

**B.Sc Part II 2020**  
**(Under 1+1+1 Regulations)**  
**BOTANY HONOURS**  
**PAPER III**

**Time 2 hours**

**FM 50**

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|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| <b>1. Answer the following questions</b>                                                                                                        | <b>1x5</b>      |
| a) Mention a land adaptive feature of <i>Rhynia</i> .                                                                                           | 1               |
| b) Name one pteridophyte used as pesticide.                                                                                                     | 1               |
| c) Define quiescent centre.                                                                                                                     | 1               |
| d) What is rhizofiltration?                                                                                                                     | 1               |
| e) Name the paleobotanist who reconstructed <i>Williamsonia seawardiana</i> .                                                                   | 1               |
| <br><b>2. Answer any three questions</b>                                                                                                        | <br><b>5x3</b>  |
| a) Describe the gametophyte of <i>Psilotum</i> with relevant illustration                                                                       | 5               |
| b) State the evolutionary significance of <i>Archaeopteris</i> .                                                                                | 5               |
| c) Write a short note on types of stomata in dicotyledonous plants                                                                              | 5               |
| d) Briefly discuss the chemical nature of cell wall.                                                                                            | 5               |
| <br><b>3. Answer any three questions</b>                                                                                                        | <br><b>10x3</b> |
| a) Describe the floristic composition of lower Gangetic plain with particular reference to deltaic Sunderbans                                   | 10              |
| b) What are mechanical tissues? Explain the principles governing the distribution of mechanical tissues in different plant organs.              | 2+8             |
| c) Comment on incipient heterospory found in <i>Equisetum</i> . Mention the stages in the evolution of seed habit from heterosporous condition. | 3+7             |
| d) Compare male and female gametophyte of <i>Cycus</i> and <i>Gnetum</i> with suitable diagram.                                                 | 5+5             |