**	(4)	**27.**	(3)	**28.**	(4)
29.	(2)	**30.**	(1)	**31.**	(2)	**32.**	(2)						

MISCELLANEOUS QUESTIONS

1.	(1)	**2.**	(3)	**3.**	(3)	**4.**	(1)	**5.**	(4)	**6.**	(3)	**7.**	(2)
8.	(1)	**9.**	(2)	**10.**	(4)	**11.**	(4)	**12.**	(1)	**13.**	(4)	**14.**	(1)
15.	(3)	**16.**	(4)	**17.**	(2)	**18.**	(4)	**19.**	(2)	**20.**	(4)	**21.**	(4)
22.	(1)	**23.**	(1)	**24.**	(4)	**25.**	(4)	**26.**	(2)	**27.**	(3)	**28.**	(4)
29.	(3)	**30.**	(2)	**31.**	(4)	**32.**	(4)	**33.**	(3)	**34.**	(1)	**35.**	(2)
36.	(3)	**37.**	(1)	**38.**	(3)	**39.**	(2)	**40.**	(1)	**41.**	(3)	**42.**	(2)
43.	(3)	**44.**	(1)	**45.**	(2)	**46.**	(3)	**47.**	(4)	**48.**	(4)	**49.**	(4)
50.	(4)	**51.**	(1)	**52.**	(4)	**53.**	(2)	**54.**	(1)	**55.**	(2)	**56.**	(2)
57.	(4)	**58.**	(2)	**59.**	(2)	**60.**	(3)	**61.**	(3)	**62.**	(4)	**63.**	(1)
64.	(4)	**65.**	(2)	**66.**	(2)	**67.**	(3)	**68.**	(4)	**69.**	(3)	**70.**	(2)
71.	(4)	**72.**	(2)	**73.**	(4)	**74.**	(3)	**75.**	(3)	**76.**	(1)	**77.**	(2)
78.	(3)	**79.**	(3)	**80.**	(3)	**81.**	(1)	**82.**	(1)	**83.**	(4)	**84.**	(4)
85.	(2)	**86.**	(3)	**87.**	(3)	**88.**	(1)	**89.**	(2)	**90.**	(2)	**91.**	(2)
92.	(2)	**93.**	(2)	**94.**	(4)	**95.**	(2)	**96.**	(1)	**97.**	(3)	**98.**	(4)
99.	(1)	**100.**	(3)	**101.**	(4)	**102.**	(4)	**103.**	(1)	**104.**	(1)	**105.**	(4)

106.	(4)	**107.**	(2)	**108.**	(4)	**109.**	(3)	**110.**	(2)	**111.**	(1)	**112.**	(1)
113.	(4)	**114.**	(2)	**115.**	(4)	**116.**	(3)	**117.**	(2)	**118.**	(1)	**119.**	(4)
120.	(2)	**121.**	(4)	**122.**	(2)	**123.**	(3)	**124.**	(4)	**125.**	(1)	**126.**	(2)
127.	(3)	**128.**	(4)	**129.**	(4)								

EXERCISE - 2

1.	(4)	**2.**	(3)	**3.**	(2)	**4.**	(4)	**5.**	(2)	**6.**	(3)	**7.**	(1)
8.	(4)	**9.**	(1)	**10.**	(4)	**11.**	(1)	**12.**	(3)	**13.**	(3)		

EXERCISE - 3

PART- I

1.	(1)	**2.**	(1)	**3.**	(4)	**4.**	(1)	**5.**	(1)	**6.**	(4)	**7.**	(2)
8.	(4)	**9.**	(1)	**10.**	(4)	**11.**	(4)	**12.**	(2)	**13.**	(4)	**14.**	(3)
15.	(4)	**16.**	(3)	**17.**	(4)	**18.**	(1)	**19.**	(4)	**20.**	(2)	**21.**	(3)
22.	(3)	**23.**	(3)	**24.**	(3)	**25.**	(4)	**26.**	(1)	**27.**	(1)	**28.**	(2)
29.	(4)	**30.**	(1)	**31.**	(3)	**32.**	(3)	**33.**	(4)	**34.**	(2)	**35.**	(1)
36.	(4)	**37.**	(2)	**38.**	(1)	**39.**	(2)	**40.**	(4)	**41.**	(2)	**42.**	(3)
43.	(4)	**44.**	(4)	**45.**	(1)	**46.**	(3)	**47.**	(2)	**48.**	(4)	**49.**	(2)
50.	(1)	**51.**	(3)	**52.**	(1)	**53.**	(1)	**54.**	(1)	**55.**	(4)	**56.**	(3)
57.	(2)	**58.**	(2)	**59.**	(4)	**60.**	(4)	**61.**	(4)	**62.**	(3)	**63.**	(3)
64.	(1)	**65.**	(2)	**66.**	(2)	**67.**	(3)	**68.**	(1)	**69.**	(4)	**70.**	(1)
71.	(3)	**72.**	(2)	**73.**	(3)	**74.**	(1)	**75.**	(3)	**76.**	(1)	**77.**	(4)
78.	(3)	**79.**	(3)	**80.**	(4)	**81.**	(2)	**82.**	(1)	**83.**	(1)	**84.**	(1)
85.	(4)	**86.**	(1)	**87.**	(4)	**88.**	(3)	**89.**	(3)	**90.**	(1)	**91.**	(4)
92.	(2)	**93.**	(1)	**94.**	(2)	**95.**	(2)	**96.**	(3)				

