

Reg.No.....

FYCBTA22/3

Name.....

FIRST YEAR HIGHER SECONDARY PRE MODEL EXAMINATION

Part – III

BIOLOGY

PART – A: BOTANY

(Maximum: 30 Scores)

Morphology of flowering plants

Time: I Hour

Cool-off time: 10 Minutes

PART I

Answer any seven questions from 1 to 10. Each carries 1 score.

(7x1=7)

1. Which one of the following is a modified root for storage of food?

(a) *Ginger*

(c) *Potato*

(b) *Colocasia*

(d) *Turnip*

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

3. In some flowers like Lily, the calyx and corolla are not distinct and are termed as _____.

4. Which one of the following family is a representative of monocotyledonous plants?

(a) Fabaceae

(b) Liliaceae

(c) Solanaceae

5. Observe the relationship between the first pair and fill in the blank.

(a) *China rose*: Monadelphous

(b) *Pea*: _____

6. In a floral formula Calyx is represented by the letter:-

- (a) P (b) C (c) K (d) A

7. Define parthenocarpic fruit.

8. What is epipetalous stamen?

9. State the function of pneumatophores in *Rhizophora*.

10. The flower of Pea is referred as a *Zygomorphic*. Why?

PART II

Answer any seven questions from 11 to 20 each carries 2 scores

(7x2=14)

11. (a) Define the term inflorescence.

(b) What are the two types of inflorescence seen in plants?

12. Differentiate between *pinnately compound leaves* and *palmately compound leaves*.

13. Write the characters given below under the columns A and B.

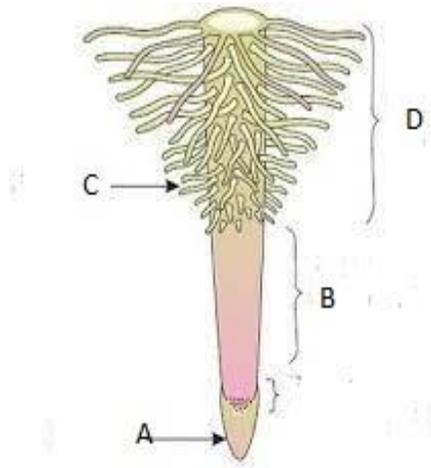
[*tap root system, fibrous root system, pentamerous flower, trimerous flower*]

| A [Dicot Plants] | B [Monocot Plants] |
|---------------------|-----------------------|
| | |

14. (a) Define venation.

(b) What are the two types of venation seen in flowering plants?

15. The given figure shows the regions of the root. Label the parts A, B, C, and D.



16. Write any two economic importance of the family Fabaceae?

17. Vexillary (papilionaceous) aestivation is a special type of aestivation seen in flowering plants.

(a) In which family vexillary aestivation is seen?

(b) Name the three types of petals seen in vexillary aestivation.

18. Roots in some plants are modified to perform special functions. What type of root modification is found in the:

(a) Banyan tree

(b) Sugarcane

19. (a) Define phyllotaxy.

(b) Mention the three different types of phyllotaxy in plants.

20. Which plant part is modified as

(a) Tendrils in *Cucumber*

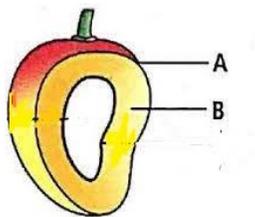
(b) Tendrils in *Pea*

PART III

Answer any three questions from 21 to 25. Each carries 3 scores.

(3X3=9)

21. Diagram of a mango fruit is given below:-



- (a) Label the parts A and B.
- (b) Why this fruit is called as *drupe*?
- (c) What is pericarp?

22. Observing the floral diagram given below



- (a) Identify the family.
- (b) Write the floral formula of this family.

23. (a) What is placentation?

(b) Identify the types of placentation in the given diagrams (a), (b), (c) and (d).



a



b

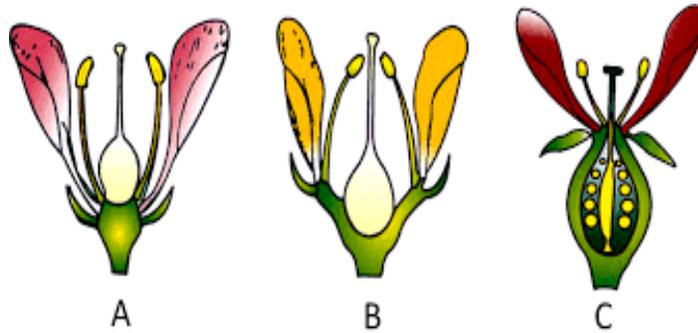


c



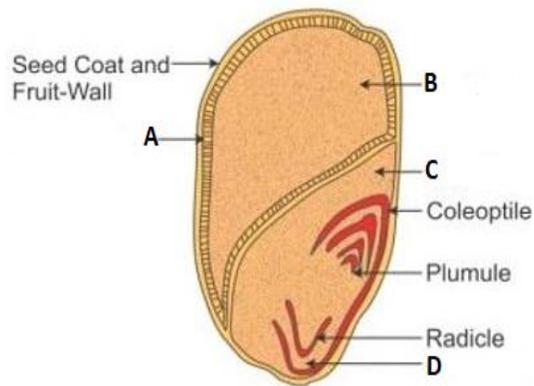
d

24. Observe the figure below:-



- (a) Identify the type of flowers A , B, and C based on the position of floral parts on thalamus.
(b) Comment on the position of the ovary in A, B and C.

25. Diagram of monocot seed is given below.



- (a) Label the parts A, B, C and D.
(b) Name the single cotyledon seen in monocot seed.

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