

BIOLOGY

CB05

SYLLABUS : Morphology of Flowering Plants

Max. Marks : 180

Marking Scheme : + 4 for correct & (–1) for incorrect

Time : 60 min.

INSTRUCTIONS : This Daily Practice Problem Sheet contains 45 MCQs. For each question only one option is correct. Darken the correct circle/ bubble in the Response Grid provided on each page.

1. Which one of the following is a true fruit?
(a) Apple (b) Pear
(c) Cashew nut (d) Coconut
2. Pulses are belong to the family
(a) fabaceae (b) asteraceae
(c) poaceae (d) solanaceae
3. In a cereal grain the single cotyledon of embryo is represented by
(a) scutellum (b) prophyll
(c) coleoptile (d) coleorrhiza
4. Perisperm is
(a) remnant of endosperm
(b) persistent nucellus
(c) remnant of embryo
(d) part of endosperm
5. The mode of catching insects in *Drosera* plants is by means of
(a) sensitive glandular hairs which secrete a sweet, viscous, shining substance.
(b) specially sensitive trigger hairs.
(c) leaves which are modified into pitcher.
(d) leaf segments modified into bladder.
6. Insectivorous plants grow in
(a) calcium deficient soil
(b) carbon deficient soil
(c) magnesium deficient soil
(d) nitrogen deficient soil
7. Which part of the coconut produces coir?
(a) Seed coat (b) Mesocarp
(c) Epicarp (d) Pericarp

RESPONSE
GRID

- | | | | | |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1. (a)(b)(c)(d) | 2. (a)(b)(c)(d) | 3. (a)(b)(c)(d) | 4. (a)(b)(c)(d) | 5. (a)(b)(c)(d) |
| 6. (a)(b)(c)(d) | 7. (a)(b)(c)(d) | | | |

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8. Pineapple (ananas) fruit develops from
 (a) a multipistillate syncarpous flower
 (b) a cluster of compactly borne flowers on a common axis
 (c) a multilocular monocarpellary flower
 (d) a unilocular polycarpellary flower
9. Scutellum is a/an
 (a) protective covering of radicle
 (b) protective covering of plumule
 (c) endosperm of gymnosperms
 (d) shield-shaped cotyledon
10. Fibrous root system is better adopted than tap root system for
 (a) transport of organic matter
 (b) absorption of water and minerals
 (c) storage of food
 (d) anchorage of plant to soil
11. Velamen is found in
 (a) roots of screwpine
 (b) aerial and terrestrial roots of orchids
 (c) leaves of *Ficus elastica*
 (d) only aerial roots of orchids
12. Hypanthodium is
 (a) thalamus (b) fruit
 (c) inflorescence (d) ovary
13. Which of the following statement (s) is/are incorrect?
 (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) Radical buds develop on roots.
 (a) (i), (ii), (iii) and (iv) (b) (i), (ii) and (v)
 (c) (iii), (iv) and (vi) (d) (i), (iv) and (v)
14. Milky water of green coconut is
 (a) liquid nucellus
 (b) liquid of female gametophyte
 (c) liquid endosperm
 (d) liquid embryo
15. Clove is
 (a) flower bud (b) axillary bud
 (c) thalamus (d) ovule
16. When gynoecium is present in the top most position of thalamus, the flower is known as
 (a) inferior (b) epigynous
 (c) perigynous (d) hypogynous
17. Which is not a stem modification?
 (a) Rhizome of ginger (b) Corm of *Colocasia*
 (c) Pitcher of *Nepenthes* (d) Tuber of potato
18. Which option is correctly matched with the diagrams?




