



WEST BENGAL STATE UNIVERSITY  
B.Sc. Honours 5th Semester Examination, 2022-23

BOTACOR11T-BOTANY (CC11)

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words as far as practicable  
All symbols are of usual significance.*

1. Answer **all** the following questions: 1×6 = 6
- (a) Write full form of PEN. Mention its ploidy level.
  - (b) What is hydrochory?
  - (c) What do you mean by Anthophore?
  - (d) What is adventive embryony?
  - (e) What is pollen kit?
  - (f) What is Pollinia?
2. Answer any **eight** questions from the following: 3×8 = 24
- (a) Distinguish Autogamy, Allogamy and Geitonogamy. 3
  - (b) Distinguish between Amoeboid or Invasive tapetum and Glandular tapetum. 3
  - (c) What is Callose? Mention the significance of Callose deposition during microsporogenesis. 1+2
  - (d) What is self-incompatibility? Differentiate between Gametophytic Self-incompatibility (GSI) and Sporophytic Self-incompatibility (SSI). 1+2
  - (e) What is parasexual hybridization? Mention its significance in plant science. 1+2
  - (f) Describe the structure of a monocotyledonous embryo with labelled sketch. 3
  - (g) Mention the mechanism of seed-dispersal through different agencies with examples. 3
  - (h) What are the distinctive features of Anemophilous and Entomophilous flower. 1½+1½
  - (i) Differentiate between microsporogenesis and microgametogenesis. Where do they occur? 2+1
  - (j) Draw and label a monosporic, 8-nucleate embryo sac inside ovule. What is Triple fusion? 2+1
  - (k) Define polyembryony. Mention its different types. 1+2
  - (l) (i) Differentiate between cybrid and hybrid. 1½+1½  
(ii) Distinguish between mixed pollination and in vitro pollination.
3. Answer any **two** questions from the following: 5×2 = 10
- (a) Give a brief representation of different types of Apomixis present in plant. Write a note on its significance. 3+2
  - (b) Briefly describe the different adaptations for cross pollination in plants, with examples. 5
  - (c) Discuss the genetic and molecular mechanism of flower development. 5
  - (d) Explain with evidences the axis nature of thalamus and leaf nature of floral members. 2+3

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