

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

THIRD SEMESTER – November 2009

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

Date & Time: 04/11/2009 / 9:00 - 12:00 Dept. No.

Max. : 100 Marks

PART - A (20 marks)

Answer ALL questions

I. Choose the correct answer

(5x1=5)

1. Order Centrospermae predominantly contains pigment
a. Anthocyanins b. Betalains c. Carotenoids d. xanthophylls
2. Pseudocarp is found in the family
a. Rubiaceae b. Solanaceae c. Anacardiaceae d. Amaranthaceae
3. Morphology of the useful part of Nutmace is
a. Endosperm b. Kernal c. Pericarp d. Aril
4. Pollinia are found in
a. Annonaceae b. Asclepiadaceae c. Apiaceae d. Ancistrocladaceae
5. Aleurone layer occurs in
a. Potamogetonaceae b. Polygonaceae c. Poaceae d. Cyperaceae

II. State whether the following statement are true or false

(5x1=5)

6. Latin diagnosis is a must for publication of new species
7. Fruits of *Sechium edule* has many seeds
8. Sedges are used as mat fibers
9. Study of pollen in the atmosphere is aeropalynology
10. Nucellus is a protective in function

III. Complete the following

(5x1=5)

11. Numerous and free floral parts are found in the series _____
12. Absence of gynophores in the family Capparidaceae is seen in the genus _____
13. Tetra-hydro-cannabinol, a halogenic chemical, occurs in the plant _____
14. The exine in pollen is made up of _____
15. Seedlessness naturally occurs due to _____

IV Answer the following each in about 50 words

(5x1=5)

16. Explain the use of **in** and **ex** in author citation.
17. What is a spikelet?
18. Name any two essential oil yielding plants.
19. Define entamophily.
20. Name two families in which ruminant endosperm occurs.

PART – B

Answer the following each within 350 words. Draw diagrams wherever necessary

(5 x 7 = 35 marks)

21. a) Explain the criteria for effective and valid publication.

(Or)

b) What are the guidelines to be adapted in construction of botanical key for identification?

22. a) Mention the characteristic features of the family Cucurbitaceae.

(Or)

b) How do you identify the family Solanaceae?

23. a) Write notes on any five leaves as spices.

(Or)

b) Mention the binomial family and morphology of useful parts of the following a) Fox tail millet b) Pearl millet c) Finger millet d) Star anise e) Patchouli.

24. a) Trace the development of male gametophyte in angiosperms.

(Or)

b) What are the different types of Ovules?

25. a) Draw a labeled diagram of mature dicot embryo. Add a note on its development.

(Or)

b) Give an account of double fertilization.

PART – C

(3 x 15 = 45 marks)

Answer any THREE questions. Each answer within 1200 words, draw the diagram wherever necessary.

26. Discuss the various techniques used in the study of molecular systematics.

27. Describe the family Rubiaceae and discuss its economic importance.

28. Give binomial, family and uses of the following:

a) Cinchona b) Indian Gooseberry c) Capsicum d) Jute e) Ebony

29. Explain the different modes of cross pollination with suitable examples.

30. Discuss the different types of endosperm. Add a note on function of endosperm.

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