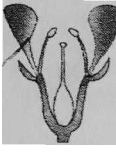
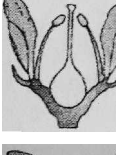

- (a) A-Valvate B-Twisted, C-Imbricate,
 D-Vexillary
 (b) A-Vexillary, B-Valvate, C-Twisted,
 D-Imbricate
 (c) A-Imbricate, B-Vexillary, C-Valvate,
 D-Twisted
 (d) A-Twisted, B-Imbricate, C-Vexillary,
 D-Valvate

**RESPONSE
GRID**

8. (a) (b) (c) (d) 9. (a) (b) (c) (d) 10. (a) (b) (c) (d) 11. (a) (b) (c) (d) 12. (a) (b) (c) (d)
 13. (a) (b) (c) (d) 14. (a) (b) (c) (d) 15. (a) (b) (c) (d) 16. (a) (b) (c) (d) 17. (a) (b) (c) (d)
 18. (a) (b) (c) (d)

Space for Rough Work

19. Given below are the diagrammatic representation of position of floral parts on thalamus, condition of ovary and example. Find the correctly matched combination?

| | Position of floral parts on thalamus | Condition of ovary | Example |
|-----|--|--------------------|----------|
| (a) |  | \overline{G} | Cucumber |
| (b) |  | \overline{G} | Brinjal |
| (c) |  | \overline{G} | Plum |
| (d) |  | \overline{G} | Rose |

20. Match Column-I with Column-II and select the correct option from the codes given below.

| Column-I | Column-II |
|---------------------------------|-----------------------------|
| A. Thorns | I. Vegetative propagation |
| B. Phylloclades | II. Defensive mechanism |
| C. Runners | III. Mechanical support |
| D. Stilt roots | IV. Absorption of nutrition |
| E. Haustoria | V. Photosynthesis |
| (a) A-I; B-IV; C-III; D-II; E-I | |
| (b) A-II; B-V; C-III; D-I; E-IV | |
| (c) A-II; B-V; C-I; D-III; E-IV | |
| (d) A-III; B-V; C-IV; D-I; E-II | |

21. Maize grain is a fruit known as
 (a) cypsela (b) caryopsis
 (c) legume (d) achene
22. Monocotyledonous root differs from dicot root in which of the following internal features (a to d)?
 (a) Presence of parenchymatous pericycle.
 (b) Absence of few xylem bundle.
 (c) Presence of large and well-developed pith.
 (d) Presence of parenchymatous cortex without intercellular spaces.

23. Select correct match w.r.t column I & II.

| Column I | Column II |
|--|-----------------|
| A. Modified tap root for respiration | I. Zea mays |
| B. Storage tap root | II. ipomoea |
| C. Modified adventitious root for mechanical support | III. Rhizophora |
| D. Modified adventitious root for food storage | IV. Turnip |
| (a) A-III; B-IV; C-I; D-II | |
| (b) A-III; B-IV; C-II; D-I | |
| (c) A-IV; B-II; C-I; D-III | |
| (d) A-III; B-II; C-I; D-IV | |

24. The modified stem in some plants of arid region is

- (a) Tendril for climbing as in *Passiflora*
 (b) Spines for defence mechanism
 (c) Phylloclade for food synthesis
 (d) Phyllode for food synthesis

25. The modified stem in grasses, strawberry and *Crysanthemum* is concerned with special functions i.e.,

- i. Food storage
 ii. Vegetative propagation
 iii. Assimilation
 iv. Spread to new niches
 v. Perennation
 (a) ii, iv (b) i, ii, v
 (c) ii, iv, v (d) iii, iv, v

RESPONSE
GRID

19. (a) (b) (c) (d) 20. (a) (b) (c) (d) 21. (a) (b) (c) (d) 22. (a) (b) (c) (d) 23. (a) (b) (c) (d)
 24. (a) (b) (c) (d) 25. (a) (b) (c) (d)

