



**WEST BENGAL STATE UNIVERSITY**  
B.Sc. Honours 5th Semester Examination, 2021-22

**ARDADSE02T-AGRICULTURE AND RURAL DEVELOPMENT (DSE1/2)**

**AGRICULTURAL BOTANY**

Time Allotted: 2 Hours

Full Marks: 40

*The figures in the margin indicate full marks.  
Candidates should answer in their own words and adhere to the word limit as practicable.*

1. Answer any **six** questions from the following: 5×6 = 30
- (a) Explain characteristics features behind the concept of Agro-ecology.
- (b) State the factors affecting the success of plant tissue culture.
- (c) Explain Mendel's 2<sup>nd</sup> law of inheritance. Give any one example of the deviations of this law. 3+2
- (d) Write a short note on Crossing over.
- (e) How do you maintain a pure line in plant breeding?
- (f) What are the scopes of plant breeding in crop improvement?
- (g) What are the differences between Meiosis I and Meiosis II ?
- (h) Define the terms: (i) Monohybrid cross (ii) Incomplete dominance. 2½ + 2½
- (i) Write a short note on breeding techniques for self-pollinating crop.
2. Answer any **one** question from the following: 10×1 = 10
- (a) What is Micropropagation? Give a detailed note on the stages of Micropropagation. 2+8
- (b) What is the significance of meiotic cell division? Why it is called reduction division? How does it differ from mitotic cell division? With proper illustration describe Metaphase and Anaphase in mitotic cell division. 2+1+2+5

**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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