

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

B.Sc. DEGREE EXAMINATION – PLANT BIOLOGY & PLANT BIO-TECH.

THIRD SEMESTER – APRIL 2010

PB 3506/PB 3502 - ANGIOSPERM, TAXONOMY, ECO.BOTANY & EMBRYOLOGY

Date & Time: 23/04/2010 / 1:00 - 4:00

Dept. No.

Max. : 100 Marks

PART - A (20 marks)

Answer ALL Questions

I. Choose the correct answer

(5X1=5)

1. Sagittate anthers are characteristic feature of the family
a) Anacardiaceae b) Amaranthaceae c) Apocynaceae d) Rubiaceae
2. The classification based on the reproductive plant part only is known as
a) artificial system b) natural system c) phylogenetic system d) modern system
3. Cumin is a
a) cereal b) millet c) pulse d) spice
4. The Peperomia type of embryosac contains
a) 8 nuclei b) 12 nuclei c) 16 nuclei d) 20 nuclei
5. Ruminant endosperm is seen in the members of
a) Arecaceae b) Fabaceae c) Poaceae d) Solanaceae

II. State whether the following statements are true or false

(5X1=5)

6. In numerical taxonomy, a minimum of 50 characters are used.
7. The botanical name of Black gram is *Phaseolus radiatus*.
8. The stipules are an important characteristic feature of the family Euphorbiaceae.
9. The typical example for bisporic embryosac is *Peperomia*.
10. Polyembryony was first discovered by Leeuwenhoek.

III. Complete the following

(5X1=5)

11. The morphology of the useful part in opium is _____.
12. The only genus which does not possess a tendril in Cucurbitaceae is _____.
13. The basic unit in numerical taxonomy is _____.
14. The innermost wall layer of the microsporangium is the _____.
15. Substitution of sexual process by asexual method is known as _____.

IV. Answer each within 50 words

(5X1=5)

16. What is Binomial nomenclature?
17. Mention the type of Gynoecium in Capparidaceae.
18. Write binomial & plant parts of Geranium oil.
19. What is triple fusion?
20. Define Palynology

(P.T.O.)

PART - B

Answer the following each within 500 words. Draw diagram wherever necessary. (5X7=35 marks)

21. a) How will you identify Angiosperms with botanical keys?
OR
b) Explain the role of chemotaxonomy.
22. a) Describe the different types of adnation in Solanaceae.
OR
b) Write about the floral variation in Euphorbiaceae.
23. a) What are beverages? Give the botanical name, the part used and the uses of any three beverages.
OR
b) Give the botanical name, common name, the part used and the uses of any one cereal, one millet and one spice.
24. a) Give the application of Palynology.
OR
b) Describe the development of microsporangium.
25. a) Give an account of the post-fertilization changes.
OR
b) Explain the development of embryo in *Capsella*.

PART - C

Answer any THREE questions. Each within 1200 words each. Draw diagrams wherever necessary (3x15=45 marks)

26. Explain the phylogenetic system of classification.
27. Give the salient features of the family Orchidaceae.
28. Give the botanical name, common name, morphology of the useful part and uses of any two fibre and three timber-yielding plants.
29. Describe the structure and development of bisporic and tetrasporic embryosacs.
30. Explain Polyembryony in detail.

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