Space for Rough Work

26. In which of the following type of flowers stamens are superior in position?
(a) Hypogynous (b) Perigynous
(c) Epigynous (d) Protogynous
27. Inner layer of pericarp is hard and stony in
(a) Dateplam, Almond (b) Wood, apple, Pea
(c) Mango, Coconut (d) Pear, Litchi
28. Find out the incorrect match.
(a) Sterile stamen – Staminode
(b) Stamens attached to petals – Epipetalous
(c) Stamens attached to perianth – Episepalous
(d) Free stamens – Polyandrous
29. Ovary is said to be half inferior in which of the following conditions?
(a) Hypogynous (b) Perigynous
(c) Epigynous (d) Both (b) and (c)
30. Identify the family which shows the following diagnostic features.
Flowers pentamerous, gynoecium-bicarpellary, syncarpous, ovary placed obliquely, placentation axile, placenta swollen.
(a) Solanaceae (b) Leguminosae
(c) Papilionaceae (d) Liliaceae
31. Select the pair which contains monocotyledonous families.
(a) Solanaceae and Brassicaceae
(b) Fabaceae and Asteraceae
(c) Liliaceae and Poaceae
(d) None of these
32. In *Nepenthes* (pitcher plant), the pitcher is formed due to modification of
(a) leaf petiole (b) leaf lamina
(c) tendril (d) leaflet
33. Example for tuberous adventitious roots
(a) Dahlia (b) Carrot
(c) Radish (d) Beet
34. A root-cap is usually absent in the roots of
(a) Hydrophytes (b) Epiphytes
(c) Parasites (d) All of the above
35. An example of negatively geotropic root
(a) Coralloid root of *Cycas*
(b) Pneumatophore of mangroves
(c) Assimilatory roots of *Trapa*
(d) More than one of the above.
36. *Santalum album* is normally considered as a
(a) Complete root parasite
(b) Partial root parasite
(c) Complete stem parasite
(d) Partial stem parasite
37. An example of tuberous root that is a modification of tap root
(a) Radish (b) *Mirabilis*
(c) Sweet Potato (d) *Ipomoea*
38. Ginger is a stem and not a root because
(a) It stores food
(b) It is bitter in taste
(c) It has nodes and internodes
(d) It is non-green in colour.
39. In *Allium*, the leafless part of the stem which bears flower is called
(a) Culm (b) Scape (c) Caudex (d) Bulb
40. Sweet Potato is a modification of
(a) Root (b) Stem
(c) Bud (d) Flowering axis
41. Epiphyllous buds serve the function of
(a) Respiration (b) Nutrition
(c) Reproduction (d) Absorption
42. In a potato plant the tubers develop on
(a) Primary root (b) Secondary root
(c) Tertiary root (d) Stolon
43. Root is the prolongation of
(a) Plumule (b) Radicle
(c) Stem (d) Branches
44. Food stored in a bulb is within
(a) A swollen stem (b) Swollen leaf-bases
(c) Enlarged roots (d) In the inflorescence
45. Cladode is the modification of
(a) Whole stem (b) Axillary bud
(c) Leaf (d) Leaflets.

**RESPONSE
GRID**

26. (a) (b) (c) (d) 27. (a) (b) (c) (d) 28. (a) (b) (c) (d) 29. (a) (b) (c) (d) 30. (a) (b) (c) (d)
31. (a) (b) (c) (d) 32. (a) (b) (c) (d) 33. (a) (b) (c) (d) 34. (a) (b) (c) (d) 35. (a) (b) (c) (d)
36. (a) (b) (c) (d) 37. (a) (b) (c) (d) 38. (a) (b) (c) (d) 39. (a) (b) (c) (d) 40. (a) (b) (c) (d)
41. (a) (b) (c) (d) 42. (a) (b) (c) (d) 43. (a) (b) (c) (d) 44. (a) (b) (c) (d) 45. (a) (b) (c) (d)

Space for Rough Work

DAILY PRACTICE PROBLEM DPP CHAPTERWISE 5 - BIOLOGY

| | | | |
|---|----|------------------|-----|
| Total Questions | 45 | Total Marks | 180 |
| Attempted | | Correct | |
| Incorrect | | Net Score | |
| Out-off Score | 45 | Qualifying Score | 60 |
| Success Gap = Net Score – Qualifying Score | | | |
| Net Score = (Correct × 4) – (Incorrect × 1) | | | |

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