



WEST BENGAL STATE UNIVERSITY
B.Sc. Honours 3rd Semester Examination, 2020, held in 2021

BOTACOR05T-BOTANY (CC5)

MORPHOLOGY AND ANATOMY OF ANGIOSPERMS

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) What do you mean by adelphy? Give example.
 - (b) What is an albuminous seed?
 - (c) Draw a diacytic stomata.
 - (d) What is a bicollateral vascular bundle?
 - (e) What are tyloses?
 - (f) Mention one function of hydathodes.

2. Answer the following questions (any **eight**) taking at least **one** question from each Group: 3×8 = 24

GROUP-A

- (a) Distinguish between gynostegium and gynostemium. 3
- (b) Write a note on the morphological nature of Hesperidium. 3
- (c) Differentiate between Imbricate and Vexillary Aestivation with diagram. 2+1

GROUP-B

- (a) State the salient features of Histogen theory regarding the organization of shoot apex. 3
- (b) What is Kranz anatomy? Where do you find it? 2+1
- (c) Write a short note on Adcrustration and Incrustation. 3
- (d) Briefly explain the role of anatomy in plant systematic mentioning at least three examples. 3
- (e) Distinguish between Heart wood and Sap wood. What is rhytidome? 2+1
- (f) State the differences between vascular bundles of a dicot and monocot stem. 3
- (g) Write a short note on Periderm with a diagram. 2+1
- (h) Briefly mention the anatomical adaptations of Xerophytes. 3
- (i) Discuss briefly the cytodifferentiation of sieve elements. 3

3. Answer the following questions (*one* from each Group): 5×2 = 10

GROUP-A

- (a) Briefly discuss the concept of primitive and advanced type of inflorescences. 5
- (b) What do you mean by cohesion of stamens? Mention the different types of cohesion of stamens with examples. 1+3+1

GROUP-B

- (a) What are pits and plasmodesmata? Mention their functions. 3+2
- (b) Explain Korper-Kappe theory of root apex organization. Define quiescent centre. 3+2

N.B. : *Students have to complete submission of their Answer Scripts through E-mail / Whatsapp to their own respective colleges on the same day / date of examination within 1 hour after end of exam. University / College authorities will not be held responsible for wrong submission (at in proper address). Students are strongly advised not to submit multiple copies of the same answer script.*

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