PART- II

1.	(4)	**2.**	(2)	**3.**	(1)	**4.**	(3)	**5.**	(2)	**6.**	(3)	**7.**	(3)
8.	(4)	**9.**	(3)	**10.**	(1)	**11.**	(1)	**12.**	(1)	**13.**	(1)	**14.**	(2)
15.	(4)	**16.**	(4)	**17.**	(4)	**18.**	(1)	**19.**	(2)	**20.**	(1)	**21.**	(1)

Self Practice Paper (SPP)

1. Opposite, simple leaves with reticulate venation are present in
(1) *Nerium* (2) China rose (3) *Calotropis* (4) Neem

2. Potato and sweet potato
(1)Have edible parts which are homolgous organs
(2)Have edible parts which are analogous organs
(3)Have been introduced in India from the same place
(4) Are two species of the same genus

3. Radical leaves are found in
(1)Radish, Turnip and carrots (2) *Brassica*, *Iberis* and *Allium*
(3) Sugarcane, Bamboos, Canes (4) *Cynodon*, Maize and Wheat

4. Epigynous flowers are present in
(1) Mustard (2) Brinjal (3) China rose (4) Cucumber

5. Prickles of rose are
(1) Modified leaves (2) Modified stipules
(3) Exogenous in origin (4) Endogenous in origin

6. Palmately compound leaves are found in
(1)Neem (2) *Acacia* (3) *Cassia* (4) Silk cotton

7. A pappus is modification of
(1) Bract (2) Corolla (3) Stamen (4) Calyx

8. Which of the following is not a modification of stem –
(1)Tendrils in cucumber (2) Thorns in *Bougainvillea*
(3)Flattened green structure in Cactus (4) Pitcher in *Nepenthes*

9. *Gladiolus*, *Eichhornia*, *Chrysanthemum*, Cucumber, Pea, Ginger, *Amorphophallus*, grasses, strawberry, *Colocasia*
On the basis of above names given below the following statements
(a) Gladiolus has corm while cucumber has stem tendril
(b) *Eichhornia* shows offset while Jasmine is runner
(c) *Chrysanthemum* is sucker while *Amorphophallus* is rhizome
(d) Pea shows leaflet tendril while Colocasia has both stolon and corm
How many above statements are wrong?
(1) 1 (2) 2 (3) 3 (4) 4

10. Alternate phyllotaxy is found in
(1) *Alstonia* (2) *Calotropis* (3) Guava (4) China rose

11. Ginger is homologous to
(1) Sweet potato (2) Turnip (3) Onion (4) Mango ginger

12. Inflorescence of Fig is

(1) Hypanthodium (2) Verticillaster (3) Cyathium (4) Cymose

13. Fruit is legume in family
(1) Fabaceae (2) Asteraccae (3) Poaceae (4) Solanaceae.

14 Spines are found in
(1) *Citrus* (2) Cacti (3) *Bougainvillea* (4) *Duranta*

15. Which of the following are found in ginger, zaminkand, onion respectively
(1) Corm, bulb, rhizome (2) rhizome, bulb, corm
(3) bulb, rhizome, corm (4) rhizome, corm, bulb

16. Which of the following represents the floral characters of liliaceae?
(1) Six tepals, zygomorphic, six stamens, bilocular ovary, axile placentation.
(2) Actinomorphic, polyphyllous, unilocular ovary, axile placentation.
(3) Tricarpellary, actinomorphic, polyandrous, superior ovary, axile placentation.
(4) Bisexual, zygomorphic, gamophyllous, inferior ovary, marginal placentation.

17. Select the wrong pair
(1) Offset – Water hyacinth
(2) Tuber – Potato
(3) Runner – Grasses
(4) Stolon – Turmeric

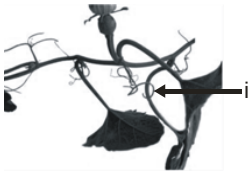
18. Stem tendrils are found in
(1) Pea (2) Grapevine (3) Glory lily (4) *Smilax*

19. Which of the following can be vegetatively propogated by axillary buds
(1) Potato (2) Mango (3) Chinarose (4) Mustard

20. Which of the following is wrongly matched?
(1) Prop roots – Banyan
(2) Pneumatophores – *Rhizophora*
(3) Stilt roots – Maize
(4) Hygroscopic roots – Sweet potato

21. Sucker is found in
(1) Turmeric (2) Ginger (3) *Colchicum* (4) *Chrysanthemum*

22.#



In the above diagram, (i) represents.
(1) Stipular tendril (2) Leaflet tendril (3) Stem tendril (4) Petiolar tendril

23. In some plants, roots arise from parts of the plant other than the radicle and are called adventitious roots. They are found in
(1) Grass (2) *Monstera* (3) Banyan tree (4) All of the above

24. Some plants of arid regions modify their stems into fleshy cylindrical structures. They contain chlorophyll and carry out photosynthesis. They are
(1) *Opuntia* (2) *Euphorbia* (3) *Asparagus* (4) Australian Acacia

25. Given below the following statements.
i. Phyllode and Cladode are homologous structures.
ii. *Amorphophallous* and Strawberry have corm.
iii. Tendril of pea and tendril of *Cucurbita* show convergent evolution.
iv. Phylloclade is a fleshy stem for performing photosynthesis.
v. Sunflower has capitulum inflorescence.
How many statements are correct?
(1) 4 (2) 3 (3) 2 (4) 1

26. Which type of inflorescence is found in *Euphorbia?*
(1) Verticillaster (2) Hypanthodium (3) Cyathium (4) Corymb

27. In the *Utricularia* plant, which of the following structure is used for capturing insects.
(1) Leaf pitcher (2) Leaf bladder (3) Leaf hook (4) Leaf tendril

28. Aggregate fruit develops from
(1) Multicarpellary syncarpous ovary (2) Multicarpellary apocarpous ovary
(3) Monocarpellary apocarpous ovary (4) Whole inflorescence

29. Which of the following is found in *Ruscus*?
(1) Cladode (2) Phylloclade (3) Phyllode (4) Staminode

30. Epigeal germination occurs in
(1) Pea (2) Gram (3) Castor (4) Maize

31. Which type of inflorescence is found in Mulberry?
(1) Spike (2) Umbel (3) Catkin (4) Corymb

32. Which of the following is not a root
(1) Turnip (2) Sweet potato (3) Radish (4) *Colchicum*

33. Thorn are found in
(1) *Citrus* (2) *Acacia* (3) *Aloe vera* (4) *Opuntia*

34. Which inflorescence is found in *Ocimum*?
(1) Hypanthodium (2) Verticillaster (3) Dichasial cyme (4) Umbel

35. Venus fly trap has
(1) Modified stem (2) Modified leaves (3) Modified roots (4) Modified inflorescence

36. In racemose inflorescence, flowers are usually arranged in
(1) Basipetal manner (2) Centripetal manner
(3) Acropetal manner (4) centrifugal manner

37. Assimilatory roots contain chlorophyll and are found in
(1) Orchids (2) Sweet potato (3) *Tinospora* (4) All of the above

38. Which of the following is a modification for mechanical support
(1) Stilt roots (2) Floating roots (3) Fasciculated roots (4) Pnumatophores

39. Which of the following pairs are correct except one
(1) Lianas – Woody climber
(2) Clinging roots – *Convolvulus*
(3) Tuberous root – Sweet potato
(4) Buttress roots – *Bombax ceiba*

40. In the sweet pea plant, which type of tendril is found?
(1) Stem tendril (2) Petiolar tendril (3) Stipular tendril (4) Leaflet tendril

41. The edible part of garlic is
(1) Stem (2) root (3) buds (4) fleshy leaves

42. Name the most advanced family of monocots
(1) Arecaceae (2) Orchidaceae (3) Poaceae (4) None of the above

43. Which type of phyllotaxy is found in *Alstonia?*
(1) Opposite decussate (2) Alternate
(3) Whorled (4) Opposite superposed

44. Which of the following one is modification of aerial stem
(1) Rhizome (2) Sucker (3) Tuber (4) Cladode

45. Which of the following type of inflorescence is found in onion
(1) Spadix (2) Catkin (3) Spike (4) Cymose umbel

SPP Answers

1.	(3)	**2.**	(2)	**3.**	(1)	**4.**	(4)	**5.**	(3)	**6.**	(4)	**7.**	(4)
8.	(4)	**9.**	(3)	**10.**	(4)	**11.**	(3)	**12.**	(1)	**13.**	(1)	**14**	(2)
15.	(4)	**16.**	(3)	**17.**	(4)	**18.**	(2)	**19.**	(1)	**20.**	(4)	**21.**	(4)
22.	(3)	**23.**	(4)	**24.**	(2)	**25.**	(2)	**26.**	(3)	**27.**	(2)	**28.**	(2)
29.	(1)	**30.**	(3)	**31.**	(3)	**32.**	(4)	**33.**	(1)	**34.**	(2)	**35.**	(2)
36.	(3)	**37.**	(3)	**38.**	(1)	**39.**	(2)	**40.**	(4)	**41.**	(4)	**42.**	(2)
43.	(3)	**44.**	(4)	**45.**	(4)								